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**TITLE: UYOGRO SOLID WASTE MANAGEMENT PROJECT,
TEMEKE, DAR ES SALAAM CITY**

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SOUTHERN NEW HAMPSHIRE UNIVERSITY AT THE OPEN
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(i)

SUPERVISOR CERTIFICATION

This is to certify that I have gone through the dissertation for Lema Leslie titled "UYOGRO SOLID WASTE MANAGEMENT PROJECT TEMEKE, DAR ES SALAAM CITY" and found it in a form acceptable for the partial fulfilment of the requirements for the MASTERS OF SCIENCE IN COMMUNITY ECONOMIC DEVELOPMENT of the Southern New Hampshire University and Open University of Tanzania.


.....

Maria Marealle

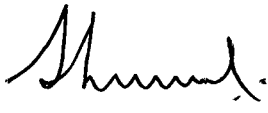
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(ii)

DECLARATION/STATEMENT OF AUTHORITY

"I certify that this Project Report is my own work, and that it has not been submitted for a similar degree in any other University, and that all sources of references have been acknowledged.

Signed  Date: 31st May, 2005

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DEDICATION

Community based organisations have played a greater role in human life development at the grassroots level towards community and eventually national and international economic development. In order to develop a strong community, then the poor peoples have to be considered first. The role of community-based organisations requires special attention and direction. This work is dedicated to CBOs whom I am really indebted to help and build their capacity as they are the type of organisations which are close to the community at the grassroots level.

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Finally, I hold myself responsible for any fault, error or any other shortcoming that might be in this project report.

ABBREVIATIONS

CBOs:	Community Based Organisations
UYOGRO:	Upendo Youth Group
RCC:	Refuse Collection Charges
PMO:	Prime Minister's Office
NEMC:	National Environmental Management Council
DCC:	Dar es Salaam City Council
SDP:	Sustainable Dar es Salaam Project
NGOs:	Non-Governmental Organisations
SWM:	Solid Waste Management
WGR:	Waste Generation Rates

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OPERATING DEFINITIONS

- Franchisees:

Formal permission given by a government to whoever wants to operate a public service as a business.

- Refuse Collection Charge:

Means the charge determined by the local authority as fee to be paid for waste collection set out by respective local authorities bylaws.

ABSTRACT

This study was conducted at AZIZI ALLY, a suburb of Temeke Municipal, Dar es Salaam City. The purpose of this study was to work and study with small groups which were voluntarily formed for the aim of creating employment by taking care of their environment, i.e. waste management at their neighbourhood. The study will lead to the group capacity building which will create an impact on the community and thus turn the group to be legally Community Based Organisation working in broad perspective under national policies.

The study was guided by five objectives, namely; to examine the legal status of the group, its strength and weakness, assess their need; and a wide survey of the concept of solid waste management in Dar es Salaam City in comparison to what the group is practicing now. The study picked the Azizi Ally suburb, which reflects or resembles many other parts of Dar es Salaam City. About four wards were surveyed namely, Saba Saba, Relini, Bustani and Mtoni Sokoni. The sample comprised 131 households and were selected randomly from each ward. Also several officials from the wards, Municipal Council and Board of External Trade were interviewed. Data was collected through documentary analysis, interviews, questionnaires, a checklist and observation.

The findings indicated that, the majority of urban residents have devised ways to deal with their own waste. People do not throw solid waste haphazardly into their plots, but put it somewhere outside the plot ready for collection to the dumping site. However only a limited number of the population have ever received training on solid waste management. The biggest problem with waste management in our case study in relation to other parts of Dar es Salaam is that although the waste generators remove waste from their immediate surroundings, a lot of it accumulates along streets, dumping sites or on common grounds with little coordinated remedial action due to the lack of enough equipment like tractors or lorries, to take the waste to the dumping site. Another finding is that the 1994 bylaws have many shortcomings which cannot be used for the 1998 privatization of waste management in Dar es Salaam City.

Gender roles in waste management: In many tribes or communities, women and children have the responsibility of keeping the family courtyard clean, taking out the garbage and dumping it somewhere. Women also appear to be very creative in recycling and re-using waste in their homes. On the other hand, men are involved in other productive sectors like fishing, carpentry or agriculture. Hence their roles in waste management is limited.

Some of the recommendations from the study include; to empower the community based organisations by providing education and equipments in order to work efficiently. I have also recommended that stakeholders of solid waste management should follow the so-called "The Solid Waste Stream" in order to work efficiently and improve our environment. At the households level, there are also some opportunities. It is recommended that care be taken when purchasing goods and appropriate amounts and sizes should be chosen.

I also recommended to UYOGRO that they look for more productive activities like vegetable cultivation rather than dealing only with waste collection, in order to be sustainable. By doing so, a business plan to acquire working equipment like tractor and its trailer for the purpose of empowering that CBO has been implemented.

CHAPTER ONE

1.0 INTRODUCTION

Africa is currently undergoing a rapid change in its towns and cities and also from rural to urban life style. In most African countries, Tanzania being one of them, a major population redistribution process is occurring as a result of rapid urbanization at a time when the economic performance of these countries is generally poor.

Urban authorities are generally seen as incapable of dealing with problems of rapid urbanization. One major area in which urban authorities appear to have failed to fulfil their duties is waste management. Yet, in most urban areas only a small portion of the waste generated daily is collected and safely disposed of by the authorities. Collection of solid waste is usually confined to the City Centre and high-income neighbours leaving the low income and unplanned settlements without such service or provides it at small fraction. Most parts of the City never benefit from public solid waste disposal. This being the case therefore, most urban residents and operators have to bury or burn their waste at their place or dispose of it haphazardly. Indeed wastes are disposed of haphazardly by roadsides, in open spaces or in valleys and drains; and waste water overflowing onto public lands.

This study looks at the problem of the governance of waste management in low-income areas at Mtoni Azizi Ally, Temeke, Dar es Salaam City. The report is based on a study of various documents related to the question of waste in the ward as well as in the municipal in relation to whole city programme in that area, and on discussions and interviews conducted with various stakeholders, including Mtoni ward householders. Observations were also made that if waste is unmanaged or poorly managed, it becomes a danger to health, a threat to the environment, a nuisance, and an eroding factor in civic morals, which can possibly cause a major social problem within a community. This being the case therefore, waste management is an important issue of urban governance. It involves the success or failure of the authorities to deal with this waste and the response of society to this success or failure.

1.1 Background

Upendo Youth Group (UYOGRO) was registered under The Trustees Incorporation Ordinance (Cap 75) of 1956 on the 4th day of October 2001. It has not yet qualified as a legally registered CBO, though its objectives are basically, addressing the community problems. However, efforts have been made to register the group as a legal and authorized community based organization, the process of registration was completed on 14th December 2004. Now Upendo is legally recognised CBO.

Its offices are located at Mtoni Azizi Ally, Temeke Municipal; their postal address is P.O. Box 43021 Dar es Salaam. It is important to register the group due to the fact that the role of community based organizations in community economic development have ever increasing and recognised in many parts of the world. These organizations have been credited for their positive measures they are undertaking in order to ensure that, the development of the people is starting at grassroots level, through people participation, self-reliance as well as empowerment of poor people or disadvantageous groups in the community. A number of efforts have been made including: search for a community-based organization to work with; contact of formal leaders of UYOGRO, wards, and Temeke Municipal; organizing and conducting meetings. Further orientation of the activities undertaken by UYOGRO was made and the author came up with identification of their needs as well as prioritisation of needs.

1.1.1 Objectives of Upendo Youth Group (UYOGRO)

- To create, procure and develop employment opportunities for self-employment, to participate in any economic activity which is directly or indirectly connected or related or supportive or which may be of positive contribution. To cooperate with other groups, individuals, private companies, government institutions and departments, local

governments, international institutions as well as foreign governments that may have interest in the aims and objectives of the UYOGRO.

To engage in such income generating activities aimed at generating income, and to motivate and educate society to understand issues on health, cleanliness and maintaining environment for the aims of protecting various diseases.

From the above objective, UYOGRO has proved the author *Ponna Wignaraja's* belief in his book *"Rethinking Development and Democracy"*.

The author studied the trend of development and democracy of countries of the south after independence among other things and he recognised the two basic values, which are human development and participatory democracy, and argued that the new system shall focus on social change which will ensure material well being to a large number of people. In doing so, it shall produce grassroots response in the form of people's movements and experiment. He further emphasized that, the new social structures shall identify the positive elements, which could bring changes and create consciousness and awareness of people concern at the micro level.

Again author Ponna Wignaraja (2001), pointed out that “..... as the poor and vulnerable groups in the south deepen their understanding of their reality, they also, through greater consciousness raise awareness, action and organization can bring about changes both in their lives and in society that will lead to human development and participatory democracy”. Indeed, UYOGRO has raised consciousness and awareness according to their objectives hence needs supportive measures in order to achieve their goals.

1.2 Justification/Rationale of the Study and Technical Assistance

The technical assistance in this association will lead to institutional development and capacity building through interactive learning between community development practitioner, community based organization and higher learning institutions. The assignment in this group is “monitoring”. The principle purpose of the supply study and technical assistance is to assess the existing status and capacities of implementing its objectives for the benefit of the community. By doing so several measures should be undertaken including monitoring as stated in the assignment, in order to build its capacity. Eventually the project shall have multifold purpose categories as follow:-

- i) Benefits to the would be community based organization:
 - Shall build capacity through technical assistance provided by participant;
 - It fosters institutional and organizational development;
 - Shall encourage the CBO to keep proper records;
 - Shall build officers ability to design and manage sustainable community economic development projects.
- ii) Benefits for the Participant;
- iii) Study shall develop the environment to learn from practitioners and communities in the field;
- iv) Participant would get a room to test and practice skill and techniques during the study;
- v) Study shall provide an opportunity to collect information and verify assumptions through quantitative and qualitative research methodologies:
 - Study shall offer the opportunity to assess the impact of development initiatives on poverty using participatory action research at community level;
- vi) Benefits to the Open University of Tanzania and Southern New Hampshire University:
 - Study shall create the opportunity to learn from CBOs and development practitioners;

- Study will offer the possibility to gather much needed data on community based organizations operating in Tanzania;
- It will create the information to develop a database for community based organizations;
- Study will provide indicators of success for community based organizations on the base of data collected through projects;
- Study will generate the prospect to lead the way in participatory action research in the filed of community economic development.

It should be noted that UYOGRO being registered as an association is now registered as formal community based organization in order to perform and implement its objective in an orderly manner.

1.3 Problem Statement

UYOGRO lacks some status as a community based organization as it was registered only by the registrar of associations. Hence, it has been infringed some benefits which are enjoyed by others CBOs like; sponsorship for training or working capital. They have no legal entity to negotiate grants and aid from various development partners. Indeed, it operates in the lower profile and hence has failed to deliver the desired goals to the community. Thus, the issue of governance comes in the

process through monitoring which is the major assignment to be undertaken.

1.4 Objective of the Study

The main objective of the study is to contribute towards the activities of solid waste management, cleaning and maintaining, land use and town environment, initiate and promote activities relating to the protection of environment in Temeke District or elsewhere to the extent that, non-protection affects Temeke District or other places. By doing so, such an objective would build a capacity of the UYOGRO in order to implement their desired goals.

1.5 Scope of the study

The study has covered Mtoni Azizi Ally neighbourhood based at Temeke Municipal. The scope, as indicated clearly in the work plan, was to provide technical assistance to the Upendo Youth Group (UYOGRO) assignment being monitoring which has focus on activities to be monitored for the duration of 18 months from September 2003.

1.6 Assignment

According to UYOGRO needs assessment, they preferred the monitoring assignment. This involves watching and checking UYOGRO activities over a period of time to see how it develops and making necessary changes or improvements, which will enable them to build the capacity. Accordingly, monitoring assignment started with preparatory measures for registration of UYOGRO as a formal community based organization rather than an association. The assignment started in January by registration of new members in order to qualify to be a CBO and preparation of new UYOGRO constitutions and other documents required for the registration process. Other activities have been monitored as well, including day-to-day works of solid waste collection, responding to cleaning tender documents. Furthermore survey and observation were among the activities, which have been undertaken, as shall be reflected in the data analysis.

CHAPTER TWO

2.0 LITERATURE REVIEW

2.1 Theoretical Review

2.1.1 The Concepts of the State, Civil Society and Solid Waste Management

There is considerable literature and debate on the concepts of state and civil society and their roles in solid waste management. The major question is how the two are related, and how the roles of civil society's constituent groups in democratization should be assessed. Chazzan (1992) defined civil society as that part of society that interacts with the state. This view, however is considered to be too restrictive, as many associations and groups are informal in character and do not strive directly to influence the state, but they are important in the whole issue of governance. Barken et al (1991) saw civil society as comprising those intermediary and autonomous organizations that function and sometimes flourish in the space between the state and the household. In the same vein, Starr (1990) argued that civil society refers to a social space distinct from government and that the government is but one of several institutions coexisting in a pluralist society fabric. Again Weigle and Butterfield (1992, P.I) stated that; "The independent self organization of society, the constituents party of which voluntarily engage in public

activity to pursue individual, group, or national interests within the context of a legally defined state – society relationship”.

Observers of urban governance (that is, the triadic relationship of central government, local government and civil society) in Africa have shown concern with the predominance of central over local authorities. This means that local governments are highly dependent on and controlled by central governments (Stren 1992), particularly in the areas of access to resources and political maneuverability. Furthermore, the relationship between the state and civil society has been an uneasy one, with civil society having gained in importance to some extent as a result of the failure of the state to perform its role. Partly as a result of the failure of the public authorities to perform their duties alternative systems of urban management, embedded in or part of civil society, have emerged or gained in importance, but with little encouragement from the authorities. The central and local governments show a lack of democracy, transparency, accountability, and cooperation with the public in their operations and processes and in their relationship with civil society. Areas of the failure of the authorities include infrastructure investment and maintenance, provision of services provision of shelter and land for development, management of the urban economy, and management of the environment (Stern and White 1989). The problem of solid, - liquid -,

and industrial – waste management has been a major manifestation of this failure.

2.1.2 Urban – Waste Management in Governance Perspective

Waste management refers to the storage, collection, transfer, recycling and final disposal of waste. Solid waste is taken to include refuse from households, waste from industrial and commercial establishments, refuse from institutions, market waste, yard waste and street sweepings. On the other hand, liquid waste includes nonhazardous foul water and sewage generated by urban households and commercial and industrial establishments. Indeed, everyone produces waste which is unwanted but unavoidable. There are many words, which describe waste. Some people call it garbage, litter refuse, rubbish or trash just to mention a few. No matter what name one might call waste, it requires to be handled with care by service providers like the Upendo Youth Group (UYOGRO), the upcoming CBO. In practice, one might ask a question like; what do you do with waste or what do other people do with waste? The answer is; get rid of it all by throwing it away, burying it or burning it. They do not want to keep it because they have no further use for it. However, the disposal of this waste might be a problem for many people due to the fact that, they do not want any waste within their yards, rotting and bad smelling material, but to be collected as soon as possible.

2.1.3 Importance of Governance

It has been observed that, the task of governance is not only the government issue, but also it involves any other public entity. Although governance concepts broadly defined and clearly cover all aspects of the complex and myriad relations between a government and a people, another aspect of governance, a role played by civil society should be equally recognised.

The current conceptualisation of governance sees it as encompassing the totality of the frameworks and processes for exercising state powers and society at large, and the organizations of a society set up, to respond to the state and promote society's interests. There should be interaction between the state and the social actors and those among the social actors. The desire for openness and accountability is reinforced by new awareness of the linkage between economic development and democratic processes (Mbembe 1989). This could be of crucial importance to urban governance in African cities, given the multiplicity of operators on the urban scene, including actors of the civil society who make urban life tick but whose efforts and contributions are often ignored or even impeded by the state.

At the risk of oversimplification, it is possible to see urban governance at a sub national level in terms of a triadic relationship among central government, including national institutions, local government and civil society. Civil society includes the private sector nongovernmental organizations (NGOs) and Community Based Organizations (CBOs).

2.1.4 Waste Management as a Community Concern

Waste management has importance in a governance perspective. High concentrations of population and economic activity in urban areas means that waste generated cannot be disposed of effectively on an individually basis. Waste has public good characteristics due to the fact that, it can be disposed of on public or private land and thus cause a nuisance or become an environmental or health hazard affecting society, although the private households and firms that generate waste may consider themselves to have done their duty by removing waste from their private domains. Waste management benefits the whole community, and any resident can enjoy the benefit of the service without diminishing anyone else's benefit. Thus, waste management stands squarely in the public domain as a public good; and therefore citizens expect the governments responsible for waste management to act and keep the environment clean. Here, the divisions of power, responsibilities, and resources between levels of government and the relationships between levels of

government and between these levels of government and civil society become important. The success of the authorities in waste management (as well as in other public services) hinges on the availability of resources and good governance and it creates legitimacy for the state in the eyes of the public. Failure creates hostility and distances the public from transparency and accountability.

2.1.5 Historical Background of Urban Governance in Tanzania

The matter of waste management is closely tied to the evolution of local government in Tanzania and this issue has shaped the triadic relationship of central government, local government and civil society. The evolution of local government in Tanzania can be divided into four phases; the pre-local-government era (that is, before 1949), the pre-decentralization era (1949-71), the decentralization era (1971–82) and the post-decentralization era since 1982.

The Pre-Local Government Era (Before 1949)

Tanzania as a country had no local government in the modern sense back up to 1946. Administrative power was concentrated in the central government and was shared distantly with native authorities. Major urban areas like Dar es Salaam were managed by township authorities, appointed by the Governor under the then Township Ordinance of 1920

and funded directly by the central government. The Township Ordinance gave the Governor powers to declare an area a township and to make rules for the health, order, and good government of the townships soon after the enactment of the Township Ordinance. Dar es Salaam and other 29 settlements in Tanganyika were declared to be townships.

In the same year Sanitary Rules for Township of Dar es Salaam was published, and these rules became effective from 1st September 1920. These rules gave the Medical Officer of Health powers to ensure the suppression of mosquitoes and deal with sanitary nuisances and in sanitary premises (Government Notice No. 39 of 5th August 1920). They are still used by urban authorities to deal with urban waste, despite the repeal of the Township Ordinance.

The Pre-decentralization Era (1949-71)

By 1946, the agitation for local – authority status for Dar es Salaam that had been going on since the 1930s was finally translated into the Municipalities Ordinance. The central government enacted this legislation with Dar es Salaam in mind and used it to transfer many central government powers and responsibilities of urban management to the Municipal Council of Dar es Salaam, which came into existence in 1949. These included powers for solid waste management and for undertaking

and charging for sewerage and other sanitary services. Lower tiers of local government; that is, town council, country councils and district council could be formed under the Local Government Ordinance of 1953, which was superseded by the Local Government (District Authorities) Act of 1982 for rural authorities and the Local Government (Urban Authorities), Act of 1982 for urban authorities. Like the Municipal Council, these authorities were given powers to raise revenue to make bylaws and to deal with many matters of local government, including waste management. At the time of independence, in 1961, Tanzania had 11 urban councils, but their number grew to 15 by the time of decentralization in 1971.

The Decentralization Era (1971-82)

The essence of this system was to abolish local governments, and put in place the central authority. Essentially the stated intention of decentralization was to transfer some of the central government's administrative and financial authority to the regions and districts. Although its mission was to give power to the people, speed up decision making, and bring about rapid development by stimulating grassroots participation in decision making and planning, all observers agree that the major achievement of decentralization was to take power away from the people and to concentrate it in the central government. However, the

decentralization policy is largely regarded as having failed due to the following reasons:

- Power was usurped by the central government bureaucracy at the district and regional levels. Unlike local authorities, this bureaucracy was accountable not to the people, but to the central government and local areas controlled neither the personnel nor the funds they were allocated.
- During the decentralization period the treasury funded the entire budget of urban councils. Nevertheless, major deterioration occurred in urban services and infrastructures. Services like water, power supply, sewage disposal, refuse collection, road and drain provision and maintenance, land use regulation, fire protection and malaria control deteriorated badly and the public raised an outcry over worsening urban conditions. This deterioration was a result of the destruction of existing administrative arrangements, the replacement of experienced human resources in local services by inexperienced people from the central government, and a heavy bias against urban areas in government budgetary allocations (Mbago 1985; Kulaba 1989). In 1976, the central government was already showing concern over the deterioration of urban conditions and set up a committee to study the situation and give recommendations. As a result of the committee's recommendations, the local authorities were restored,

beginning with Dar es Salaam, under interim legislation in 1978. Permanent legislation restored this and the rest of the councils in 1982.

The Post Decentralization Era (Since 1982)

The constitution of Tanzania stipulates that the national government must establish local government authorities at all levels in accordance with laws passed by Parliament. It further stipulates that the primary objective of the local government is to devolve power to the people. The constitution requires all authorities to involve the people in the development activities, to provide local government services, to maintain law and order and to strengthen democracy.

2.1.6 The Central–Local Government Relationship and its Implications for the Governance of Waste Management

Under current legislation, the central government has a number of controls over urban authorities. The central government confers local authority status on any urban area. The central government appoints senior personnel to run urban authorities, and the Minister for Local Government approves the urban authorities bylaws, budgets, and proposals to tap new sources of revenue or increase existing taxes. The government used to issue directives occasionally which eventually affects

urban authorities. Moreover, several central government ministries and a number of national parastatals have a lot of crucial roles to play in areas under the jurisdiction of urban councils, including road construction, drainage, water and electricity supply, land use regulations and environmental management.

Several observers have decried this situation pointing out that it denies the urban authorities the autonomy they are supposed to have and leads to confusion, conflict, and problems with coordination, control and ultimate accountability (Kulaba 1989). The central–local government relationship has important implications for the governance of urban waste management.

For example, the central government is responsible for approval of bylaws related to urban management, allocation of land for waste disposal, and a lot of the investment is infrastructure, such as drains, sewers, roads and treatment plants, although local authorities can easily be blamed if the central government fails to perform its duties.

2.1.7 The Emergence of Civil Society and its Role in Solid Waste Management

Civil organizations have been an important feature of the social and economic life in Tanzania urban areas since colonial times. Many of these organizations were based on ideas of tribal or hometown identity and of helping new urbanites to cope. These organizations were suppressed during the first decade of independence. The economic problems of the 1980s led to the resurgence of home – area development associations, but an increasing number of these civil organizations are entirely urban and neighbourhood oriented.

Because people identify more and more with urban areas, organizations are cropping up with the aim of addressing local issues. In terms of infrastructure investment and maintenance, groups have sprung up in Dar es Salaam that invest in and maintain roads and other services, for example, civil bodies have emerged to promote and protect the interests of private bus operators and informal business owners. Other such bodies have developed to look after the environment of their areas like UYOGRO. Some of these have benefited from association with donors and foreign NGOs (Kyessi and Shenya 1993; Mbyopyo 1993; Byekwaso 1994).

The relation between councils and these emerging civil associations is lukewarm. In most instances, the municipal councils do not put enough efforts to cooperate with these operators. Many of the self-help efforts lack the legal framework and technical know-how to achieve their goals, and support from the councils would be most helpful.

2.1.8 The Role of the Central Government and National Institutions in Urban Waste Management

Although waste management could be considered a local issue, the central government and national institutions play a big role and carry considerable responsibility in the whole system of urban waste management. The Prime Minister's Office (PMO) is the overseer of all local authorities through the Ministry of State for Local Government. The PMO approves the budgets of local governments and sees them through Parliament. The PMO approves the allocation of funds from the Treasury to local governments and handles any negotiations for external assistance. Moreover, all bylaws made by local governments must be approved by the PMO, such as bylaws to keep the environment clean or to charge various levies. The efficiency of the relationship between the PMO and urban authorities has a major effect on the governance of waste management.

The relevant institution which has played major role in environment issues is The National Environmental Management Council (NEMC), whose main role is to sensitise society on environmental issues, exerts regulation and control where necessary, advises government, and coordinates environmental issues. NEMC deals with all aspects of the environment, including control of pollution with hazardous waste.

It will be clear that the central government has a major role in urban waste management, chiefly at the level of policy formulation, but also at the operational level. Besides, in view of the unsatisfactory situation of waste management in Dar es Salaam, the central government has had to sometimes intervene directly to clean the city.

2.1.9 The Role of NGOs and CBOs

The role of the NGOs and CBOs in waste management in Dar es Salaam is still limited, but it is growing at a good speed. A number of CBOs have been established and others are in the process of formation in communities in various parts of Dar es Salaam City. These CBOs mobilize local and foreign resources to address environmental problems in their areas. Areas of concern have included road and drain construction and cleaning, drainage, tree planting and waste management (Gossi 1994). The SDP is also instrumental in encouraging

the formation of NGOs and CBOs. Already in the area of Hannah Nassif such civil bodies have been formed to clear with waste management. The Tabata Development Fund CBO deserves special mention. It was formed after the successful efforts of the people of Tabata to move the city dumping site from their area and was registered as a CBO in March 1993. It has so far managed to mobilize people's efforts, raise resources and encourage partnerships to construct a bridge, rehabilitate local roads, plant trees and construct storm drains. It was awarded T.Shs.504,000,000/= by the World Bank to help in the construction of infrastructure in the area. It must be pointed out that a number of CBOs have clearly been formed with the aim of benefiting from external funds. Indeed some of the better known CBOs are highly dependent on external agencies for funding and motivation, and this may not be a good thing as such CBOs may lack sustainability if the external funding dries up. However, an increasing number of CBOs are inward looking, and their major objective is not to obtain external funds but to mobilize local resources. Another example of local CBOs which are using local resources towards the initiative of urban environment management is "Boresha Mazingira Kata ya Kurasini (BOMAKU)".

2.2 Empirical Review

2.2.1 Case Studies in Selected Countries

The Study on Solid Waste Management for Mexico City

The project was funded by JICA between June 1998 and June 1999. The research revealed that the amount of waste generated in Mexico City continued to increase along with population growth and expansion of the city limits. As a result, there is an urgent need to secure final disposal sites and reduce waste. Therefore, in that study, they formulated a master plan for solid waste management targeting the year 2010, conducted feasibility studies on selected priority projects and recommended concrete measures to address this problem.

The wastes targeted in the study were the solid wastes treated and disposed of by Mexico City (i.e. domestic waste, commercial waste, street sweeping waste, market waste, and medical waste). Recommendations were made on (1) the introduction of separate collection; (ii) the improvement in efficiency of resource recovery; (iii) the introduction of composting facilities; (iv) the expansion of existing disposal sites; and (v) the development of new disposal sites. Feasibility studies were conducted on (iii), (iv) and (v).

The Study on Regional Solid Waste Management for Adana and Mersin in Turkey

The project was funded by JICA between July 1998 and January 2000. With assistance from the Ministry of Environment, the World Bank and METAP, the Government of Turkey formulated guidelines for measures to improve solid waste management, including a recommendation “to prepare a solid waste management (SWM) plan at the regional level” for Adana City and Mersin City, located in the Mediterranean Region of Cukurova.

In this study, they formulated a SWM master plan covering domestic waste, market waste, commercial waste, street sweeping waste, office waste and medical waste for the two cities, focusing on the above two municipalities. The plan consisted of: (i) construction of a sanitary landfill; (ii) promotion of recycling; (iii) improvement of the efficiency of collection service; (iv) measures for legal reform; (v) improvement measures for medical waste management; and (vi) improvement measures for hazardous waste management. In order to facilitate implementation of the plan, a demonstration was given for improvement of the existing disposal site to prevent leachate contamination and fires in Adana, and for improvement of separate collection and compost quality in Mersin.

Another study was on Regional Solid Waste Management for San-Salvador

The study was funded by JICA Between December 1999 December 2000. The aim of the study was to review the existing solid waste management (SWM) plan for the San Salvador Metropolitan Area and formulate a comprehensive master plan for regional SWM. The study covered household waste, commercial waste, institutional waste, street sweeping waste and medical waste.

Recommendations were also made on the following: (i) compilation and effective use of data related to waste flow; (ii) improvement of collection route and proper operation of collection vehicles; (iii) establishment of transfer stations and a trailer transport system; (iv) institutional improvement measures for the administration of SWM services; (v) forming of a regional administrative structure to support the other 13 municipalities; (vi) independent accounting of SWM services; (vii) improvement in efficiency of fee collection from household users and (viii) introduction of a volume-based fee system for large-scale generators. Furthermore, to promote implementation of the master plan, we conducted a public education campaign to raise awareness of SWM, a pilot project on waste collection in poor areas, and on-the-job training for the improvement of collection routes.

Again another study was carried out at Philippines on Industrial Hazardous Waste Management.

The project was funded by JICA, between August 2000 and November 2002. In the Philippines, industrial waste generation has increased along with industrialization and there is an urgent need for a waste management system to cope with the situation. Although the government has been working to establish such a system, they face problems such as lack of administrative capacity to enforce regulations and insufficient measures to develop companies to treat and recycle industrial waste. Moreover, because there are no companies with the capacity to properly treat hazardous industrial waste, the majority of businesses store such waste on site.

In this study, they examined the current situation regarding the treatment, disposal and management of hazardous industrial waste, constructed a database for managing hazardous industrial waste and estimated the amount of hazardous industrial waste generated, in order to develop basic policies for treating and recycling such waste. In addition, they prepared concrete plans to serve as models including a comprehensive plan for the development of hazardous waste treatment facilities, a capacity development plan for the Environmental Management Bureau (EMB) to enforce regulations, and a plan for promoting private sector

participation in hazardous waste management activities. They also conducted detailed feasibility studies on model projects and provided instructions to EMB on managing hazardous waste using a database and regulating generation sources.

Master Plan on Industrial Waste Management in the Bangkok Metropolitan Area and its Surroundings at Thailand

The project was funded by JICA between February 2001 to November 2002. Thailand has achieved rapid industrial and economic growth centred in Bangkok and the surrounding provinces of Pathum Thani, Nonthaburi, Samut Sakhon, and Samut Prakarn. However, a management system to cope with the increasing industrial waste has yet to be established. In phase 1 of the study, they prepared a master plan and action plan based on the reduction and recycling of non-hazardous industrial waste and made recommendations on necessary standards and regulations. They then prepared an action plan to promote the reuse, recycling and zero emissions of hazardous industrial waste. In addition, they designed and constructed a waste exchange system based on the internet to enable the reuse of waste among factories in the study area, developed a database for managing the factories and supported capacity building for management of the system and database.

The Study on Solid Waste Management Plan for Municipality of Panama

The research was funded by JICA between: November 2001 to March 2003. Based on the 1999 legislative amendment, responsibility for solid waste management in the capital of Panama, the municipality of Panama, was transferred from the central government to the municipality. However, the municipality of Panama faces various problems such as lack of a solid waste management plan, a shortage of human resources, and inefficient waste management. The objective of the study was to formulate a solid waste management master plan targeting the year 2015. Feasibility studies were also conducted on priority projects such as the construction of a new final disposal site and the introduction of a transfer and transport system. In addition, pilot projects were conducted for collection improvement, separate collection, upgrading of an existing final disposal site, construction of a database for solid waste management, environmental education, and introduction of a system for communicating with residents in order to develop the Municipality's capacity to provide waste services.

The Study on Improvement of Solid Waste Management in Secondary Cities at Sri Lanka

The project was funded by JICA between March 2002 and December 2003. In secondary cities in Sri Lanka, solid waste is not being properly managed, causing serious problems related to health, sanitation, and the environment. In this study they prepared national strategies for solid waste management and guidelines for improving solid waste management in secondary cities according to their financial and technical capabilities. Pilot projects including the improvement of collection services, sanitation education, the upgrading of final disposal sites, and waste reduction were also conducted in seven model towns: Negombo, Chilaw, Gampaha, Kandy, Matale, Nuwara Eliya, and Badulla. Through that process, they promoted understanding by decision makers and relevant persons in each village of the concept and methods of solid waste management.

2.2.2 Experience of Solid Waste management in Developing Countries

A research done by Hisashi Ogawa of WHO, Western Pacific Regional Environment Health Centre (EHC), in his paper, which was presented at 7th ISWA International Congress and Exhibition Parallel Section 7, "International Perspective", revealed the following:

In the last 20 year, a number of solid waste management projects have been carried out in developing countries, in collaboration with external support agencies. Some projects were successful in producing lasting impacts on the improvement of solid waste management in developing countries. However, many projects could not support themselves or expand further when the external agencies discontinued their support. A number of technical, financial, institutional, economic, and social factors contributed to the failure to sustain the projects, and they vary from project to project.

Often the recipient countries and cities tend to accept whatever resources are provided to them without due consideration to subsequent resource requirements. The external support agencies have limitations in the amount of resources they can provide and the mandates and modes under which they can operate projects. Sometimes, projects are initiated with specific aims and expected outputs, but their scope is not comprehensive enough to consider external factors influencing them. The external support agencies often do not fully understand socio-economic, cultural and political factors influencing the selection of appropriate solid waste management systems. In other cases, very limited follow-up support, including human resource development

activities necessary to sustain the project implementation, is provided by the external support agencies.

These problems and constraints associated with external support agencies' collaboration with developing countries in solid waste management can be minimized, and the sustainability of such collaborative projects improved by packaging efforts of external support agencies; defining clear roles of relevant agencies and improving their coordination in developing countries; creating key human resources; supporting strategic planning and follow-up implementations; developing self-financing schemes; and raising awareness of the public and decision makers.

2.2.3 Lessons From the Above Studies

The Governments of developing countries have limited funds for solid waste management and must develop measures to reduce and recover the expenditure and increase revenues where possible. They need to turn their solid waste management systems to more self-financing programmes. External support can be effectively used to develop different alternative cost-cutting, cost-recovering, and revenue-raising schemes (e.g., waste minimization, deposit-refund system for recyclable materials, import or sales tax on certain packaged products, collection of

user service charges, etc.) and implement pilot studies on these economic incentive measures.

Private sector participation in solid waste management collection and disposal services is also a way to reduce the financial burden of the government. It can draw not only investment finance from private companies for solid waste management equipment and facilities, but also managerial expertise and technical skills. Experiences in developing countries, which are reported elsewhere, indicate that privately operated services are generally more cost-effective than public sector services. Therefore, the use of private sector resources through a contractual arrangement provides a potential alternative towards self-financing solid waste management.

Effective application of economic incentive measures and private sector resources in solid waste management requires human resources to design and manage such schemes. Aside from human resources development in technical aspects of solid waste management, human resource development in financial planning and management is necessary and often a key to the development of more self-financing schemes.

Effective management of solid waste requires the cooperation of the general public. Lifting the priority of, and allocating more resources to, the solid waste management sector needs the support from decision makers. It is therefore, important to ensure that public and decision makers' awareness and activities are incorporated into the external support package. The aim of these activities is normally long term and it takes some momentum to build up before the effects are realized. But, once the interests of the public and decision makers in improving solid waste management are created, the sustainability of solid waste management projects will be significantly improved.

Enhanced awareness of decision makers may lead to changing national socio-economic and industrial development policies and associated government programmes in favour of improving solid waste management systems in developing countries. For instance, more financial aid and tax incentives may be introduced to encourage the development of recycling industry and business, or labourer protection programmes may be provided to improve wages and working conditions of labourers, including solid waste management workers. Changing national policies in donor countries could also improve ways in which their technologies are transferred to recipient countries.

2.2.4 Contribution of My Study in Solid Waste Management Chapter

We have learnt from previous literature review that most studies were based on urban centre; hence my study will build on the suburban area where a clear picture and needs have been shown in my research. Such research will assist the Municipal Council and solid waste stakeholder to develop and refine the goals and objectives, current waste flow patterns, scoring and operating procedures and assist in the development on an action plan for the amended plan. Furthermore, the research aims at assessing the current status of solid waste management and expects some options advanced to improve management efficiency. Focus was on the following:

- Identification of waste generation sources.
- Determination of solid waste volume and composition.
- Assessment of emerging issues in Temeke, Azizi Ally solid waste management system. Suffice to say that my study is a continuation of environmental care campaign, which eventually will sensitise the appropriate authorities and stakeholders in solid waste management programme. Yet the details of the needed educational campaign are not being adequately addressed.

2.3 Policy Review

2.3.1 The Role of the Urban Authorities in Waste Management: The Legal Framework

Urban councils are charged with most day-to-day duties and responsibilities in dealing with urban waste. These duties and responsibilities are spelled out in a number of pieces of legislation.

Solid waste – The Local Government (Urban Authorities) Act of 1982 gives considerable responsibility to urban authorities for waste collection and disposal. It requires urban authorities to among other things “remove refuse and filth from any public or private place” (s. 55 [g]). Also, urban authorities are required to provide and maintain public dustbins and other receptacles for the temporary deposit and collection of rubbish. Section 55 (i) provides for the prevention and abatement of public nuisances that may be injurious to public health or to good order. Urban authorities are also empowered to ensure that residents keep their premises and surroundings clean. This responsibility derives from the Township Rules, made under the Township Ordinance of 1920. These rules have been retained over time and operative under the Local Government (Urban Authorities) Act. To meet these responsibilities; the DCC drafted a number of bylaws relating to waste management. The most important of

these are the Dar es Salaam (Collection and Disposal of Refuse) Bye Laws of 1993. Other related bylaws include the Dar es Salaam City Council (Hawking and Street Trading) Amendment Bye Laws of 1991 and the Dar es Salaam City Council (Animals, City Area) Bye Laws of 1990.

The Township Rules impose the following requirements:

- Rule 23 requires the occupier of any building to provide a receptacle to store refuse. Receptacles must be maintained to the satisfaction of the city inspectors. Garbage bins should be placed alongside roads for collection.
- Rule 24 empowers the DCC to require a person to remove the accumulated refuse he or she deposits anywhere.
- Rule 25 prohibits the throwing of refuse on any street or in any public area. Sanctions are a fine of up to T.Shs.400/= (Tanzanian Shillings Four Hundred) or months' imprisonment.
- Rule 27 requires the occupier of any plot of building to keep the surroundings free from accumulated refuse.

The Dar es Salaam (Collection and Disposal of Refuse) Bye Laws were passed to enable the privatisation of waste disposal. They require occupiers of premises to maintain receptacles to keep waste and bind the DCC to collect and dispose of waste. Among other things, these bylaws prohibit people from causing a nuisance and throwing or depositing waste on street or in open space not designated as collection points. The DCC may require an offender to remedy the situation.

However, the DCC cannot enforce these rules and bylaws and is itself unable to fulfil its own duties. Moreover, it could be argued that these rules are outdated, having been enacted during the colonial period. They do not reflect the circumstances prevailing today in urban areas.

2.3.2 The Role of the Private Formal Sector in Waste Management

Various firms, industries and institutions have their own in house arrangements for dealing with waste, including the Kariakoo Market Corporation, which handles waste from the largest market in Dar es Salaam, at Kariakoo; the University of Dar es Salaam; the Tanzania Telephone Company; the National Housing Corporation; and the National Bank of Commerce. Some private companies also offer services for solid or liquid waste removal to individuals firms and institutions, but their overall impact is still limited.

2.3.3 The Background of the Privatization of Solid-Waste Collection in Dar es Salaam

Initially, in 1994, the Dar es Salaam City Council (DCC) decided to privatize solid waste collection in 10 wards of the central area of the city. The privatization of solid waste collection in Dar es Salaam is closely related to the activities of the Sustainable Dar es Salaam Project (SDP).

The SDP started its operations in Dar es Salaam under the auspices of the Habitat Sustainable Cities Programme. Its main aim is to bring together the various actors on the urban scene, including central and local governments, the private sector, various donor organizations, and the CBOs, to agree on strategies to address the environment problems of cities.

In August 1992, the SDP organized the Dar es Salaam City Consultation on Environmental Issues. The City Consultation identified waste management as a priority environmental issue to be addressed immediately, recommending that cross sectoral, multi-institutional working groups be established to implement a five point strategy of intervention. This initiative included launching an emergency clean up of the City; privatising the collection system; managing disposal sites; establishing community-based collection systems; and encouraging waste recycling.

To achieve this strategy, five working groups were set up: emergency cleanup; privatisation; management of disposal sites; recycling and community collection. This strategy was revised and currently the focus is on three working groups: strengthening privatisation, strengthening disposal sites and recycling.

With this framework, the SDP was instrumental in bringing about the emergency cleanup of Dar es Salaam back 1993/94 (for which the central government and the donor community provided considerable resources) and the privatisation waste collection in the city centre in 1994. The SDP is an example of how important an impact of foreign institution can have on the governance of Dar es Salaam.

Privatization was made possible after passage of the Dar es Salaam (Collection and Disposal of Refuse) Bye Laws, in 1993, which enable the DCC to impose refuse collection charges (RCCs) on the occupants of premises where refuse is collected. Failure to pay RCCs may lead to a court suit. The bylaws also stipulate that no business licence is to be issued unless RCCs have been paid.

2.3.4 The Role of the Rest of the Emerging Civil Society

All said and done, the DCC together with the private contractor and the formal private sector and institutions, collects only about 10% of all solid waste generated in the city at the mid of 1995. This section looks at the various ways society deals with waste. It is worth mentioning that there has been no major popular protest from the people of Dar es Salaam about the authorities failure to collect waste. Nevertheless, a study of the newspapers by that time revealed that, the press has expressed considerable concern over uncollected waste. In one local daily, the issue of accumulating waste in Dar es Salaam was highlighted at least four times in the month of July 1995 alone (see Majira News paper, of 3rd, 6th, 17th and 24th July 1995).

However, notable protests took place to force the DCC to move from its old dumping place in the area of the Tabata community and to abandon those earmarked for it in Kunduchi and Mbagala, as highlighted below. Otherwise society has learned to live with the inadequacies of the formal system for collecting waste and has put in place a number of ways of dealing with the problem. Some of these are described below.

Partnerships with the DCC

The DCC and waste generators have formed a number of partnerships for waste collection and disposal. The following are examples:-

- A number of business people, especially hoteliers are known to pay the DCC some fees or to give incentives to its workers to collect their waste, as and when required.
- Traders at some markets collect money to hire waste-collecting vehicles. For example, traders at the Buguruni market formed a cooperative (Wauza Mazao Buguruni Cooperative Society). These people operate a fund they collect from themselves, which they use to hire vehicles, including those of the DCC, to collect market waste.
- In some parts of the city, as in the Drivein area, the DCC has set aside a place where waste can be dumped. Waste is collected from the generators by various means, including handcarts. At the dump, the DCC has stationed a skip and two employees, who put together the waste and then burn it. Occasionally the DCC collects the skip and the waste that may have accumulated around its.

CHAPTER THREE

3.0 RESEARCH METHODOLOGY

3.1 Introduction

A number of methodologies have been employed while undertaking this study; Meetings with officials of Upendo Youth Group (UYOGRO) ward leaders, and Temeke Municipal CBOs leaders, field surveys were conducted to observe the activities undertaken by UYOGRO at the following wards; Mtoni Saba Saba, Relini, Bustani and Mtoni Sokoni. The style of self-administered, questionnaires were used to obtain important information about solid waste management and related issues facing community, particularly poor community. Each item in the questionnaire was developed to address a specific objective or hypothesis of the study. The questionnaires were completed by the members of the community within that particular location. Other techniques employed in research include; interview of leaders and household members and discussion with various environmental cleaning stakeholders. Observation of the real situation in the field as well as past experiences and knowledge were part and parcel of the methodology.

3.2 Research Design

The study is typically a case study of a low-income neighbourhood or location in relation to solid waste management in Dar es Salaam City. This location forms only a small area of several suburban centres or locations within Dar es Salaam City with the same problems.

3.3 Units of Inquiry

The major unit of inquiry was Temeke Municipal, Azizi Ally suburban centre. Focus was directed to the subunits, i.e. wards, as mentioned before. People were selected randomly cluster-wise by household members; however, some people's views did not count. The method was selected due to the fact that it is simple and easy to conduct compared to other sampling techniques, like stratified random sampling and simple random cluster sampling: Mtoni Saba Saba, Relini, Bustani and Mtoni Sokoni. Respondents from these subunits came from household members within that particular community.

3.4 Sampling Technique

Purposive sampling has been used to select units of inquiry for the study, the reason being easy accessibility. The exercise involved four wards mentioned early in this report such as: Mtoni Saba Saba, Relini, Bustani and Mtoni Sokoni. Actual respondents from each ward were selected

randomly. Also, round table discussions were made with representatives from each ward, as indicated by the following table:-

Wards Recommendation on Environmental Cleaning Programme

Ward	No of Household Interview	Support Programme	Do not Support Programme	Percentage
Saba Saba	20	17	3	85
Relini	20	19	1	95
Bustani	20	15	5	75
Mtoni Sokoni	20	18	2	90

Source: Author's researched data

3.5 Data Collection Methods

Questionnaires have been used in this research to obtain important information about handling or managing solid waste in that particular area. Each item in the questionnaire was developed to address specific objectives or hypothesis of the study. Open/structured or closed ended questionnaires were formulated for the purpose of this study. The questionnaires were hand delivered to the respondents and thereafter

collected after being completed environmental management awareness and its impact to community were the major themes focused. Also, secondary data were collected through documentary information collected and compiled by various researchers and stakeholders. Included among them were various reading materials available at Dar es Salaam City Council Library; like those of Professor J. M. Lusuga Kironde; on Urban Management Research and other bylaws passed by the urban authorities.

3.6 Data Analysis Methods

Once the questionnaires had been administered the mass of raw data collected were systematically organized in a manner that facilitated analysis. Both qualitative and quantitative analyses were anticipated, thus the responses in the questionnaires were interpreted and assigned numerical values. Coding, entering data and analysis was done using Statistical Package for Social Sciences (SPSS).

CHAPTER FOUR

4.0 PRESENTATION OF THE ACTUAL DATA: ANALYSIS AND DISCUSSION OF FINDINGS

4.1 Overview of Community Based Solid Waste Management as Practiced in Dar es Salaam

Dar es Salaam City, the largest town in Tanzania is a practical example where community based social waste management is being practiced.

Current trend has shown that, solid waste management is undertaken jointly by the Dar es Salaam City Council, the three Municipalities of Ilala, Temeke and Kinondoni and permitted private people known as contractors or franchisees who include NGOs; CBOs and private companies.

The Dar es Salaam City Authorities were not able to meet the continually growing demand for solid waste collection services, before privatisation. Post privatisation, private sector became involved. The privatisation process was the franchise type; therefore the private contractors are franchisees. It means that these franchisees have been given the exclusive right to provide cleansing services in respective areas allocated to them and collect refuse collection charge (RCC) from the residents so served. This refuse collection charge does not have any relation with any other taxes collected by the Dar es Salaam City Council (DCC) or

municipal councils or any other authority. The franchisees provide waste collection services in partnership with the Municipal and City authorities.

4.2 Procedure for Awarding Contract for Solid Waste Management

The procedure starts with municipalities inviting suitable firms, micro-and small enterprises (MSEs) and CBOs and NGOs to apply for provision of solid waste collection services including street sweeping, the collection and transportation of solid wastes, drain cleaning, grass cutting and removal of dead animals along the streets in areas indicated in the tender.

As soon as tender applications are collected from the tender box after the deadline, they are opened and read before the public, after which they are forwarded to grassroots ward authorities, in order to select the successful service provider. They are pre-qualified according to the criteria in the tendering invitation and according to the situation in the area applied for. Successful applicants are recommended to the Municipal Tender Board for final approval, after which contracts are signed for allocated areas of operation.

Road sweeping services are provided under a different contract, the work being paid for directly by the Municipal Councils. All franchisees collect

waste from areas allocated to them. They also sweep main roads in their areas.

Most CBOs operate in lower income areas of Dar es Salaam. They do not own any vehicle, but hire them to haul refuse to dumpsites. We can look at how these CBOs or near-CBO groups are operated, by referring to the following case study: UYOGRO SOLID WASTE MANAGEMENT PROJECT.

4.3 Case Study – Upendo Youth Group (UYOGRO)

- The Upendo Youth Group Operates within the Temeke Municipality, Mtoni Azizi Ally neighbourhood comprising the following wards: Saba Saba, Relini, Bustani, and Mtoni Sokoni. UYOGRO was allocated these places after winning the tender. They collect waste from house to house on fixed days using dustbins and polythene bags. Thereafter, they load the waste in hired vehicles. Each household gets the service three times in each week.
- The group also collect from business places like bars, restaurants and Mwalimu Nyerere International Fair Grounds along Kilwa Road.
- Other duties undertaken by the group are cleaning part of Kilwa Road, about 2km from Mandela Road. Tasks involve removing of sand,

grass cutting and removal of dead animals or broken branches of trees.

- The collected waste is moved to a collection point, which is a place agreed upon by residents and the group to temporarily store waste. The group have several temporary transfer points. After collection the waste is hauled by a hired tractor or tipper or other vehicles to dumpsites.
- Sometimes waste become too much, or vehicles become unavailable at the required time, in such cases UYOGRO contact other stakeholders to help them with transport to transfer waste to the legal dumping sites.
- The Upendo Youth Group collects the Refuse Collection Charges (RCC) or fee for collecting the waste, from each household by physically going from house to house. Sometimes they involve ward leaders to ensure that people pay. There are good customers who pay in the group's office.
- A few customers have been uncooperative; however efforts to negotiate with them are going on. UYOGRO considers court procedure as the last resort.

4.4 Further Analysis of Data

Four wards mentioned earlier Saba Saba; Relini; Bustani and Mtoni Sokoni accommodate about 1900 households with a total population of approximately 23,000 people. These people have been enjoying cleaning services delivered by UYOGRO at fees known as Refuse Collection Charges (RCCs). Currently, average fees collection from households per month is T.Shs.400,000.00/= (Tanzania Shillings Four Hundred Thousand only).

Distributions of fees chargeable are illustrated in the following Table:

Classification of Fees Chargeable

Classification	Fees Chargeable in T.Shs.
Residential house of low & medium standard	500 - 1,000
Residential house of high standard	1,500 - 2,000
Commercial premises	3,000 - 4,000
Service Trade Industries	10,000

Source: UYOGRO Data Base

However, the UYOGRO faces a number of constraints, which include lack of full support from the local government as they were anticipated, though they are in good relation. Observations have revealed that, there is not enough advertisement of the UYOGRO activities to the community. Some community members do abuses the activities undertaken by the UYOGRO.

Despite the above-mentioned constraints, the members are aware of environmental management as most of them are ready to pay Refuse Collection Charges (RCCs) promptly, as evidenced by responses to the questionnaire sent to the community members.

Another assignment which is currently undertaken by the UYOGRO, is the management of the 2km part of Kilwa Road; weekly paid labourers attend the road three times a week. Various methodologies have been used interchangeably in order to make sure that community participation is observed. Mtoni Azizi Ally has been grouped into four wards namely; Saba Saba, Relini, Bustani and Mtoni Sokoni.

4.5 Survey Results

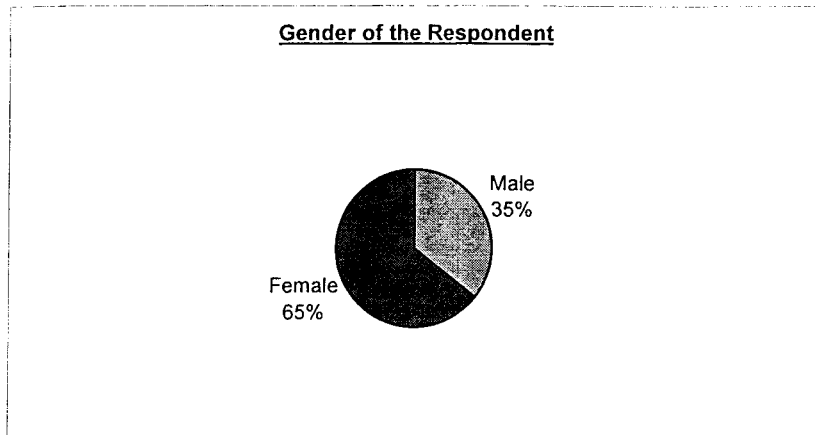
Field surveys were made using random sampling by administering the questionnaire to the community to get their views on environmental caring and management. A total of 51 questionnaires were sent to four wards mentioned before namely: Mtoni Saba Saba, Relini, Bustani and Mtoni Sokoni. The objective was to test the awareness of the community in the number of issues with regard to environmental care and management. Among issues which have been tested according to the 51 questionnaires already tested and analysed include:-

- i) Gender participation in the exercise of environmental cleaning.
- ii) Community views on environmental status in their community.
- iii) Measures taken so far to improve their environment.
- iv) Age of the respondent.
- v) Education of the respondent.
- vi) Whether community of that particular area knows the UYOGRO and their activities.
- vii) Whether the UYOGRO's environmental activity is accepted by the community.
- viii) Examining the cleaning activities at that particular area.
- ix) Whether stakeholders of that particular neighbour are tenants or landlord.

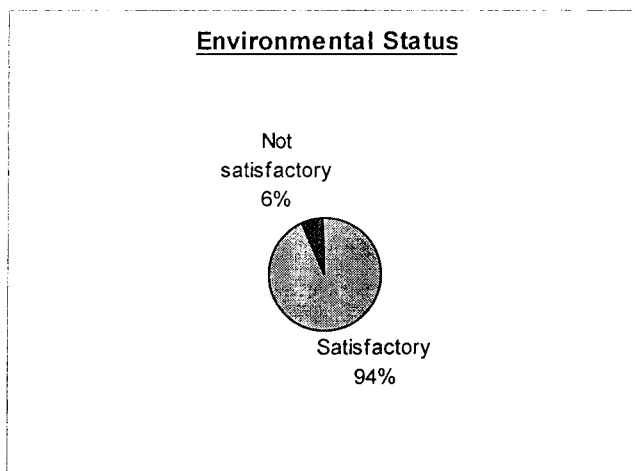
- x) Testing of awareness as whether environmental care is solution to health hazard.
- xi) Whether community is ready to contribute resources and other service charges arising from the assignment of solid waste management.
- xii) Whether ready to allow UYOGRO to continue with services.
- xiii) Whether community had training on environmental issues.
- xiv) The general remarks on environmental care.
- xv) Questionnaire also tested the occupation of the member of the community.
- xvi) Also incomes of the community members have been analysed.

Data Analysis

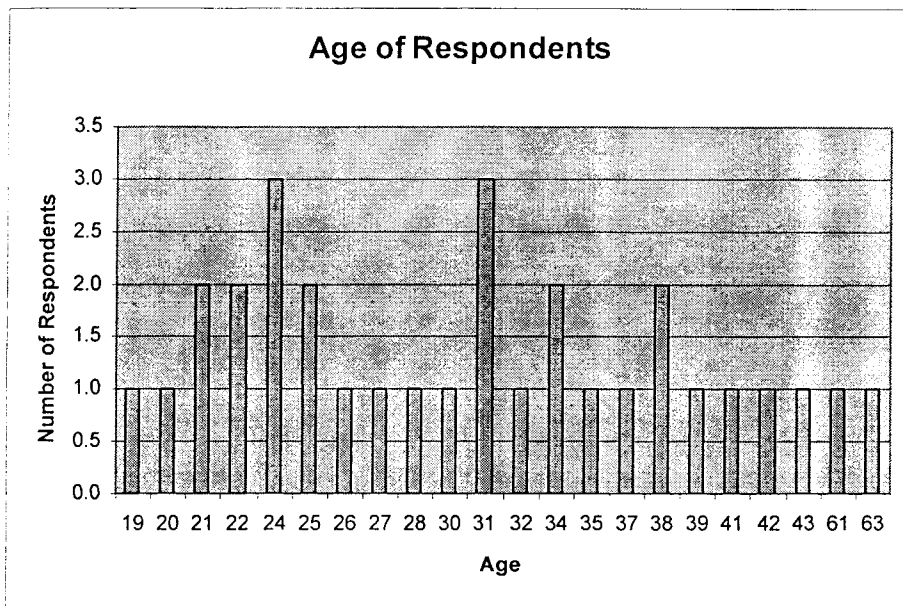
This analysis is based on 51 questionnaires sent to the community to test their awareness and commitment towards waste management programme. According to the analysis, gender response revealed that 35% of the male of the surveyed sample support the programme while women support it in a large number as women score 65%. The analysis has shown that, women are more active in the programme of solid waste management and environmental caring as per the following chart.



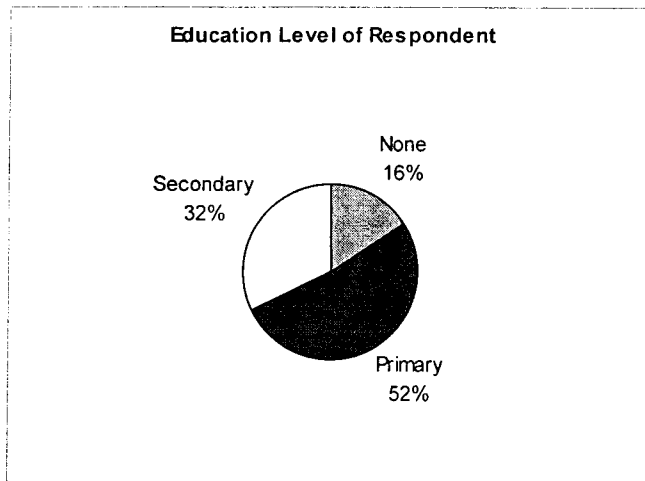
Again assessment of initiative undertaken so far by UYOGRO of solid waste collection and general environmental cleaning revealed that 94% of the sample size indicated their satisfaction towards efforts undertaken so far, while 6% of the sample size were not satisfied with the current status of environment. Refer the following chart.



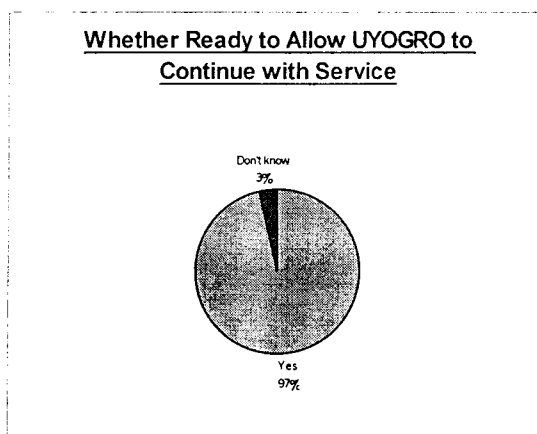
Furthermore, aged people above 30 years are more supportive of the programme as they scored 51.5% compared to young people below 30 years who scored only 45%. Refer the following bar chart.



Again, education impact on environmental management was tested and this revealed that, people who have no formal education background are not active, or do not much support the programme, as that category scored 16% compared to those with formal education programme. Primary school graduates scored 51.6% while those of secondary school background scored 32.4%. Refer the following chart.

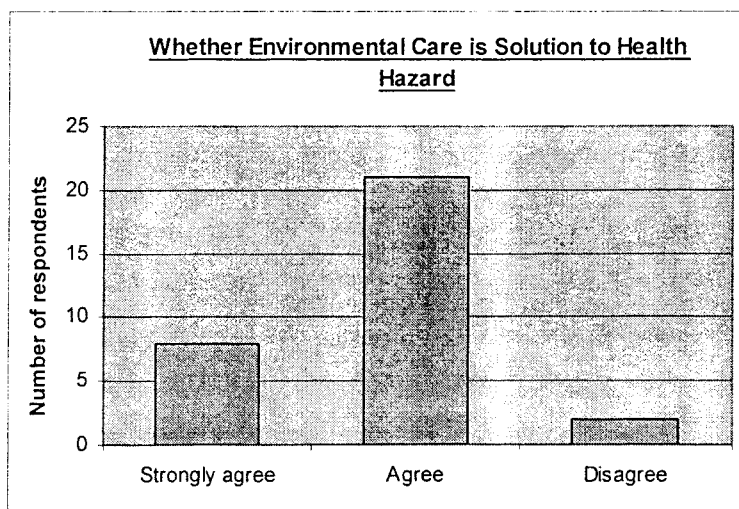


Again research revealed that all people surveyed know Upendo Youth Group and their activities and 97% of the population sample accept them while only 3% reject them. People recommend them to continue with cleaning work as per the following chart.



Assessment of solid waste management in that particular area revealed that 41% of the sample population recommended as well done; 57% fairly done and 2% suggest some improvement on the assignment as they were not satisfied with the level or standard reached so far.

Again, awareness was tested on whether people knew that environmental care could be a part of the solution to their health hazards at present and in the future date; at least 33% strongly agreed while 63% also agree on the concept. However 4% of the sample population disagree. Refer the following bar chart.



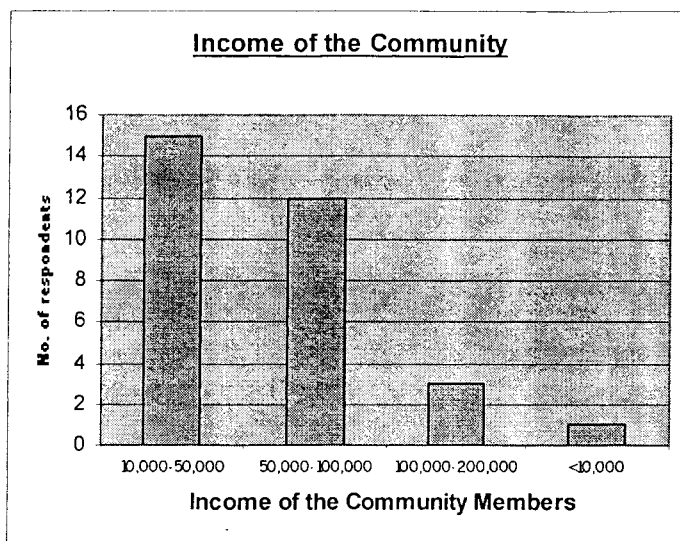
Community participation towards waste management programme was seen clearly in their willingness to contribute refuse collection charges, as

94% are ready to contribute while only 6% are not ready to pay for unknown reasons.

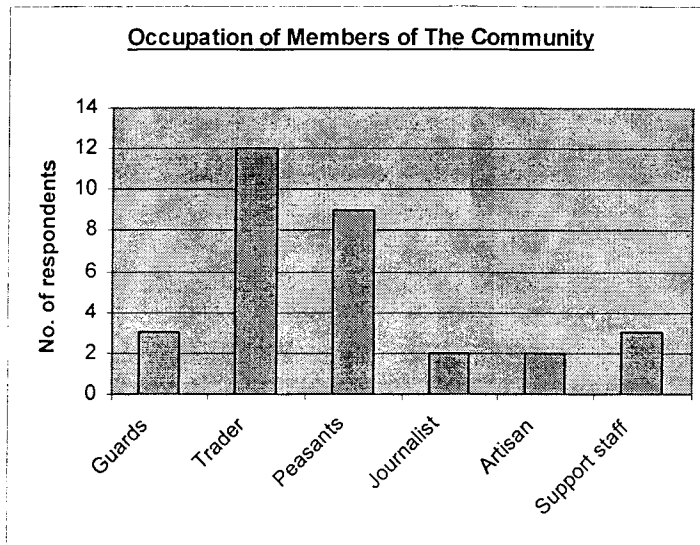
Of the total number of people interviewed, 51.6% are tenants to the houses they are living in, while 48% are landlords, i.e. people owning land and buildings thereon.

Assessment of the training package to the members of community on environmental management issues indicated that only 19.4% of the people interviewed had minimum training either through meetings, seminars or radio programmes, while 80.6% have not yet received any training at all.

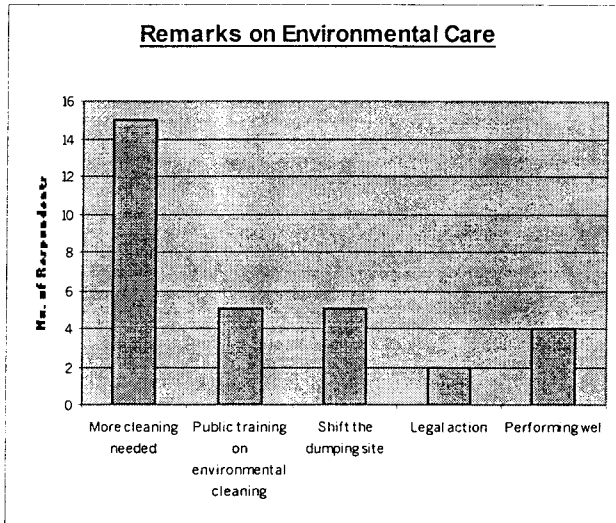
Income of the community member indicator towards environmental management indicated that only 3.2% of the people with income less than T.Shs.10,000/= participated in the programme, while 48.4% of the people with income between T.Shs.10,000/= – T.Shs.50,000/= participated; and 38% people with income ranging between T.Shs.50,000/= – T.Shs.100,000/= support the programme and 9% of the people with income between T.Shs.100,000/= – T.Shs.200,000/= support the programme, as per the following graph:



Another testing was based on occupation of the members of the community. Out of our sample population; those engaged in guards support by 9 – 7%, trade 38.7%, peasants 29.0%; other workers like journalists and artisans 13% and support staff 9.7%. In this research traders are more aware and supporters of the programme. Refer the following graph:



General remarks on environmental management in general, and solid waste management in particular revealed that people have different views. About 37% suggest more cleaning is needed; 20% request training in environmental management; 14% suggest the shifting of the dumping sites from Mtoni to far away places; 12% suggest legal action to be taken against environmental caring defaulters and 14% recommended that activities of environmental management are going well. Refer the following graph:



Suffice to conclude that environmental issues are community responsibilities, and should be dealt with by all members of the community as stakeholders. This has been revealed by the general awareness of people, as evidenced by surveys at Mtoni Azizi Ally, Temeke Municipal, Dar es Salaam City.

Due to that awareness, about 96% of the surveyed population suggested that UYOGRO is doing well on environmental management which has been started and recommended support to the CBO. Also, leaders of wards and the municipal are supporting UYOGRO. Thus, more capacity building to that organization is needed in terms of moral and material support in order that it perform well this task which is the issue of

individuals, the community and the national and international communities.

Solid Waste Composition and Generation Rates

The amount and the composition of the solid waste at the different locations differ. Offices and learning institutions or schools, produce a lot of paper waste, while restaurants and hotels produce a lot of food leftovers. Bars usually produce a lot of empty bottles and cans and households often produce a bit of everything. It is possible to find how much waste and what kind of waste is produced by a certain industry, shop or any business entity, school or household. All this information is interesting to people who collect and dispose waste. They need this information to decide on what type of equipment and facilities should be bought. For example, the temporary storage places which include concrete the transfer box at a communal collection point, collection points and transfer stations, should have enough capacity. Otherwise waste will be stored or dumped in the surroundings of these facilities, which pollutes the area.

Waste collectors are also interested in the composition of the waste. The composition of the waste will define how much the waste will weigh by volume unit. For example, soil or construction waste like bricks and

concrete is heavy, whereas paper or maize stacks are light. The kind of waste and the expected weight have to be considered when deciding what kind of transport equipment is most suitable.

Another reason why waste collectors are interested in the composition of the waste is because some of it may be harmful or dangerous (hazardous). People could cut themselves on the sharp edges of metal and broken glass or get affected by chemicals mixed with waste for several reasons, including recycling.

Waste Generation Rates (WGR)

The amount of waste generated is found in the form of waste generation rates. Waste generation rate means the weight and volume of waste produced per unit household or per person or per business entity or per a known area, in a certain period of time.

Waste collectors need to know the waste generation rates in their area of operation, to help them plan for the collection and dumping or disposal of waste. Generation rates also help to know the number and types of waste collection equipment and tools and the waste storage and disposal facilities they will need. The rates also help to determine the frequency of collection or how often waste should be collected from households in a

certain area/street or compound. Stakeholders should also need to know the waste generation rates so as to design or plan the best route to follow when they are collecting waste from households.

In order to estimate the weight and the volume of the waste per customer in a given period of time (per day, per week or per month), one will have to collect waste samples from householders and businesses in a certain community. Asking people to store their waste for a fixed number of days or a week can do this.

One can give them a bag to store the waste in during this period. Afterwards you collect the bags with waste from these people. Then one will have to weigh the waste samples to see how much is thrown away in the selected period and you have to check what kinds of waste these people have thrown away.

Some studies have been carried out before in Dar es Salaam by JICA in 1996 to estimate the weight, volume and composition of waste. To that purpose one exercise was done in 1996 in different parts of Dar es Salaam. It was found that the domestic waste generation rates vary between 0.36 – 0.69 kg per person per day and waste generation 2,500 tonnes per day.

Waste Composition (%)

Component	Household	Restaurant	Institutions	Others
Kitchen	42.0	93.4	9.2	0.8
Paper	3.1	1.9	71.5	71.8
Textile	1.2	1.2	2.6	2.5
Plastic	2.2	1.7	6.1	8.4
Grass & Wood	25.3	0.8	0.9	1.5
Leather & Rubber	0.9	0.0	0.0	0.5
Metal	2.0	0.5	4.1	5.3
Glass	3.5	0.6	3.3	0.0
Others	19.8	0.0	2.4	9.4
Total	100	100	100	100

Source: JICA 1996

Calculating Waste Generation Rates

CASE STUDY: THE UPENDO YOUTH GROUP

Family/Household Name	Kg Collected	Kg per Day	Kg per Person per Day
Family; Nassor Salehe (6 people)	18 kg	$18/5 = 3.6$	$3.6/6 = 0.60$
Family; Jamila Hussein (8 people)	36 kg	$36/5 = 7.2$	$7.2/8 = 0.90$
Family; Grace Thomas (3 people)	16 kg	$16/5 = 5.3$	$5.3/3 = 1.77$
Family; Ramadhani Limbega (9 people)	33 kg	$33/5 = 6.6$	$6.6/9 = 0.74$
Family; Jane Ngoti (5 people)	24 kg	$24/5 = 4.8$	$4.8/5 = 0.96$
Total of 5 Families	127 kg	$127/5 = 25\%$	

Source: Author's Researched Data

The case study indicated that; 5 families produced 127 kg in five days. This means that they produced 25.4 kg per day. This figure was divided by 5, i.e. for 5 families, and obtained amount of waste generated per family per day.

Average Waste Generation Rate = $25.4/5 = 5.08$ kg per Household per Day

From the table above, the group noted that the amount of waste generated per family per day can differ considerably and 5 households might be too small a number to obtain a real average value. For example, the family of Jamila Hussein collected 7.2 per day; whereas the family of Nassor Salehe collected only 3.6 kg per day.

It has been observed that, not only the amount of waste generated per family differs, but also the amount of waste generated per person per day differs per family. From the findings one may argue that, such a situation arises from many factors like the income level of the family (more money, more waste produced), the size of their plots (sweeping coverage), etc.

Waste Generation in the Area of the Case Study

From the study, the Mtoni Azizi Ally neighbourhood has 1,900 estimated households. Thus, they can estimate that; they collect $1,900 \times 5.08 = 9,652$ kg of waste per day in that particular neighbourhood. Given such a high rate of waste generation at that particular neighbourhood, UYOGRO should be empowered with enough equipment.

Gender and Waste Management

From the study, I have learned a lot from gender perspective towards solid waste management. Due to gender roles and myths, women and men do have different attitudes towards solid waste. In many tribes or communities, women and children have the responsibility of keeping the family courtyard clean, taking out the garbage and dumping it somewhere.

Women also appear to be very creative in recycling and re-using waste in their own houses, especially in the low and middle-income families. The following are examples of materials that are reused or recycled by households:

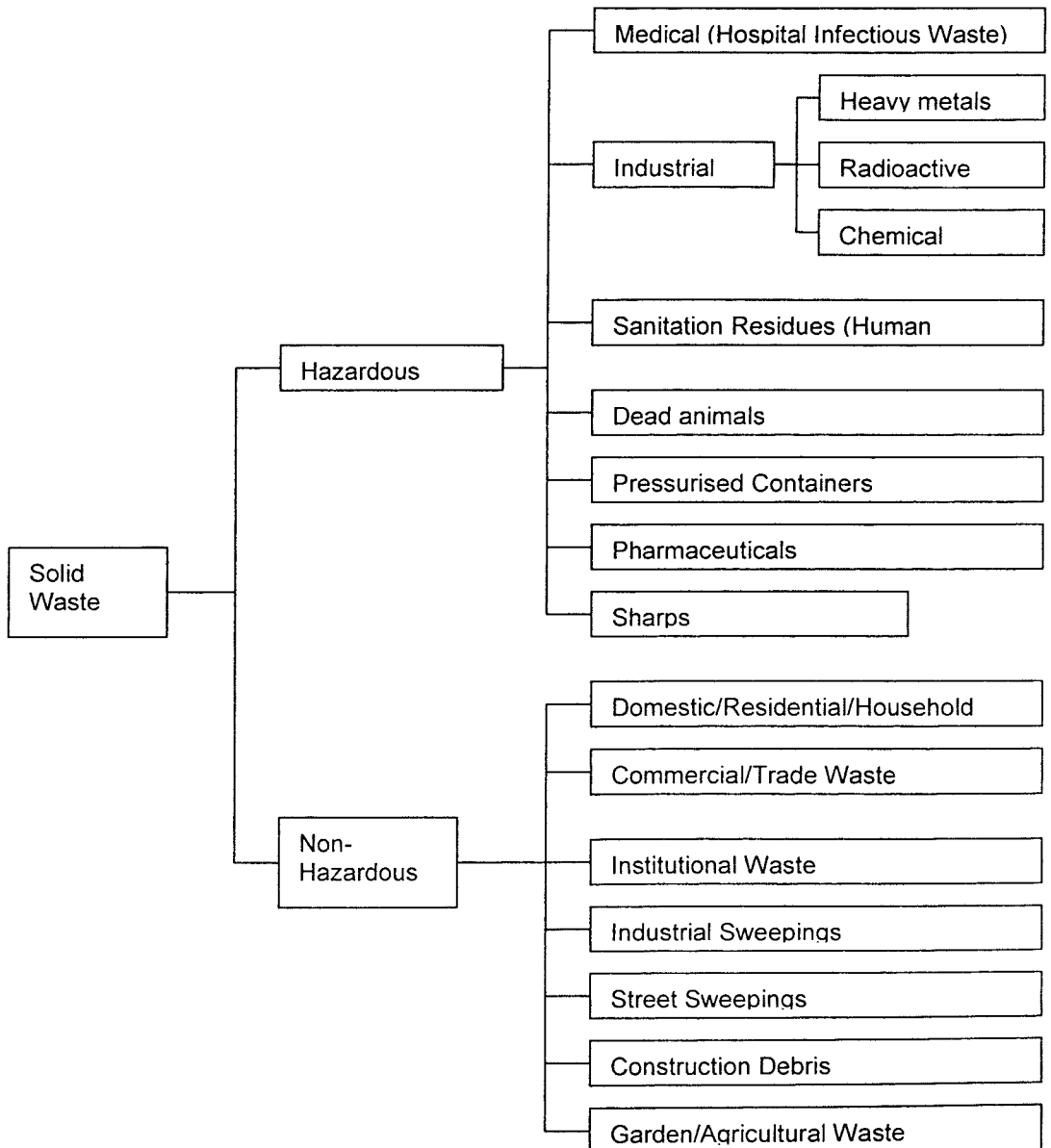
- i) Glass bottles and plastic bottles are washed and reused for storing cooking oil, drinking water, salt, sugar, kerosene, local beer, etc.
- ii) Newspapers and other waste paper are used for wrapping things like buns, covering school exercise books, lighting of cooking fires, and toilet papers, etc.
- iii) Food waste is collected to feed livestock and used to make compost.
- iv) Empty cooking oil containers and paint tins are reused as plant or flowerpots.
- v) Plastic and paper bags are reused as shopping carrier bags.

Indeed, women are playing a greater role in the issue of solid waste management considering the few roles played by women in most households, cleaning the bedroom; sweeping the kitchen; cleaning the sitting room, wiping dust from windows/furniture; removing spider webs from the house, removing garbage from the kitchen; storing garbage at home; sweeping the yard or compound around the house; removing waste from the compound of a house; reusing waste, i.e. bottles, tins, plastic containers, boxes, etc. at home; digging or preparing a ditch for dumping garbage from home; burying of garbage at or near home; collecting waste from households to collection points or illegal dumps;

paying for waste collection services; doing voluntary community cleaning; pulling/pushing handcarts with waste; sweeping of roads/streets, loading of waste onto vehicles and so many other roles.

Types of Solid Waste According to Source.

Different Types of Solid Waste



Source: Technical Training Manual Draft Report, 2004 prepared by the Dar es Salaam Institute of Technology.

4.6 Findings

4.6.1 Ineffective bylaws enacted by the Municipal Council

Among finding is that, the 1994 bylaws have many shortcomings which could not be used for the 1998 privatisation of waste management in Dar es Salaam City. Such shortcomings which brought some negative effects on the whole issue of waste management are:-

i) Jurisdiction coverage of the Refuse Collection Bye Laws:-

- These bylaws covered an area of jurisdiction in 10 wards in the City Centre. The wards were namely; Upanga East, Upanga West, Kivukoni, Kisutu, Mchafukoge, Gerezani, Kariakoo, Jangwani, Mchikichini and Ilala.
- The Municipalities of Temeke, Kinondoni and most of Ilala wards were not covered.
- In these areas no defaulter(s) could be brought to court of law for failure to pay Refuse Collection Charges (RCCs).

ii) Small Refuse Collection Charges

The RCC rates did not conform to the current economic rates. For instance, charge for a residential dwelling in the mentioned area was T.Shs.150/= per month.

They did not cover operation costs, to the extent that it was practically impossible for any waste contractor or franchisee to deliver better Solid Waste Management (SWM) services.

iii) Punishment/Fine

The fine imposed against defaulters of refuse collection bylaws is very small. "Any person refuses or fails to comply with any provisions of these bylaws is guilty of an offence and on conviction, shall be liable to a fine not exceeding T.Shs.5,000/= (Tanzanian Shillings Five Thousand only).

iv) Poor Enforcement of Collection and Disposal of Refuse Bylaws

The bylaws are also poorly enforced as there no proper machinery to enforce the existing bylaws, for instance, to arrest people who throw waste products in streets, footpaths, along the roads, etc.

4.6.2 Lack of Enough Equipment

Again, findings revealed that the major problem facing UYOGRO is lack of enough working tools like brooms and collection carts and high costs of hiring other equipment like motor vehicles or tractors to take the wastes to the dumping sites.

4.6.3 Inability to effectively collect the wastes which are produced in the neighbourhood at high rates

The Azizi Ally neighbourhood comprising of 1,900 households with estimated 23,000 people is producing waste amounting to 9,652kg every day. Given such a high rate of waste generation, UYOGRO could not afford to collect wastes which are being produced in that particular area.

4.6.4 Lack of enough activities to ensure UYOGRO's sustainability as a CBO

We have learnt from this research that the monthly waste collection fees and road cleaning charges are in the tune of T.Shs.1,080,000/= only. Such income per month could not guarantee the survival of UYOGRO as a CBO. Instead, it should look for other productive activities which will generate income to ensure its sustainability.

4.7 Recommendations

4.7.1 Ineffective Bylaws

From findings, some problems like breaking the Township Ordinance are policy issues which could only be implemented by the appropriate authorities. However, UYOGRO as a stakeholder is advised to continue reminding the authorities of the problems or difficulties which are caused by non-implementation of relevant laws.

4.7.2 Lack of Enough Equipment and Sustainability Activities

It is recommended to take appropriate measures to help UYOGRO to acquire their own equipment, as shall be explained in the implementation part. It is also recommended to expand UYOGRO's activities from just solid waste collection to other productive projects or activities like: vegetable and fruit cultivation in suburban areas at Nkuranga where they can acquire land at low cost. Expansion of UYOGRO activities will ensure its sustainability as CBO.

4.7.3 Inability of UYOGRO to Collect Waste

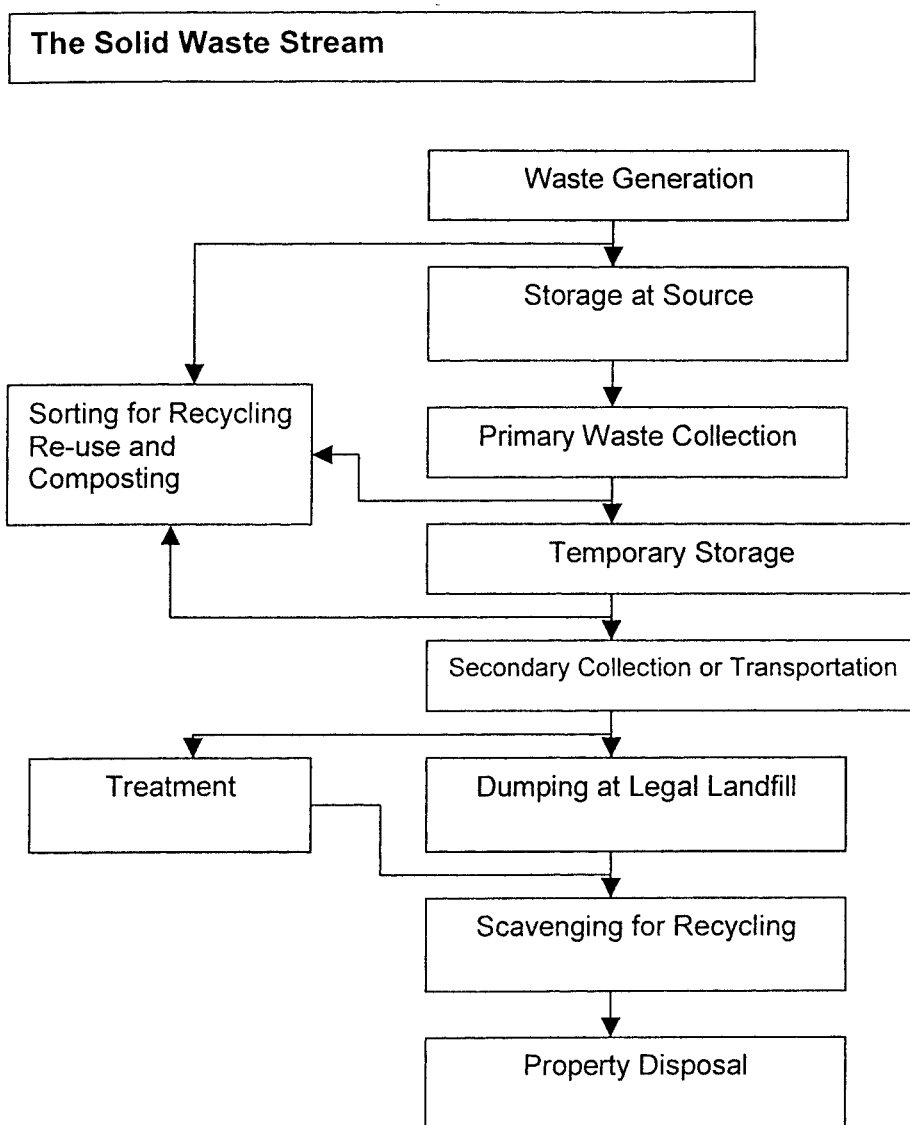
In order to reduce waste collection costs, which are T.Shs.400,000/= per month, as we learned from this study, UYOGRO is advised to adopt a solid waste management system. When solid waste is generated at the source and is thrown away by its user, several steps will be necessary before reaching the disposal site. These steps are called the solid waste management system.

Recommendation is hereby given to UYOGRO to follow the three main steps in the solid waste management system namely:-

- Solid waste storage;
- Solid waste collection and transport;
- Solid waste disposal.

These operations depend on each other. However the success of the solid waste management system depends on the frequency of collection, transport and disposal. Waste is usually stored somehow, some way, and often it is stored at least twice before it can be dumped at the landfill. For example, the people will store the waste for some days in their homes. The contractor or service provider collects this waste with small handcarts and stores it at a transfer point until it is enough for a truck to transport to the landfill.

This being the case, therefore, recommendation is made to follow the solid waste stream as follows:-



Source: Technical Training Manual, Draft Report 2004, Prepared by the
Dar es Salaam Institute of Technology

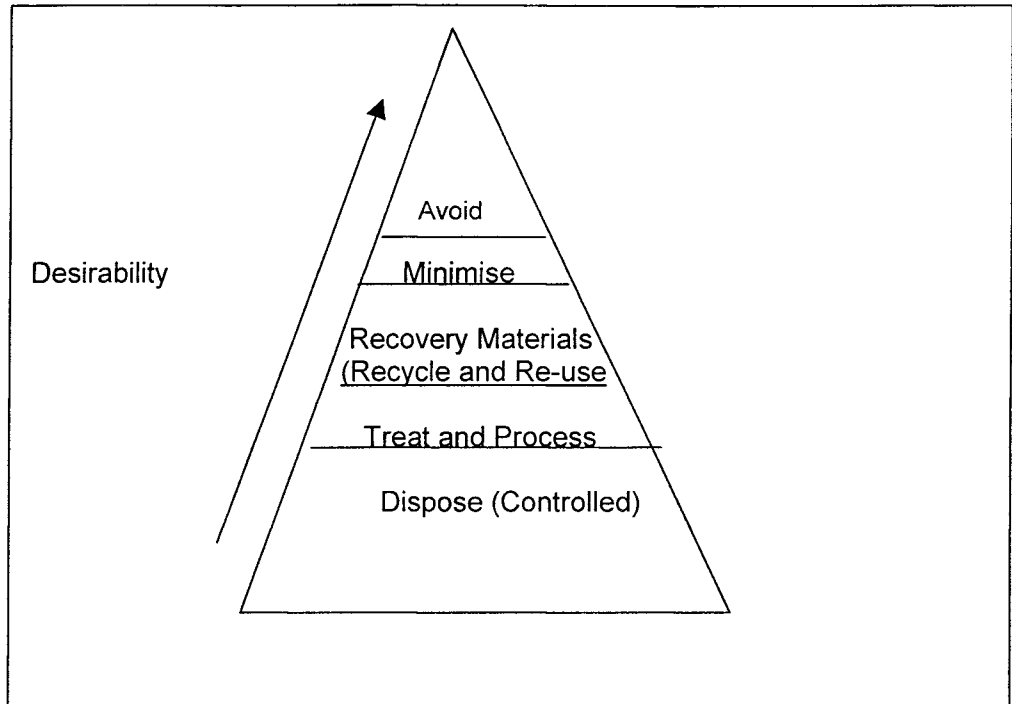
This being the case therefore the whole process of solid waste management shall lead to the so-called “The Solid Waste Management Hierarchy”.

The Solid Waste Management Hierarchy

The solid waste management hierarchy represents an approach to solid waste management which prioritises the various options in dealing with solid waste. According to this hierarchy, optimisation of any SWM system means focusing on moving it up the hierarchy, away from disposal into the direction of waste avoidance.

Refer the following illustration:

+



Source: Technical Training Manual, Draft Report 2004, prepared by the
Dar es Salaam Institute of Technology

From this illustration, one can see that avoidance of waste generation is the best option. The second best option is to minimize the amount of waste one generates. The third most desirable option for dealing with solid waste is the recovery of materials by practicing recycling and reuse where possible. Crude dumping of solid waste is not considered to be an option in a SWM system and is therefore, shown outside the pyramid. It

is not part of the pyramid. It is not part of the hierarchy because it represents an unsuitable and undesirable SWM option.

Therefore, disposal is the first step on the SWM hierarchy. It is the most practiced option for Municipal SWM, in which the solid waste is disposed of on a Municipal dumping site. Take note that even in highly sophisticated SWM system there will always be a portion of the waste that will need to be disposed of. The landfill (dumping site) is therefore an essential component of any SWM system. Preventing waste from being produced is clearly the first goal in the hierarchy.

Waste minimization, means not generating unnecessary waste. However, waste minimization is not a simple technique, which can be applied universally. It is an attitude of mind and requires commitment from all sectors of society. Waste minimization is first of all a technique for industries. Much can be achieved by good housekeeping and input materials management within the factory with little or no investment and probable cost savings. The other techniques which may be used involve more fundamental changes-input materials, product design and process changes. The success of any such waste minimization scheme will depend, however, on the commitment of management, and governance style.

In the households, there are also some opportunities. It is recommended that care be taken when purchasing goods and appropriate amounts and sizes be chosen. Buying large tins of paint to do a small decorating job or buying larger amounts of food than can only be consumed while fresh are two examples of unnecessary waste creation. Individuals can reduce the amount of waste they create by buying fewer products, and by reusing items. Empty tins and jars make good storage; yoghurt pots are ideal for seedlings. It is wasteful to demand new items like clothes and new furnishings simply to follow fashion trends when the current articles still have useful life left in them. Not accepting unnecessary plastic bags, or wrapping papers and other containers when one going shopping is another way of avoiding bringing waste to households. In this way the amount of waste one generate to his/her home will reduce.

CHAPTER FIVE

5.0 IMPLEMENTATION

5.1 Introduction

Implementation implies carrying out what has been planned. Project implementation involves a number of activities. Implementation in my case study shall focus on some findings and recommendations suggested in the previous chapter. This shall be done on short term and long-term basis in order to build UYOGRO's capacity.

My implementation stages shall be as follows:-

1. Registration of UYOGRO as a legal community based organization.
2. Establishment of UYOGRO organizational structure in order to manage its activities well.
3. Preparations of UYOGRO business plan to enable it to acquire working equipment and build capacity to undertake other productive activities.

5.2 Registration of UYOGRO as a Legal Community Based Organization

In order to build the capacity of the former UYOGRO social group, this important step was taken to register it according to the law of the country, a step which was implemented on 14th December 2004. This action is now putting plans, visions and objectives into practice. This is the main step, whereby prepared plans and visions could now be carried out formally. We know that the building of organizational and institutional capacity is an essential development intervention towards the strengthening of any civil society. Indeed, it is the heart of development practice.

UYOGRO officials recognize the importance of capacity building for development, as they have appreciated the registration of UYOGRO as a civil society. Refer copy of their letter with Reference No. UYOGRO/V.1/05/08 dated 25th January 2005 to the author of this report. Registration of UYOGRO as a legal community based organization concurs with the classic development cliché attributed to Confucius: "Give a man a fish, feed him for a day; teach him how to fish, feed him for a lifetime".

The first requirement for an organization with capacity, the “prerequisite” on which all other capacities are built, is the development of a conceptual framework, which reflects the organization’s understanding of the world. This is a coherent frame of reference, a set of concepts which allows the organization to make sense of the world around it, to locate itself within that world, and to make decisions in relation to it. Thus the objective of registering UYOGRO was attained and was brought to CBO’s charts or a position of understanding their environmental activities in collaboration with other stakeholders.

Note that a number of groups, institutions and individuals in the community will be involved in implementing various activities carried out by UYOGRO. Thus constant coordination is necessary to prevent duplication of activities, promote efficiency, and reduce costs. Appropriate managerial actions have been taken in order to respond to different situations. Such actions involved preparation of a new constitution, which will consider community participation, transparency, and rule of law.

Also, many people from different status have been involved in CBO as members. Remember that, before registration as a CBO, UYOGRO had only 6 members. Now about 24 members have been registered in a participatory manner. Again UYOGRO has managed to involve area local government leaders in their activities when they need them. This being the case, they have managed to mobilize more jobs from Temeke Municipal Council and other stakeholders. Further details of managerial techniques developed for UYOGRO shall appear on organizational structure in the following topic.

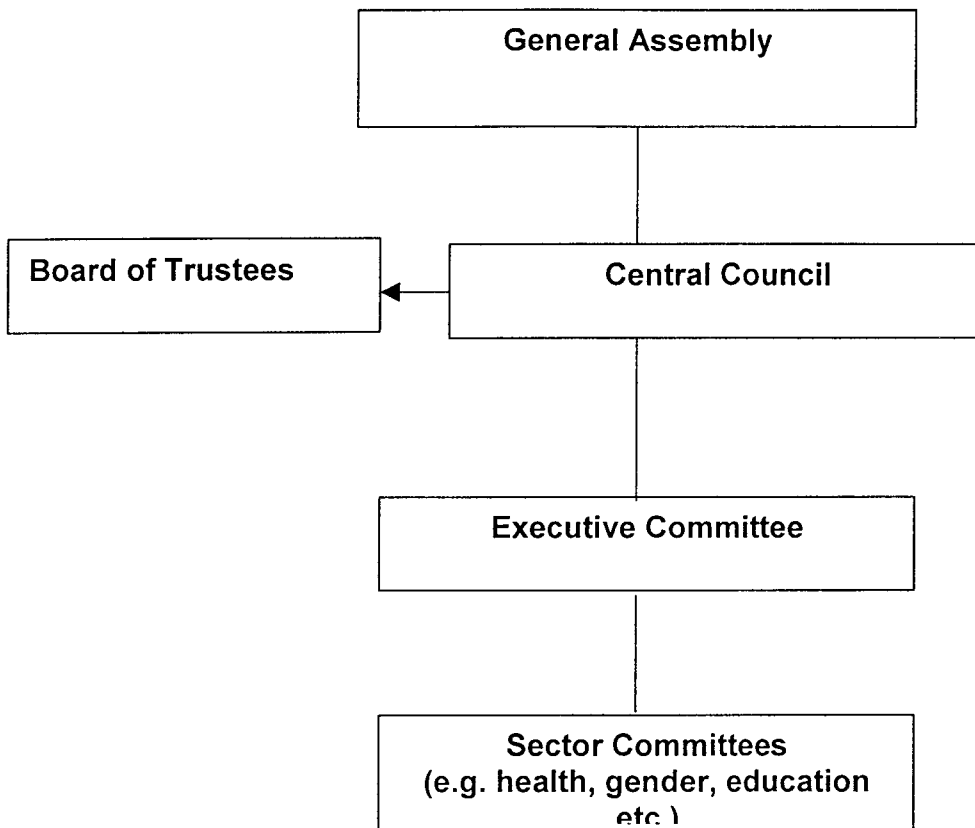
5.3 Establishment of UYOGRO Organizational Structure and Management

After the registration of UYOGRO, it is important to put in place a management structure capable of:

- Directing and observing activities
- Establishing contacts and consulting with political and electoral administrations
- Recruiting and training personnel
- Managing materials, logistics and information matters
- Handling any confrontations on political or administrative issues

Refer the following summarized UYOGRO organizational structure.

UYOGRO ORANISATIONAL STRUCTURE



Source: Author's proposal

Functions of each organ are as follow:-

- **General Assembly**

Is the main decision making organ, approving policies, financial plan, budget and reports. Its chairperson is also the chairperson to two

other organs of the organization, i.e. Central Council and Executive Committee.

- **Executive Committee**

This organ, consisting of five members, is the overseer of the activities of the organization.

- **Central Council**

This is the policy formulation organ and monitor sector committees also are the link organs to the Board of Trustees on crucial matters. Members of the Central Council include five members of the Executive Committee plus six other members elected by the General Meeting.

- **Board of Trustees**

This organ consisting, of 3 persons, is the caretaker of UYOGRO properties.

5.3.1 Expected Impact, Outcomes and Output of Good Organizational Structure:

- **Expected Impact**

Increase in capacity to respond constructively to community issues by working together and acquiring a higher control over resources and the decision making process.

- **Expected Outcomes**

- 1) Increased implementation of good governance and democratic practice by the community based organization.
- 2) Enhanced good citizenship competencies and use of democratic practices by youth, women and children in the target areas.
- 3) Increased capacity of the UYOGRO in the areas of training, research and advocacy.

- **Expected Output**

- 1) Increased capacity of the CBO to carry out key roles such as policy formulation, fundraising, public relations, financial oversight, lobbying and advocacy and adoption of mechanisms to obtain appropriate input from stakeholders in order to be more representative of communities.

- 2) Mechanisms development to guarantee participatory and accountable management and leadership practices.
- 3) Recognition by CBOs of their stakeholder/constituencies as partners and integration of needs assessments into all planning and review processes.
- 4) Policies of the CBO to reflect more democratic and gender sensitive values.
- 5) Development of CBO ability to establish and strengthen alliances with its institutional environment and to advocate for its constituencies.
- 6) Quality social, cultural and recreational activities implemented as channels to attract, mobilize and empower youth, women and children within the CBO and the larger community and to reinforce positive, democratic values.
- 7) Children, youth, and women better equipped to identify and formulate their needs and to make their voices heard in a positive manner within the organization and within the larger community.

5.4 UYOGRO Business Plan

It is important in this part of implementation to develop a comprehensive business plan, which among other things will solve some problems which have been indicated in the findings as: lack of enough working equipment, inability to collect effectively the wastes which are produced in the neighbourhood at a higher rate and to solve the problem of lack of enough activities which shall ensure the UYOGRO sustainability.

This important component also shall implement some recommendations given in the previous chapter like: to empower UYOGRO to acquire their own equipment and to expand UYOGRO activities from solid wastes collection to other productive activities like vegetable cultivation. This being the case therefore, I have prepared a business plan for UYOGRO as follows:

UYOGRO needs working/generating equipment like tractor, tractor-trailer and tractor accessories.

I PRELIMINARIES

Business Plan for:

**Title: UYOGRO'S EQUIPMENTS ACQUISITION: TRACTOR,
TRACTOR TRAILER AND TRACTOR'S ACCESSORIES:**

Location: The project shall be conducted at Mtoni Azizi Ally, Temeke Municipal, southern part of Dar es Salaam City approximately 8 km from the city centre. Its postal address is P. O. Box 43021, Dar es Salaam, Tanzania, East Africa.

II BACKGROUND INFORMATION

Mtoni Azizi Ally is among the Dar es Salaam City suburban centres with higher populations. The neighbourhood comprised of 1900 households with approximately 23,000 people.

Currently UYOGRO as a solid wastes collector could not afford to collect a large portion of wastes which are being produced daily by using their few or hired equipment like lorry or tractor due to higher cost of hiring. The evidence shown by the feasibility study indicates that, UYOGRO spends T.Shs.400,000/= (Tanzania Shillings Four Hundred Thousand only) monthly to hire motor vehicles for solid waste collection out of its average monthly income of T.Shs.1,080,000/= (Tanzania Shillings One Million Eighty Thousand only).

Hence:

- The goal would be to reduce UYOGRO operational costs and empowerment of that CBO.
- The objective of the project is to acquire a tractor, a tractor-trailer and necessary tractor accessories in order to serve the community more effectively at lower costs.
- The management of the proposed tractor and its equipment shall be monitored by the Board of Trustees of the UYOGRO. The proposed tractor shall be run by a driver, co-driver and 4 attendants. However the increase or decrease of the number of employee shall be subject to the growth of the project.

III MARKETING PLAN

- The tractor will be expected to serve 1,900 household of Mtoni Azizi Ally and sometimes to be hired to the neighbouring wards, like Kurasini Keko, Tandika and Temeke Mwembe Yanga.
- Hiring such a tractor to the neighbouring wards will bring more income to UYOGRO, hence would manage to run such tractor and maintain it.
- Also, the tractor will be expected to be engaged in small vegetable farming to be conducted at Nkurunga, as the arrangement of acquiring land has been made.

- These two projects, i.e. hiring the tractor and farming activities shall ensure UYOGRO sustainability.
- Services shall be excellent and prompt, in order to compete well with other stakeholders.

IV COST ANALYSIS

Assets, which shall be deployed in this project includes:-

1. Land 1000 hectares
2. Tractor
3. Tractor trailer
4. Tractor accessories
5. Other variable inputs like, fuel and lubricants, small equipment and spare parts

V FINANCIAL PLAN

1. The cost of the proposed project is estimated to be Tshs.18,000,000/= (Tanzanian Shillings Eighteen Million only).

2. Sources of the above funds shall be as follows:

(i) UYOGRO's equity	T.Shs.2,000,000/=
Plus land worth	T.Shs.2,000,000/=
(ii) Loan from MFIS	T.Shs.3,000,000/=
(iii) Aid/Grants from development partners	T.Shs.12,000,000/=

3. Distribution shall be made as follows:

(i) Land acquisitions	T.Shs.2,000,000/=
(ii) Tractor purchase price	T.Shs.5,000,000/=
(iii) Tractor trailer purchase price	T.Shs.2,000,000/=
(iv) Tractor accessories	T.Shs.2,000,000/=
(v) Other variable inputs like administration costs	T.Shs.1,000,000/=
(vi) Reinvestment in fixed deposits or stock exchange	Tshs.4,000,000/=
(vii) Contingencies	Tshs.2,000,000/=

4. Expected earnings after completion of the project:

(i) Income from tractor hiring -

T.Shs.40,000/= per day x 260

working days per annum,

excluding Saturdays & Sundays T.Shs.10,400,000/=

(ii) Savings which were used to hire

motor vehicle before; T.Shs.

400,000/= x 12 months

T.Shs.4,800,000/=

(iii) Tractor will be working on

farming activities on Saturday.

Income from vegetables and

fruits annually

T.Shs.7,500,000/=

Thus, UYOGRO will anticipate an annual income of
T.Shs.22,700,000/= (Twenty Two Million Seven Hundred
Thousand Tanzanian Shillings)

5. Distribution of earned money shall be as follow:

(i) Loan repayment	T.Shs.3,000,000/=
(iii) Operational and administration costs, including maintenance, small equipment and spare-parts, fuel and lubricants.	T.Shs.5,000,000/=
(iv) Wages and salaries	T.Shs.10,700,000/=
(v) Money for reinvestment in other ventures like: fixed deposits, shares in capital market	T.Shs.4,000,000/=
Total	T.Shs.22,700,000/=

6. **Financial Analysis**

We anticipate to use external financial expert to prepare and test the capital budgeting techniques in this project and other projects which will take off at a future date. These techniques shall include Payback Period, Net Present Value and Internal Rate of Return (IRR).

Thus, business as a means of generating income has a different outlook and structure depending on the nature, scale or source of funding. Business plans and eventually its growth is highly influenced by a number of factors including geographical location, economic trend, nature of the society, history, time frame and so on. Some of these factors are predictable and could be accommodated in the business plan, but others are not predictable, thus making the business as a dynamic and variable process which requires careful management, review, research and short and long term planning.

5.5 The Way Forward

One of UYOGRO's objectives is strengthening its financial base in order to obtain financial sustainability that will enable it to carry out the different functions, the major ones being solid waste management and creating jobs for youth. However, financial sustainability does not mean that it will establish its own financial source like a big income generating activity, which would go beyond its activities as CBO. Donors should support UYOGRO, like other CBOs and non-governmental organizations for a period of time.

However, UYOGRO is advised to diversify its financial resources wherever they get some money from different sources, in order to try and make sure that it has funds to carry out its required functions for their mutual benefits. The main challenge facing UYOGRO is to create opportunities for its members to develop into strong and independent community based organization. At the same time, it should continue to create an exchange forum of ideas on solid waste management and how to contribute their ideas and efforts to bring development to the grassroots community of Mtoni Azizi Ally.

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