



TANZANIA OSAKA ALUMNI

Best Practices

Hand Book 5

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P.O. Box 1923,
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December, 2017

BEST PRACTICES HAND BOOK 5

(2017)

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List of abbreviations

AAS	Assistant Administrative Secretary
ADF	Agency Delegated Functions
ALAT	Association of Local Authorities In Tanzania
AMCOs	Agricultural Marketing Cooperatives
AMSDP	Agriculture Market Support Development Programme
BMU	Beach Management Unit
BRELA	Business Registration and Licensing Agency
CAVA	Cassava Adding Value for Africa
CBHF	Community Based Health Financing
CDCF	Constituency Development Catalyst Fund
CDD	Community Driven Development Projects
CHMT	Council Health Management Team
CMT	Council Management Team
COWSO	Community Owned Water Supply Organization
CPU	Coffee Processing Unit
DASIP	District Agriculture Support Programme
DbyD	Decentralization by Devolution
DC	District Council
DED	District Executive Director
DFT	District Facilitation Team
ECOVIC	East African Community Organization for Management of Lake Victoria Resources
ESRF	Economic and Social Research Foundation
FBO	Faith Based Organization
FETA	Fisheries Education and Training Agency
FRMP	Forest Resource Management Project
HFGC	Health Facility Governing Committee
HOD	Head of Department
IFAD	International Fund for Agricultural Development
JICA	Japan International Cooperation Agency
KCMC	Kilimanjaro Christian Medical Centre
LAT	Local Allocation Tax Grant
LED	Local Economic Development
LG	Local Government
LGA	Local Government Authority
LGRCIS	Local Government Revenue Collection Information System
LGRP	Local Government Reform Programme
LGTI	Local Government Training Institute
LVEMP	Lake Victoria Environmental Management Programme
LVFO	Lake Victoria Fisheries Organization
LVRLACC	Lake Victoria Region Local Authorities and Counties Cooperation
MHCDGEC	Ministry of Health, Community Development, Gender, Elderly and Children
MIVARF	Market Infrastructure Value Addition and Rural Financing
MKUKUTA	Mkakati wa Kukuza Uchumi na Kuondoa Umaskini Tanzania
MMEM	Mpango wa Maendeleo ya Elimu ya Msingi
MoU	Memorandum of Understanding
MUVI	Muunganisho Ujasiriamali Vijijini
NGOs	Non - Governmental Organizations

NSSF	National Social Security Fund
O&OD	Opportunities and Obstacles to Development
OJT	On the Job Training
OVOP	One Village One Product Movement
PICS	Purdue Improved Crop Storage
PO - RALG	Presidents' Office, Regional Administration and Local Government
POS	Point of Sales
POT	Post Osaka Trainings
PPP	Public –Private- Partnership
PRF	Poverty Relief Fund
RAS	Regional Administrative Secretary
RC	Regional Commissioner
RCH	Reproductive and Child Health
RFSP	Rural Financing Support Programme
RHMT	Regional Health Management Team
RS	Regional Secretariat
SACCOs	Savings and Credit Cooperative Societies
SAP	Structural Adjustment Programme
SATF	Social Action Trust Fund
SFNE	Standard Four National Examination
SHIB	Social Health Insurance Benefit
TACRI	Tanzania Coffee Research Institute
TANESCO	Tanzania Electric Supply Company
TBS	Tanzania Bureau of Standards
TFDA	Tanzania Food and Drugs regulatory Agency
TOA	Tanzania Osaka Local Government Reform Alumni
UNDP	United Nations Development Programme
UNESCO	United Nations Education, Science and Culture Organization
VEO	Village Executive Officer
WDC	Ward Development Committee
WEO	Ward Executive Officer

Foreword

Local Government Reforms in Tanzania are primarily focused towards effective Service Delivery by Local Government Authorities within the Central Government’s Policy Framework. The reforms have attracted cooperation between the Government of the United Republic of Tanzania, Development Partners and many other stakeholders. Through this cooperation, the Local Government Reforms in Tanzania have successfully generated democratic Local Governments, rationalized local human resourcing, increased fiscal disbursements, improved local governance, increased local participation and increased local government autonomy in Service Delivery.

The Local Government Reforms in Tanzania have been implemented in a comprehensive approach that has involved learning Local Government Reform initiatives and implementation in other countries which led to designing an appropriate implementation modality for Tanzania. Since 2002 the Government of Tanzania through the President’s Office – Regional Administration and Local Government (PO-RALG) and the Government of Japan through Japan International Cooperation Agency (JICA) have jointly conducted training on Decentralization reforms in Japan namely “Osaka Training”. This training has been attended by selected PO-RALG Directors/staff, Regional Administrative Secretaries, Council Directors and other Local Government Reform stakeholders. Following Osaka Training, Regional Post Osaka Trainings (POT) have been conducted to Assistant Administrative Secretaries (AASs) and Heads of Departments (HODs) from Local Government Authorities (LGAs) to share lessons learned in Osaka Training in Japan.

Both Osaka Trainings and Regional POTs have provided opportunity for Tanzanian Central and Local Government Staff to learn the Japanese Decentralization Reforms Experiences, select the best Japanese decentralization lessons and implement the lessons learnt within the Tanzanian context. The implementation of the lessons learnt from Japan has resulted into identifiable “*Best Practices*” by specific Regional Secretariats (RSs) and LGAs. This has created urgency for reporting the best practices in the form of a handbook to make other RSs and LGAs appreciate and learn from the local successful implementation and the secrets for success.

This Fifth Best Practices Handbook is a continuation of the joint efforts of PO-RALG and JICA to strengthen Decentralization by Devolution (D by D) in Tanzania. The handbook provides the History of Osaka Training and the Best Practices in the following order; Chapter One summarizes the lessons learnt from Japan; Chapter Two focuses on Self Help Efforts for Improved Services and has Cases from Mwanza CC, Geita and Chato DCs. Chapter Three is on Fiscal Decentralization and Revenue Enhancement and has a Case from Bariadi DC. Chapter Four presents Participatory Service Delivery Cases from Itilima, Misungwi, Musoma, Bukombe, Ngara and Ukerewe DCs. Chapter Five focuses on Local Economic Development with Cases from Misenyi, Ukerewe, Itilima, Tarime, Rorya, and Bunda DCs.

PO-RALG recommends the RSs staff, LGAs staff and all stakeholders in the Local Government Reforms in Tanzania to read the handbook, appreciate the specific local initiatives, learn the secrets of success and use the available local opportunities to perform better in the D by D context.

ENG. MUSSA I. IYOMBE
PERMANENT SECRETARY - PO-RALG

Preface (TOA)

Cooperation between the two Governments (Tanzania and Japan) through Osaka Training resulted into establishment of Tanzania Osaka Local Government Reform Alumni (TOA) in 2002. This Alumni is formed by all Regional Administrative Secretaries (RASs), Council Directors and all ex-participants of Osaka Training and POT. TOA endeavors to build capacity to her members in order to become champions of Local Government Reforms. Implementation of lessons learnt in Osaka Training has resulted into improved service delivery to the communities within the Framework of “D by D”.

For the purpose of enhancing horizontal learning amongst stakeholders, TOA decided to publish a series of best practices reported by members in a reader friendly Handbook . This is the fifth handbook. TOA anticipates to issue more Handbooks in the future concurrently with continued implementation of lessons learnt from Osaka and Regional Post Osaka Trainings.

The completion of Best Practices Handbook 5 attracted support from various institutions and individuals. TOA would like to acknowledge and express gratitude to the President’s Office – Regional Administration and Local Government for forging a Memorandum of Understanding with the Government of Japan, financing and allowing Tanzanian senior staff to attend training on Decentralization Reforms in Japan since 2002 to date. Secondly, TOA extends sincere appreciation to the Government of Japan through JICA for designing, supporting and funding the Osaka and Regional Post Osaka Trainings and production of this Handbook. TOA also would like to recognize and appreciate initiatives of the Regional Administrative Secretaries and Council Directors in implementing the lessons learnt and their readiness to prepare detailed cases that appear in this fifth handbook.

The analysis and synthesis of the Best Practices in this Handbook 5 was done by Mr. Paulo F. Faty (Lecturer at Mzumbe University) and Mr. Ahmed Nassoro (Assistant Lecturer at the Local Government Training Institute – Hombolo) while the lessons learnt in Japan were explored by Mr. Michiyuki Shimoda (Senior Advisor, PO-RALG). TOA deeply commends their work and thanks them all.

Lastly, TOA would like to extend appreciation to all PO-RALG staff, JICA staff and TOA leaders who participated in various meetings that improved and concretized this Handbook. It is not possible to list down all contributors to this work. However, TOA values all offerings made by various institutions and individuals.

Finally disclaimer; though many individuals and institutions have contribution in this Handbook, TOA and the analysis team remain responsible for errors and omissions that might be perceived by readers of this Handbook. However contents found in each case remain the responsibility of respective LGAs and RSs.

ENG. MUSSA NATTY
TOA CHAIRPERSON

Preface (JICA)

Dear Distinguished Readers!

Implementation of Decentralization by Devolution Policy in Tanzania has taken more than 10 years now with the objective to improve service delivery by devolving functions, responsibilities and resources from Central Government to Local Government.

Based on the above, JICA's cooperation has been geared to support implementation of this policy by focusing on strengthening local level service delivery through LGA's capacity development as well as Sector development in the fields of Health, Agriculture, Water and Roads.

Since 2002, JICA in collaboration with PO-RALG has been conducting the training on Local Government Reform Programme which is called "Osaka Training." It targeted top management officials in Local Government Reforms i.e. Regional Administrative Secretaries, Council Directors, PO-RALG Officials and Higher Learning Institutions, with the purpose of learning experiences of Japanese Local Government Reforms. On their return, the knowledge and experiences were shared during Regional Post Osaka Training workshops (2003 – 2007). As a result, Tanzania – Osaka Local Government Reform Alumni (TOA) was established in a view to create a platform where members have opportunity to share experiences, good practices and challenges. JICA has been supporting the institutional building of TOA.

As a result of implementation of lessons learnt from Osaka training, a number of best practices were presented from RSs and LGAs in five Regional Workshops conducted in Mwanza, Simiyu, Mara, Geita and Kagera during 2016. Through verification and analysis of these best practices, this fifth "Best Practices Hand Book" is finally produced. The Handbook verifies that *we have to learn not only from other countries but also from many initiatives inside the country.*

I am happy if you learn some tips from this handbook and take small but concrete steps forward in improving the implementations at ground.

JICA plans to support TOA to conduct Regional POTs for Regional Secretariat staffs and LGA Heads of Departments by utilizing this handbook. We would like to explore the next Best Practices stimulated by the handbook and the training. We hope to strengthen the horizontal learning platform for field level in future and improved service delivery in Tanzanian communities.

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TOSHIO NAGASE

CHIEF REPRESENTATIVE - JICA TANZANIA OFFICE

Chapter One: Introduction; Lessons Learnt from Japanese Experience

1.0 OSAKA TRAINING

This Handbook was elaborated by Tanzania Osaka Local Government Alumni Association (TOA). TOA is an alumni association of a training course offered by Japan International Cooperation Agency (JICA). The training is entitled “Country Focused Training Course - Local Government Reform Programme in Tanzania”, but more popularly known as “Osaka Training”. The Association is composed of all the RASs and the Council Directors of the Country.

“Osaka Training” started in 2002. During the initial five years, all the RASs from 21 Regions of the country (at that time) together with two Council Directors of the respective Regions were invited. Also high officials of PO-RALG (Directors, Asst. Directors)¹ as well as the Secretary General of ALAT and some prominent academicians participated in the Course.

Due to the remarkable impact and outcome, JICA decided to continue with the same programme, widening its scope to three other African Countries that have been promoting or planning decentralization reforms, namely Kenya, Uganda and Zambia, in addition to Tanzania. Towards the end of 2016 more than 100 Tanzanian reform leaders including RASs and Council Directors have directly benefitted from Osaka Training. Furthermore, those participants, after returning to their respective Regions, conducted local seminars called “Post Osaka Training” to share the experience and knowledge acquired in Osaka, inviting all the remaining Council Directors together with Head of Departments. Thus the beneficiaries of the said Training were expanded to more than 1,500, and the membership of TOA came to cover all the RASs and the Council Directors.

Based on various lessons learned in Osaka and Post Osaka Trainings, the participating LGAs elaborated Action Plans to improve their performance. Having more than 12 years of the history, it has been confirmed that there are a number of useful good practices emerging in many LGAs through implementing the above-mentioned Action Plans which could be worth sharing with others. It was therefore decided in TOA to verify and analyze such cases and compile this handbook, so that the LGA leaders can refer to such cases and apply any of them if they consider appropriate and feasible, with a view to improving their works.

Before going into the respective cases of good practice, however, we would like to see in this chapter why JICA decided to offer this training to Tanzanian reform leaders, what was the meaning of Osaka Training to Tanzania, and what kind of issues were discussed there.

¹ Including Hon. A. Mwanri (Deputy Minister) and Ms. M.K.Tarishi and Mr. H.A.Katanga (former Permanent Secretaries)

2.0 BACKGROUND OF OSAKA TRAINING

Why did JICA decide to offer such course, and what was the meaning of it to Tanzania?

2.1 JICA's Views on the Decentralization Support

JICA has some unique views on the governance support which may differ from other development partners. It has been observing that many strong interventions have been made in the developing countries by the development partners such as the Structural Adjustment Programme (SAP) and the governance support including decentralization reforms. However, it can be said that these programmes and reforms applied in the developing countries are almost the same as what are currently tried in the developed countries, irrespective of the great difference in the background and the conditions between the former and the latter. Also it is often observed that these reforms are promoted under a strong pressure from the donors, without ensuring endogenous development process and ownership of the recipient country.

Based on the bitter experience of failures in international cooperation of this kind, JICA has the following principles in carrying out the decentralization support:

- (i) There is no universal model that can be applied to all countries.
- (ii) Decentralization itself is not an objective, but a means to achieve something.
- (iii) Internalization and endogenous development through nationwide discussion is essential.
- (iv) How to ensure National Minimum Standard² is essential in designing decentralization reforms.
- (v) Decentralization Reform is a long process, which should not be treated as a mere "project".
- (vi) Too rushed decentralization reform will rather bring chaos. In any reform efforts for D-by-D, it is essential to secure enough conditions on the side of LGAs and local society to receive such huge responsibilities devolved.

2.0 The Big Challenge of Tanzanian LGRP Observed by the Formulation Mission in 2002

Upon request from the Government of Tanzania for a training programme on local government reforms in 2001, JICA decided to dispatch a mission to analyze the situation and formulate a training course with most adequate contents to address the important issues. When the mission visited Tanzania in November 2002, it observed the following serious challenges that Tanzanian LGRP was facing:

- (i) Huge and detailed Log Frame (more than 80 pages!)
- (ii) LGRP was being implemented with such a beautiful but rigid Log Frame defining all the details of activities. The mission observed that there was very little room left for flexibility to allow "trial and error" that is considered to be essential. The mission felt as if everything was pre-determined and the Tanzanian Government was obliged to follow that rail without "deviation" and "going back".
- (iii) Prepared mostly with strong "assistance" from the Donor Group
- (iv) The common basket funding donors formed the steering committee together with the Government. Programme design was contracted out to external consultants and even implementation itself as well. The mission was worried that the Programme was elaborated without passing sufficient process of awareness building within the nation and consensus based on their own felt needs.
- (v) Danger in too much rushing to D-by-D

The policy of D-by-D promoted by the Government seemed to the mission as if Tanzania was looking for almost the same type of model as the recent trend in the developed countries. A question was raised if

² National Minimum Standard is a concept that a minimum level of services must be secured even in poor remote rural areas just as in big cities.

the capacity and mind-set of LGAs as well as that of the Central Ministries were ready for such a drastic change. The mission observed the following challenges in this regard:

- Resistance from the Sector Ministries
- Lack of in-depth discussion over D-by-D in the society
- Not yet sufficient capacity development in LGAs to assume the devolved duties

2.3 Possible Utility of Japan’s Experience in Nation Building and Decentralization Reforms – Message Given from Japan to Tanzania in Osaka Training

Having observed the above-mentioned situation of Tanzania, JICA considered that Japan’s experience of her nation building and long decentralization reform process could be fairly relevant and useful for Tanzanian reform leaders to learn and review their own reforms.

Japan is a small Asian country outside the Western Civilization that started her nation building as a backward country and later achieved remarkable development. She has ample interesting experience of applying external models (Western models), which other donors do not have. (European Countries have been always the frontrunner at the center of the world and no need to learn from outside.) In fact, Japan started her nation building and development, trying to copy Western models, but failed at the initial stages. Since then, it was a long process of “trial and errors” until eventually reached the creation of her own unique model called “Half-Japanese Half-Western Model”. Japan believes that this kind of creation process with strong ownership through repeated “trial and error” is very important for the Country’s sustainable development.

This process model that Japan took for establishment of her local government system as well as decentralization reforms is quite different from the European model that many of the developing countries are currently trying to introduce. JICA thought that presenting such a “different model” could be useful by itself, since if they have only one model, it becomes the “absolute model”, but when they have more than two, they can start comparing and see which part of which model is more suitable to their own situation, which is an important first step towards creation of their own model.

The following are just a few examples of the interesting learning points from Japanese model, among many:

(1) Very slow but steady reform process

Japan took 110 years since she started development of local government system and decentralization, and 55 years even counting from the start of major decentralization reforms after the World War II, before reaching eventual D-by-D which was realized in 2000.

The government tried to make sure that LGAs have acquired enough capacity before devolving functions, instead of rushing for institutional reforms of D-by-D.

This experience of Japan gives opportunities for Tanzania to think twice whether their speed is not too fast, and if at all they have to keep the current speed, then how to ensure adequate capacity development process of LGAs.

(2) Agency Delegated Functions (ADF)

In fact, during the above-mentioned 55 years, the government chose the modality of “delegation” called ADF as a transition measure, instead of jumping directly to “devolution”. Because of this modality, Japan has been criticized by the Western countries for long that she is not appropriately decentralized, and eventually the government decided to go for real D-by-D in 2000, getting rid of ADF.

However, it is now confirmed that ADF has contributed significantly to healthy development of the LG system and to the successful realization of eventual D-by-D in the case of Japan, especially in the following aspects:

- Thanks to ADF, LGAs worked in close consultation with the Central Ministries concerned, and could develop their capacity through On-the-Job Training (OJT) with close technical backstopping from the Ministries. Whenever LGA officers face difficulties, they could consult with Ministry officials by phone, and the latter kindly helped the former to solve the problem together. All these were possible because the work was supposed to be under the responsibility of the Central Ministries but delegated to LGAs. Thus there was no resistance from the Ministries but cooperation, unlike many developing countries promoting D-by-D.
- The whole idea was to make sure that the limited available resources in the country could be mobilized to the maximum extent towards one direction, i.e. development of the nation, instead of fragmenting them and creating conflict between CG and LGAs.
- It was especially important at the initial stages where LGAs' capacity was weak. Without ADF during that time, LGAs could have neither performed their duties to serve for the people nor develop their capacity.
- Another important factor was "OJT", as mentioned above. Thanks to this process of OJT for 55 years, all the staff of LGAs as well as their organization itself could develop their capacity enough, receiving transfer of know-how and expertise from the Ministries, and were ready when the government decided for eventual D-by-D.

This experience of Japan poses a fundamental question to Tanzania on how to ensure reliable and effective capacity development process of LGAs while proceeding with D-by-D, making sure the maximum mobilization of the limited resources of the country and avoiding resistance from the Sector Ministries.

(3) Personnel Exchange System between CG and LGAs

In Japan, during the initial stages of the reform, the modality of personnel exchange between CG and LGAs was used quite often as one of the most effective means to a) fill the gap of qualified staff especially in the poor remote areas, and b) promote transfer of know-how and expertise from CG elite to weak and inexperienced LGAs staff in order to develop capacity of those LGAs.

The Government created a big pool of elite officials in Ministry of Local Government and assigned them to difficult LGAs in the most remote areas in order to help them. This secondment was normally for 4-5 years, after which they returned to their respective mother ministries. The more capable they are, the more remote and difficult LGAs they were sent to. But when they succeeded in performing well in those duty stations, they were promised a good promotion upon their return, which was an important incentive for the elites to go to such unattractive places with high motivation. Also, many LGAs sent their staff to the Central Ministries to work there, with a view to getting OJT on certain subjects that the respective LGAs are interested in.

After repeating several cycles of such personnel exchange, a lot of know-hows and expertise were transferred effectively from CG to LGAs, which tremendously helped the capacity development of LGAs in Japan. Now, LGAs in Japan are self-sufficient in their human resources without any need to depend on CG anymore.

It is obvious that if too rigid human resources decentralization is carried out without careful provision of countermeasures, it will create a serious gap of personnel in the LGAs in poor remote areas. It was for this reason that Tanzania decided to "recentralize" major part of the human resources management. However, it does not make much sense to promote D-by-D without human resources decentralized. Instead of "0 or 100", it is required to consider certain strategy on how to go about HR decentralization but avoiding at the same time the gap in rural areas, and ensuring a certain process to develop future capacity of such LGAs.

3.0 THE ISSUES RAISED AND DISCUSSED DURING OSAKA TRAINING

Due to space limitations, only a few most fundamental issues could be presented in the section above, among many messages given from Japan to Tanzania based on her own experience. Here, some other points will be itemized below with brief explanations.

3.1 General Issues

The following issues and questions were raised to be discussed during Osaka Training:

- (1) Importance of capacity development of LGAs as necessary preconditions for successful decentralization**
 - Are there no risks of stagnation of the service delivery, decentralizing so much responsibility in such a short period?
 - How to cope with the situation where LGAs need to be equipped with enough capacity to assume all the devolved functions?
 - What about recruitment? How to secure qualified personnel in the LGAs of poor and remote areas?
 - How to fill the gap of know-how and experiences in LGAs and develop them? Is it not necessary to ensure some mechanisms of transfer of know-how and expertise, as well as technical backstopping from CG to LGAs? Is it not important to nurture collaborative relationship between CG and LGAs, instead of always looking for external support?
- (2) Decentralization and Development**
 - In order to achieve socio-economic development of the country with very limited resources available, it is essential to seek for the best strategic mobilization of these available resources. (This is what Japan has been doing for her development.)
 - How to manage the Country's development and decentralization together which are sometimes contradictory each other. How to make sure to avoid fragmenting the resources and conflict between CG and LGAs as well as among different LGAs?
- (3) Decentralization and National Minimum Standard**
 - How to manage between decentralization and National Minimum Standard? How to ensure the LGAs in poor remote rural areas to have as good capacity as those in rich cities in terms of service delivery to the people? (human and financial resources)
- (4) Reality of the LGAs' Capacity for Service Delivery**
 - A question was posed as to how many extension officers are there in one LGA including those who are deployed at Ward and Village levels, in order to let the participants realize what a harsh situation the Tanzanian LGAs are obliged to cope with. Compared to less than 100 in Tanzania, just taking one example, Nagano Prefecture³ in Japan which is rather smaller prefecture in rural area has more than 1,500 agricultural extension officers. Moreover, there are 77 lower LGAs within the said Prefecture, each of which employs 20-30 extension workers. It means the farmers in Nagano Prefecture are enjoying the services provided by more than 3,000 LGA extension workers, compared to Tanzanian farmers who have less than 100⁴. Furthermore in Japan, there are a number of private companies that sell agricultural machineries, fertilizer, agrochemicals, seeds, etc. together with strong agricultural cooperatives, all of which provide a number of extension services and technical supports.
 - We should recognize the above-mentioned harsh realities, and start our strategy from there. We should not dream as if it is possible in Tanzania to realize as good service delivery as the industrialized countries with such a small number of staff to cover a huge area, if the Government is to do everything alone.
- (5) Importance of people's self-help efforts, and collaboration between LGA and communities**
 - Because of the above-mentioned harsh reality, it is indispensable to make maximum use of people's potential for self-help efforts in order to implement better service delivery.
 - It is JICA's belief that if people are properly guided and facilitated, they will be able to do a lot of things by themselves, including construction of primary schools, dispensaries and community roads, and maintaining them.
 - In the case of Japan as well, at the initial stages of her development, the Government was too poor to construct primary schools, for example. It was the community people who contributed from their pocket and worked together to construct, and furthermore, looked for somebody who can teach and paid them

³ Prefecture in Japan is somehow comparable to Tanzanian Districts in size. (Though in many cases, Tanzanian Districts are far bigger than Japanese Prefectures.)

⁴ Moreover, Japan is not an exceptionally better-off country in this regard. To the contrary, Japan is the country that has the least number of public servants per population among the industrialized countries. It means U.K., France, Germany, Italy, etc. have even more government personnel!

their salary. That is why many of the schools at that time in Japan were not “public” but “private”, which means “community owned schools”. It was only after several decades that the government became well-off and started owning them as public schools.

- It requires a kind of mind-set change of the Government as well as people, from thinking that it is the government to provide all the services for people, into a perception that people can do a lot by their own self-help efforts and the government is to facilitate such process instead of implementing everything alone.

(6) Importance of defining adequate size of LG units, and develop innovative mechanisms to reach out from LGAs to communities

- From the above-mentioned requirement, it is crucial to develop much stronger mechanisms for LGAs to reach out to communities. In Tanzania, area covered by LGA is relatively big compared to that of Japan, so it is important to think how to bridge between LGAs and communities.
- From the viewpoint of nurturing strong sense of local autonomy among people, the LG unit should be small enough so that people can feel that it is their own. On the other hand, the LG unit has to be strong enough to provide enough level of services, which requires certain size of unit in terms of financial and human resources. These are two contradictory requirements.
- In order to give a good answer to the above contradictory question, the only solution is a multi-layer system from LGA to communities. In Japan, this multi-layer system is well functioning. But Tanzania also has a very well established system of District-Ward-Village-Kitongoji. This is very advantageous to nurture local autonomy and collaborative development endeavors between LGAs and communities. Furthermore, O&OD could be an excellent platform to consolidate that system and make it function.

3.2 Human Resource Management and Its Decentralization

As seen in the previous sections, Osaka Training had been rather warning the Tanzanian leaders during the initial few years to be careful about too rapid and drastic reform of D-by-D. However, as far as the human resource management aspect is concerned, the message became a bit different since it started observing the recentralization of the appointment authority of Council Directors and Head of Departments of LGAs as well as establishment of the Recruitment Secretariat for all the personnel of LGAs.

Japan did not go for D-by-D so quickly, keeping certain interventions of CG. In this sense, Japanese decentralization was not a perfect one for many years until 2000. However, as far as the human resource management is concerned, Japan made it completely decentralized from the very beginning of the reforms.

It was because human resource decentralization is the most fundamental basis for decentralization. In Japanese local government system, everything is decided and carried out within each LGA without any CG intervention right from recruitment, training, salary scale, transfer, promotion, till retirement. Japanese LGAs recruit new graduates every April according to their needs. After being recruited by one particular LGA, the employees will work for that LGA all through their life until retirement. There is no transfer from one LGA to the other in principle.

Furthermore, the Mayors are politicians elected by popular vote by the residents, and he/she will be the head of administrative branch of his/her LGA facing with the Council as the legislative branch. The technocrats will report to the Mayor and not to the Councilors, being represented and thus protected by the Mayor towards the Council and the Councilors.

In Osaka Training, the following three factors were emphasized as crucial elements to achieve the maximum human resource capacity of LGAs:

- 1) Recruitment
To recruit the best person apt for the organizational mission; and
- 2) Training
To train them towards achievement of the organizational mission (not for individual aims); and

3) Mobilization

To ensure maximum mobilization (exploitation) of the full capacity of all the members to achieve organizational goal

For those sakes, Japan considers it indispensable to decentralize the HR management so that each LGA can analyze its own situation, plan, recruit, train, assign, and mobilize its own personnel by itself. LGA staff should be someone who loves the area as well as the people there, works hard for the people, understands well about the situation of the area, and knows the people well and thus be able to work closely with the residents. These form the essence of decentralization. It is the experience of Japan that in those LGAs that are achieving remarkable success, there are officers who really work hard for the people and collaborate with the residents, and most of them were the ones who were born and brought up in the area and love their home town, together with the very strong leadership of the mayor who was also born there.

Another important element that makes Japanese LGAs stronger is their effective training of the staff. Japanese LGAs invest a lot on their staff through trainings as well as OJT which is given very strategically based on their institutional needs (not individual) and with longer perspective. It is possible in Japan because there is no transfer of staff to other LGAs and retention rate is so high, thus LGAs can invest without fear of losing their staff after training them. To the contrary, in Tanzania there are frequent transfer of important officials from one LGA to the other and difficulties in retaining staff. Under such circumstances, the big challenge is how to ensure the training outcome to be maintained and led to improvement of LGA's performance, and how to make the LGAs to be serious about their staff capacity development despite such high possibilities of losing them after training. A question was posed if it is possible for Tanzanian LGAs to prepare and implement an effective staff capacity development strategy (plan) with longer perspective under such circumstances.

On the other hand, Osaka Training presented the issue of "team work" and mobilization of 120% capacity of the existing staff towards the same institutional goal. In Japan, there are several elements of HR management system that are carefully elaborated for that sake, such as:

- 1) deliberately developed salary scale with a view to avoiding corruption and making staff to work hard until retirement;
- 2) Japanese unique "late promotion system" to make everybody work so hard for years (exploit 120% of the capacity of everyone);
- 3) Staff rotation system within the same LGA and accumulated evaluation system in order to make fair and objective evaluation to everyone as well as to identify capable staff who are apt to be promoted as Directors;
- 4) totally concentrated HR management function in Personnel Division to support 3) above;
- 5) Japanese unique working environment to facilitate "team work", supervision by bosses, and OJT by the supervisors, called "Big Roomism" (open office).

All that are explained in this section are provided in Japanese LGAs for the sake of ensuring the three crucial factors of HRM mentioned above, i.e. 1) Recruitment; 2) Training; and 3) Mobilization. Question was posed, under the current circumstances of Tanzanian LGAs, how to ensure the above-mentioned three elements.

3.3 Local Finance and Fiscal Decentralization

a) Financial Basis for LGAs

Figures (1) and (2) provide a symbolic overview of the situation of LGAs in Japan from financial viewpoint.

Figure (1) indicates how big the role played by Japanese LGAs is in terms of each sector service spending. Looking at the health sector, LGAs spend 94% of the total national expenditure while CG spends only 6%.

In education, the proportion between LGAs and CG is 85% and 15%.

Considering the close correlations between amount of expenditure and volume of work, it can be analyzed that the Japanese LGAs are performing highly important part of the Government service delivery.

Oh the other hand, it is very important to note that such big amount of budget is actually allocated to LGAs to enable them to perform the heavy duties assigned (decentralized) to them.

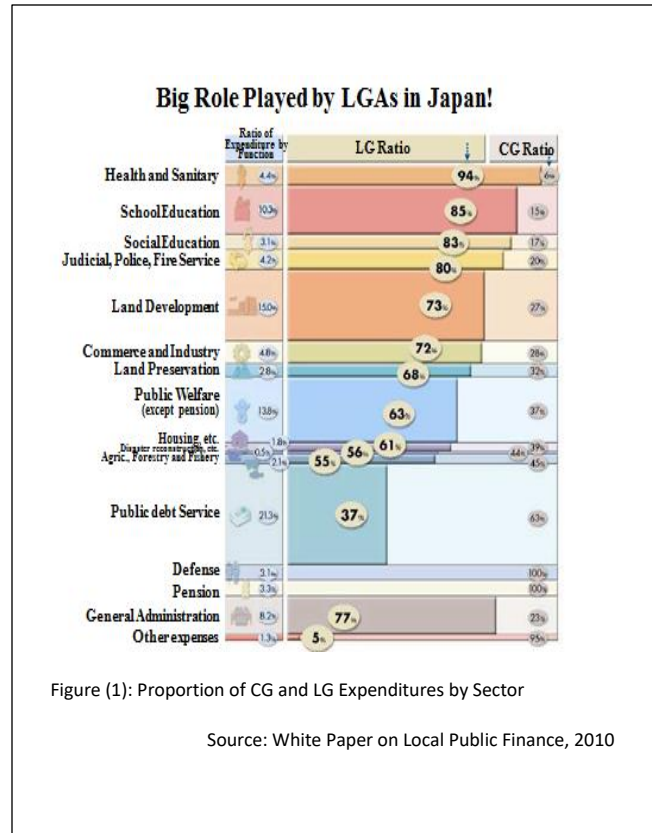


Figure (1): Proportion of CG and LG Expenditures by Sector

Source: White Paper on Local Public Finance, 2010

What about Tanzania? In fact, looking at all the functions devolved to LGAs in Tanzania, the volume of works assigned to them is almost the same as those given to Japanese LGAs. Nevertheless, the budget allocated to LGAs was less than 3 trillion Shillings out of the total national budget of more than 11 trillion in 2011/12.

Another interesting comparison is about discretionary nature of the budget of LGAs. The Figure (2) shows composition of the revenue sources of Japanese LGAs. As can be confirmed there, 53% is from their own sources (local tax and fees/charges). Furthermore there is a totally discretionary unconditional grant called “Local Allocation Tax Grant” (LAT Grant). LAT Grant is one single block grant. It is transferred from the Ministry of Finance into the general account of each LGA on the first day of every quarter. Calculating the amount of revenue from their own sources together with this LAT Grant, Japanese LGAs enjoy 75% of their budget at their discretion. This forms an important basis for Japanese LGAs to make their development plan realizable, counting on the sufficient and predictable budget every year.

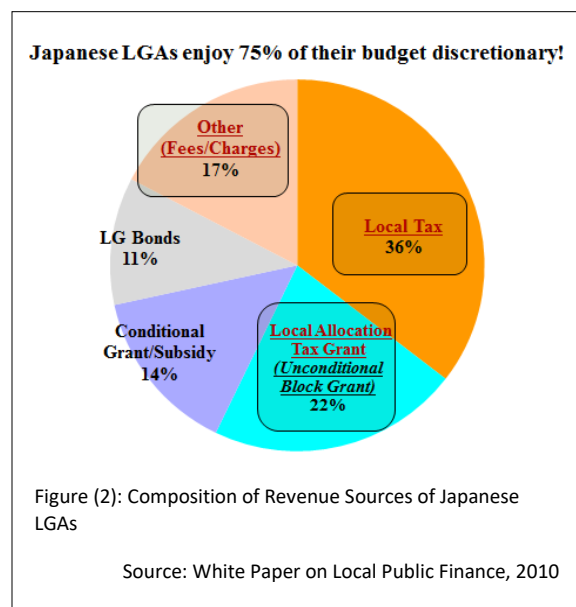
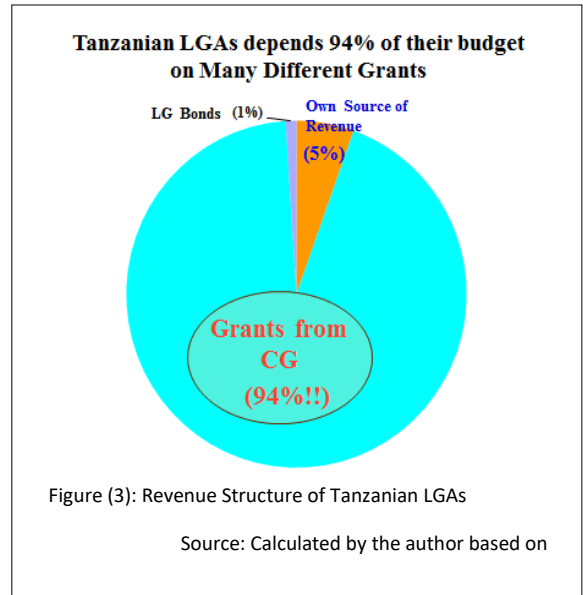


Figure (2): Composition of Revenue Sources of Japanese LGAs

Source: White Paper on Local Public Finance, 2010

Indeed it would have been still functional even in this manner if this 94% of grant were unconditional and discretionary. However in reality, it is composed of a number of different grants, many of which are conditional. Thus, even if the LGAs prepare a good development plans, it is so complicated to accommodate their priority projects because of this problem of conditional grants, which makes the development plans not easily realizable.

Furthermore, it should be remembered that the total budget allocated for all the LGAs is such a limited amount of 3 trillion Shillings out of 11 trillion. And that even this limited amount of just 3 trillion Shillings accounts for 94% of LGAs' total budget, which shows how limited their own source of revenue is.



Osaka Training urged the Tanzanian leaders that if D-by-D is to be promoted and much of the Government function is to be devolved to LGAs, corresponding amount of budget must be allocated, either in the form of own sources or unconditional discretionary grant⁵. If at all the appropriate budget allocation is not possible, then the functions should not be devolved to LGAs. Otherwise, it will be a logical consequence that the decentralized service delivery will be paralyzed and it is the citizens who will suffer eventually. As having been able to observe, in Japan when 85% of educational service delivery responsibility is decentralized, the corresponding amount of the budget is facilitated to LGAs. Otherwise it is not fair to LGAs and actually to the people.

b) Local Taxation for Sustainable Vigorousness of LGAs

In Japan, there is a clear philosophy behind the definition of local taxes allocated to each of the two layers of LGAs. (Prefectures as Higher LGAs and Municipalities as Lower LGAs⁶) Although Prefectures being HLGAs, are comparable to Tanzanian Districts in area-wise, as far as functions are concerned, it is the Municipalities that have similar responsibilities to Tanzanian HLGAs. In Japan, most of the basic service delivery is provided by the Municipalities since they are closer to the people, while Prefectures are mainly concerned with economic development since it requires a bit larger area to plan and implement strategically.

Based on the above-mentioned nature of the roles expected to the Municipalities, the following is the clear feature of the taxes allocated to the Municipalities:

⁵ In fact it is not recommended to promote a radical fiscal decentralization to give too much taxation authority to LGAs at this stage. Because it will make the LGAs in poor rural areas suffer since they don't have tax basis, though those strong LGAs in rich urban areas will enjoy a lot of revenue from their own sources. Therefore it is more realistic to make the grants unified in one single channel and totally unconditional and discretionary for the time being.

⁶ There are 47 Prefectures and about 1,742 Municipalities as of October 2012. Municipalities consist of **Cities, Towns and Villages**, which is a different classification from Tanzanian.

As can be seen in Figure (4), Fixed Property Tax accounts for 45.3% of the total tax revenue, which is almost a half. Together with “Municipal Inhabitant Tax on Individuals” and “City Planning Tax”, the share is getting more than 80% of their total tax revenue. Fixed Property Tax and City Planning Tax are imposed on the lands and buildings, which will not escape. As long as the lands and buildings are precisely registered, the tax revenue from those two sources is stably secured.

“Municipal Inhabitant Tax on Individuals” is like the poll tax (Development Levy⁷) abolished in Tanzanian. This tax source is also stable since all the residents are registered and LGAs know where they are. Now looking at the Tanzanian situation, most of the tax revenue sources are economic based ones, such as Produce Cess (23%), Service Levy (18%), Guest House Levy (3%), License (10%) and Fees & Charges (17%), which fluctuates in accordance with the economic situation of the area, while the Property Tax accounts for only 8%.

Osaka Training urged the Tanzanian leaders that if LGAs are expected to provide needed services in a constant and stable manner, it is fundamental to develop a stable taxation system. From her proper experience, Japan believes that without putting emphasis on those stable tax sources like Property Tax and Pole Tax, it is not possible to expect much for LGAs to perform. In this context, it is critical to establish an accurate land register system as well as the resident registration, which will help a lot for the entire Country not only to have more revenue, but also for many other purposes.

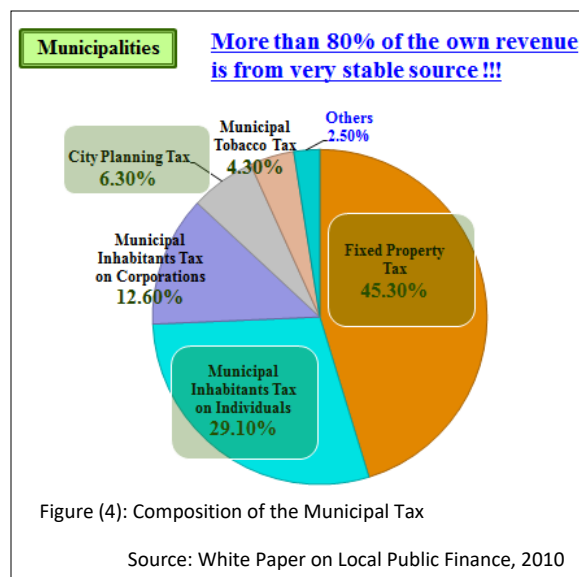
In this regard, it is worth mentioning that there are some very interesting and encouraging practices of this kind in Tanzania already as the case of Mtwara Mikindani and Kinondoni Municipals.

3.4 Local Economic Development – Japan’s Interesting Experience of “One Village One Product (OVOP)” Movement

Local economic development has been always major concern of the Council Directors of Tanzania. In this regard, there is a World famous experience in Japan called “One Village One Product (OVOP)” Movement, originated in Oita Prefecture that used to be one of the poorest Prefectures in Japan at that time. This experience could be very relevant and useful to Tanzanian rural development if it is properly interpreted and applied to Tanzanian context.

(a) What is OVOP?

OVOP is a collection of local development initiatives promoted by leaders of the respective communities in Oita Prefecture, who love their community and were worried about the poverty there. Although such individual practices had been existing here and there in the Prefecture since 1960’s, OVOP movement



⁷ The only difference is that while the latter is imposed the same amount equally to everyone, the former is imposed according to the income level of the household. If there is no income or not up to a certain level of income, the family members of that household do not have to pay this tax.

itself was officially initiated in 1979 by Dr. Morihiko HIRAMATSU, the then Governor⁸ of the Prefecture by identifying such cases and promoting them.

Talking about Dr. Hiramatsu, he had been a highly promised elite official of the then Ministry of International Trade and Industry (MITI) which was the strongest Central Government Ministry, but decided to go back to his home prefecture since he was worried about the situation of the prefecture that was remaining one of the poorest in Japan at that time. When he won the election and assumed office of the Governor, the first thing that he did was to visit all the villages in the Prefecture. During these visits, he found various spontaneous but precious endeavors for development in the villages. He was moved at the fact that there were such good practices of local development spontaneously pursued by the villagers with passionate local leaders, and that those cases had been unknown to the government. He appreciated their efforts, and encouraged them. For those villagers many of whom had never even been out of their own village, it was really an encouragement that such a big man visited their village and admired what they had been doing. They had never imagined that what they were doing was something special and valuable. Since his visit, such endeavors of the villagers became more and more enthusiastic being proud of themselves.

In his part, Dr. Hiramatsu thought it an important role of the Prefectural Government to encourage and promote this kind of precious initiatives of the villagers to improve their life by themselves, and widely share such good practices with all the other village leaders in the Prefecture.

The core feature of each case of OVOP is to produce some unique products (including tourism), and achieve local development, using existing available resources in the village. However, even more important element in this movement was that: through the concrete experience of endeavors of their small local economic development activities, the villagers consolidated their self-organizing capability; were empowered; and strengthened the local autonomy in the village. The important fact here is that experiencing success and failure (and overcoming it), the community not only achieved the economic success but also got empowered and became stronger through the process. It is fundamental to note this fact in understanding the OVOP Movement. Because to get one time success in certain business is not all that difficult with strong injection from outside, but when they encounter some problem later, they will not be able to overcome it if they have not been empowered through the past process to solve problems by themselves.

In this sense, it is very interesting to observe that in most of the cases of OVOP in Oita, they went through the following process:

- Before OVOP, the villagers were poverty stricken, given up hope to change, envious and jealous even among themselves, and thus no collaboration among them to improve their life together. However, with the experience of OVOP, they started recognizing “Yes, we can if we want!” This was a remarkable process of mind-set change.
- Based on the above-mentioned mind-set change, they accumulated experience of collaboration within the community, sharing the common challenges and experience of overcoming them together. This process made them to be organized better and better.
- Through the same process, they also strengthened the relationship with outside supportive organizations including LGA and NGOs.
- Together with all the above-mentioned empowerment, the community achieved a tangible

⁸ The post of Governor of the Prefecture is the leading post of Japanese Higher LGAs equivalent to the Municipal Mayors for Lower LGAs (See “3.2. Human Resource Management and Its Decentralization” for the Mayors.)

outcome of economic development.

(b) What did Dr. Hiramatsu do as the Prefectural Governor?

First and foremost, it should be clearly noted that OVOP was in no sense a “Top-down” programme that Dr. Hiramatsu created and told people to do something. Unfortunately, most of the developing countries that were interested in OVOP and tried to introduce it in their countries misunderstood this point. They just looked at the economic success of OVOP and promoted as a national policy giving instruction with top-down approach to each village to produce something that can be sold nationally or internationally. To the contrary, what Dr. Hiramatsu did in Oita Prefecture was, first of all, to visit all the villages, identified the already existing precious endeavors, admired and encouraged them.

Secondly, he informed the other villages and their leaders of those good practices so that they get inspired and start thinking of their own development using available resources in their respective areas, instead of complaining that they have nothing in their village and giving up hope. Thirdly, when he identified good products in some villages, he helped them to get market in and outside the Prefecture. Using his know-how, experience and connection developed since he had worked as a high rank official of Ministry of International Trade and Industry, he promoted these products nationwide. Fourthly, he promoted exchange of experience among leaders of respective villages so that they can learn from and get stimulated each other (horizontal learning, not vertical). He established “*Toyonokuni*”⁹ Human Resource Development School¹⁰ for the village young leaders to get together and learn from each other. This stimulated the leaders so much which led to emergence of a lot more of OVOP cases.

As can be seen above, OVOP in its essence was a movement composed of various spontaneous local development attempts which were identified by the LGA, appreciated and encouraged. And the LGA played a role of “facilitator” and not “implementer” or “instructor”. What Dr. Hiramatus did was not to tell the villagers what to do and lead the movement, but respected their initiatives and ownership, and accompanied their efforts. Osaka Training emphasized this aspect of OVOP, and its close relevance to the situation of Tanzania, believing that there must be such spontaneous development endeavors in Tanzanian villages with good leaders who are concerned about their home. It could be highly effective for Tanzania to encourage such efforts and give them opportunities of horizontal learning. Osaka Training urged the Tanzanian leaders that they should not think there is nothing in their villages. There must be good practices but still unknown to them. They should start trying to identify such cases, encourage, and share with others. It would be much more effective than learning from outside or from textbooks. It is also from this viewpoint that compilation of this Handbook itself was decided.

3.5 Other Issues

Due to space limitation there are more issues that are important and relevant to Tanzania which could not be covered. These are the experience of Minamata (“Minamata Disease” and recovery from that tragedy); participatory local development planning; urban planning; land use and land adjustment, Japan’s experience of economic development and roles played by LGAs, etc. Concerning the experience of Minamata, Osaka Training is putting a lot of emphasis on its importance, and believes that the developing countries have a lot to learn from there.

4.0 FURTHER DEVELOPMENT AFTER OSAKA TRAINING THAT LED TO PUBLICATION OF THIS HANDBOOK

⁹ “Toyonokuni” is a traditional name of the area of Oita Prefecture

¹⁰ It is called “school” but there is no physical facility. It is a sort of workshop type training programme for the leaders to get together.

As described in Section 1 above, Osaka Training was conducted exclusively for Tanzania during the first five years (2002 – 2007), and continued for another six years extending its scope to three other countries (2008 – 2012). The most remarkable incident during these eleven years was the establishment of its own alumni; TOA. It is a World exceptional and exemplar case to have special alumni for one particular training course and that covering all such important leading stakeholders of the reform as the RASs and the Council Directors together with high rank officials of PO-RALG. It was also a pleasant surprise even for JICA that is offering thousands of training courses all over the country.

Moreover, TOA started a series of seminars and workshops such as Post Osaka Trainings and Post Regional Workshops to share experience of the member LGAs. These opportunities, not only serve for experience sharing among the member LGAs, but have become a rare arena to discuss and exchange opinions about the reality of D-by-D in the field and challenges of the reform implementation that they are facing. So far, there is no organization of this kind in Tanzania, composed of the top technocrats of LGAs and RSs. Nonetheless ALAT exists, but the main actors in this association are the Council Chairpersons who are politicians and not bureaucrats. In this sense, TOA has an interesting possibility to serve as a national association of all the top management of LGAs and RSs who are the expert practitioners of D-by-D, struggling in the reform implementation in the frontline every day. Their collective suggestions and recommendations could be very useful elements for more successful reform implementation.

Tanzania has already accumulated more than one decade of experience in practicing D-by-D in each LGA. There must be a number of interesting initiatives and useful experiences in many LGAs all over the Country that are worth sharing with others. Japan believes that this kind of horizontal learning from such cases would be much more effective than vertical learning from outside, based on her own experience such as OVOP Movement described in 3.4 above. This Handbook was compiled with the above-mentioned background and considerations. It is a hope of TOA and Osaka Training that it will contribute to improvement of the performance of many LGAs, stimulating each other, and further good practices coming out, which leads to eventual success of D-by-D in this Country.

Finally, it is worth mentioning that based on all the remarkable outcomes of Osaka Training in Tanzania described in this chapter, JICA decided to continue Osaka Training for five more years (2013 -2017) concentrating again on Tanzania with a special view to supporting TOA activities and its institutional building. Thus, more and more Tanzanian reform leaders have been benefitting from Osaka Training to contribute to better implementation of D-by-D Reform of the Country.

Chapter Two: Community Self-Help Efforts for Improved Services

Self-help approach is a new paradigm in the field of rural development, whose main goal is rural development. Specific objectives of the approach are to increase the well-being of the poor people, and provide infrastructural facilities. It is a voluntary and self-managed group of people belonging to similar socio-economic characteristics, who come together to initiate ideas that will promote sustainable development. The self-help approach of rural development in the form of undertaking economic programmes provides employment, infrastructure that a community can provide for themselves, acquainted with skills and occupational diversification.

Self-help efforts refer to attempts by the communities to address challenges (felt-needs) facing them socially and economically without waiting for major interventions from the Government. Self-help efforts involve determination to solve community problems through community reorganization, participation and implementation. In all these cases the community itself feels the need, plans on how to meet the need, searches for local resources required to achieve the need, organizes itself into implementation groups and implements the project.

In several occasions Self-help refers to the formation of local voluntary association, in which members share common interests, organize and coordinate programmes with the sole aim of improving the socio economic wellbeing of their entire community. Studies reveal that groups in local communities over years have successfully organized themselves to construct roads, health centers, bridges and houses, cultivate farms, offer scholarships, and establish industrial/commercial institutions among others. Evidence of these has led to the multiplication and expansion of both membership and self-help activities in rural communities.

In Tanzania, self-help efforts and community participation have been common due to historical social and economic ideology of self-reliance. Since independence communities in their villages were urged to live in communities and practice cooperative methods towards solving their own problems. At the peak of this ideology during the 1960s and 1970s and especially after the Arusha Declaration, communities designed several projects and implemented them in terms of construction of schools and dispensaries, digging of water wells and charco dams, paving roads and practicing cooperative agriculture.

Although these practices declined during the 1990s towards the new millennium due to claims by the government that it can provide all services, there are communities that have recently practiced intensive self-help efforts in construction of roads, dispensaries, primary school classrooms and government buildings; all aimed at improving service delivery. In this chapter, several best practices are presented from Mwanza CC, Geita and Chato DCs.

Mwanza CC best practice is about Participatory Water Hyacinth Control in Lake Victoria. The Council and community decided to engage in this initiative because their livelihood was threatened by exceeding water hyacinth around the Lake Victoria Basin. The increase in water hyacinth led to decline of various species of fish and emergence of dangerous animals like crocodiles, hippopotamus and snakes. The weed also complicated transportation and docking. To improve fishing and aquaculture activities within

the Lake the Council took several measures which include organizing communities and stakeholders to engage in removing water hyacinth, formation of several Beach Management Units (BMUs) to engage in water hyacinth control, awareness creation to BMUs members through trainings, formulation of BMUs constitutions and introduction of weevils (*mbawa kavu/Neochetina eichhorniae* a biological mechanism of removing of water hyacinth). The effort undertaken by the BMUs, the Council and communities led to constant reduction of water hyacinth spread within the Lake and its shores thereby creating clean environment for fishing activities and decrease of breeding grounds for dangerous animals.

Geita DC best practice is on Village Self-help Efforts for Improved Service Delivery using experience of Nyakagwe Village. The Village being a center for mining activities was subjected to rapid growth in population which created a strong need for essential services such as administration, health, education and security. The Village had no primary school and dispensary, pupils used to walk almost 4km on foot to attend school at Butobela Primary School contributing to dropouts and poor performance. Villagers, especially pregnant women and children used to travel almost 14km to Bukoli Dispensary in Bukoli Ward to obtain health care services. After realizing these problems, Nyakagwe Village with the support of the Council and development stakeholders decided to improve administrative services by constructing a modern village government office, constructing a permanent police post to reduce the incidences of theft and armed robbery and constructing a village dispensary to improve accessibility to primary medical services. The village also constructed a village primary school to increase the enrolment of school age children. Nyakagwe Village opted to address the challenges by adopting a demand responsive approach focusing on an informed choice of what the community needs and is ready and willing to contribute towards addressing the commonly felt need.

Chato DC best practice focuses on Community Based Establishment of Satellite Schools. Between 2007 and 2012, Chato DC experienced shortage of primary schools as a result population increase. The number of pupils increased from 12,814 in 2007 to 22,421 in 2016 while the number of primary schools remained the same. The Council budget was not sufficient for construction of schools in new villages hence, some pupils had to walk long distances (6km – 10km) from homes to schools in other Villages. The situation led to irregular attendance, pupils drop out, early pregnancies, accidents and poor performance in examinations. Parents were unhappy with this situation and decided to engage in establishing Satellite Schools. In 2012/2013 the proposal for communities to establish satellite schools was approved by the Full council. The Council formed a multidisciplinary education task force to sensitize and supervise implementation of the initiative. Communities were organized at all levels through meetings and discussions leading to mobilization of resources to build new school infrastructure. The completion of this initiative resulted into more enrollments, eliminated dropouts, reduced distance to school, eliminated road accidents and ultimately improved performance of pupils in the Council at large.

MWANZA CITY COUNCIL



PARTICIPATORY WATER HYACINTH CONTROL IN LAKE VICTORIA



Experience of Mwanza CC

1.0 INTRODUCTION

Mwanza City Council is located on the Southern shores of Lake Victoria in North-West of Tanzania. The City covers an area of 1,325km² of which 425km² is dry land and 900km² is covered by water particularly Lake Victoria which is approximately 67% of the total area. Moreover, the 425km² dry land area, approximately 86.8km² is mainly urbanized. The City lies at an altitude of 1,140m above the sea level with mean temperatures that range between 25.7°C and 30.2°C in hot season and 15.4°C and 18.6°C in the cooler months. Mwanza City experiences annual rainfall of 700mm during October to December and 1000mm during February to May.

Administratively, the Council has 1 Division, 18 Wards and 175 Mitaa. According to the 2012 National Census, Mwanza CC has a population of 363,452 of which 177,812 are males while 185,640 are females. The annual growth rate is 3.0% with an average household size of 4.7 which is close to the national average household size of 4.8. The residents of Mwanza City depend on industrial work, white collar jobs, small scale agriculture and fishing activities as their main source of income.

The natural resources include a lucrative fishing ground, swampy lowland for rice cultivation and fertile land for other crops. The main crops grown among others include cereals, fruits as well as horticultural crops. Fishing activities within the lake involve both motorized boats and traditional canoes and the main catches from the lake include the Nile perch, Nile tilapia and sardines. Besides farming and fishing, some residents engage in livestock and poultry keeping. Other economic activities include industrial work, food vending, retail shops, recreation facilities, carpentry, welding and hotel services among others.

Lake Victoria with a surface area of 68,800 km² is the second largest freshwater Lake in the world after Lake Superior in United States. The Lake is shared by Tanzania (51%), Uganda (43%) and Kenya (6%). The annual gross economic output from the lake catchment's area is about 3-4 billion US Dollars. It supports a population of about 25 million people with *per capita* income of U\$D 90-270. The Lake's catchment provides livelihoods to one third of the combined population of Tanzania, Uganda and Kenya. Therefore maintaining the better quality of the lake's environment and raising the living standards of its people is the envisaged development goal of Tanzania, Uganda, Kenya, Rwanda and Burundi. Lake Victoria supplies fish, energy (Owen Falls Dam), drinking water, irrigation water and is used as a repository for human, agricultural and industrial waste.

Though the Lake provides livelihoods for a lot of people through fishing, there are environmental problems related to illegal fishing, pollution from domestic sewerages, nitrates and phosphates from the upper catchments and and overgrowth of water hyacinths. The problem of water hyacinth has received much attention in the past two decades amongst the East African Community Countries. As a result, there are projects in each country that deal with environmental management in River Kagera, River Nile and Lake Victoria as a whole.

Water hyacinth (*Eichhornia crassipes*) in Lake Victoria is a floating weed native to South America and is now common in other continents like North America, Africa, Asia and Australia. The weed first appeared in East Africa in particular Tanzania in river Sigi in 1956 and later river Pangani in Tanga region. It was probably brought in as flowering plant. In Kenya the weed appeared in Lake Naivasha and in Uganda it was found in Lake Kyoga in the late 1980s. The negative impacts of the weed were observed in Lake Victoria in early 1990s. The origin of the infestation is said to be River Kagera in Rwanda where the weed was used as an ornamental flower. Water Hyacinth's seeds are reported to be viable for a period of up to 20 years. At its infestation's peak in 1997, area covered by water hyacinth was estimated at 120km².

This had negative impacts on the livelihoods of the people in the three East African States of Kenya, Uganda and Tanzania as a whole. The negative impact therefore attract the need to control its spread over the lake by all the three countries in the region.

2.0 PROBLEM

The livelihoods of people around the Lake Victoria Basin particularly those depending on fishing activities and fish products in the late 1990s experienced a threat following the invasion of foreign weed within the Lake. The weed which later came to be known as water hyacinth posed a great threat to all aquatic life within the lake and even transportation was being impeded due to wide and thick spread of this new breed of weed that multiplied faster than it was expected. It is said that the weed found its way to Africa from Latin America particularly the Amazon Basin as it was mistaken to be an ornamental flower which attracted people to plant around ponds and rivers.

As the weed extensively covered the lake, the catch from various species of fish started to decline and hostile animals like crocodiles, hippopotamus, snakes and the like started to resurface on safer shores where they were previously not seen before. In addition to that, the quality of lake water for domestic use also changed drastically. Furthermore, there was blocking of water vessels used for transportation and decrease in water depth. Due to this scenario, aquatic scientists from within and outside Tanzania and other researchers undertook serious study regarding this new weed and their findings showed that if no immediate action is taken then the lake would be rendered dead since the weed denied aquatic life oxygen and sunlight for regeneration. In addition to that, transportation on the Lake was noted to face a serious challenge as the weed blocked docking areas and also moving grounds for lake vessels and fishing boats. Table No.1 below shows the coverage of the weed in both Nyamagana and Ilemela Districts for the period of December 2010 to November 2016 in Tanzania.

Table1: WATER HYACINTH COVERAGE IN NYAMAGANA AND ILEMELA DISTRICTS

DISTRICT	SURVEY PERIOD	Water Coverage (Ha)	Hyacinth Coverage (Ha)	REMARKS
NYAMAGANA	OCTOBER-NOV. 2016		21.8025	Water hyacinth coverage is dynamic and depending on weather (rainfall, and wind direction). Management level applied contributed to reduced water hyacinth coverage however, the level of management varies time to time. Biological control by the use of weevils was not achieved well at Mwanza Gulf, establishment of weevils and other bio agents (mites, fungal) was assessed to be low during the entire periods of surveys.
	APRIL-MAY, 2016		14.1445	
	NOVEMBER, 2015		10.22	
	MARCH 2015		6.3915	
	NOVEMBER,2014		7.5235	
	MAY 2014		18.1465	
	JANUARY 2014		13.725	
	SEP 2013		22.6	
	DECEMBER 2012		17	
	JULY, 2012		20.35	
DECEMBER 2010		11.95		
ILEMELA	OCTOBER-NOV. 2016		5.285	
	APRIL-MAY, 2016		2.56	
	NOVEMBER, 2015		1.835	
	MARCH 2015		3.55	
	OCTOBER 2014		3.575	
	MAY 2014		4.54	
	JANUARY 2014		3.5	
	SEPTEMBER 2013		9	
	DECEMBER 2012		7.3	
	JULY, 2012		15.32	
DECEMBER 2010		8.2		

The existing situation therefore prompted the national and international communities to come up with various efforts to tackle and control the situation and this involved organizations such as ECOVIC, LVRLAC and LVEMP I & II among others. The irony however was that once funding stopped the weed multiplied and situation become as it was previously. This can be explained by the fact that earlier interventions never took on board local communities to own the whole process at every stage hence they went for expert based solutions only. The persistence of this problem on the lake therefore raised questions like; are the agro-fishing communities taking the lead to tackle this problem? Which socio-economic activities could engender the problem among the agro-fishing communities despite all previous efforts? To address these issues, the Council introduced participatory Beach Management Units to control water hyacinths along the shores of the lake.



Water hyacinths in Lake Victoria

3.0 OBJECTIVE

The main objective of the initiatives was to facilitate proper removal of water hyacinth from the lake as a way to increase aquaculture activities in the lake. This initiative uses experiences of Sweya and Mkuyuni BMUs. In order to realize this, the following specific objectives guided the implementation.

- (i) To improve lake water depth and water transportation and anchoring activities at Lake Victoria shores.
- (ii) To improve lake water quality for both domestic and industrial consumption.
- (iii) To improve fishing and aquaculture activities within the lake for sustainability of agro-fishing communities' livelihoods on the Lake Basin.

4.0 IMPLEMENTATION STRATEGIES

In order to achieve the intended objective of controlling water hyacinth in Lake Victoria the Council implemented several strategies. First and foremost the Council took lead in organizing meetings at various levels of the community for awareness creation and stakeholders' involvement. The Council conducted Mitaa meetings to create awareness among community members thereby establishing sense of ownership of the initiative. Thereafter the decisions from Mitaa meetings were taken to Ward Development Committee (WDC) for further deliberations and finally approved by Council for implementation. The decision was approved to involve BMUs to participate in water hyacinth control activities by training them on both biological and physical removal. These meetings led to the formation of several Beach Management Units (BMUs). The BMUs were intended to control illegal fishing, to ensure security within the lake and to conserve the environment through clearing away the water hyacinths. The Council proceeded to conduct training of BMU members. Several trainings were conducted to empower BMU members on water hyacinths control using biological and physical

methods. Later, trainings were conducted on environmental management, processing of sardines, financial management, project planning and management and meeting procedures under LVEMP II support.

Another important strategy was formulation of constitutions. The BMUs formulated constitutions to guide on leadership and day to day activities, duties and accountability of leaders and members. Thereafter, the BMUs were officially registered at the City Community Development office. This was followed by Land identification and project planning in which each BMU planned for projects and identified land for BMU operations. The identified pieces of land were along the Lake shores where human settlements are not allowed.

The biological removal of water hyacinth using weevils (*mbawa kavu/Neochetina eichhorniae* and *N. bruchi*) was effected using the boat which was bought through LVEMP II project. This was spearheaded by BMU leaders in collaboration with FETA students who are using this as part of their practical studies apart from class work. The weevils which feed on water hyacinth are *Neochetina eichhorniae* and *Neochetina bruchi*. Water hyacinth is the only feed which the weevils use. These weevils are first reared in the 200 liter plastic tanks. They multiply in the tanks and after a period of one year, they are then released in the Lake Victoria and River Kagera. Through the use of weevils, the infestation of water hyacinth in the Lake has been reduced by 80%. The number of weevils cannot increase indefinitely. If their feed gets less (less water hyacinth), then they start to die. For example, in 2012, the Sweya Beach Management Unit engaged in construction of BMU field office and area for Mbawa kavu breeding center, construction of field office and fencing of Mbawa kavu breeding grounds as well as purchase of BMU boat and its engine to facilitate movements into the lake for planting the weevils.

One interesting activity is the physical removal of water hyacinths. Apart from biological control, there is also physical removal of water hyacinth using boats and in this, the BMU leaders make arrangements for the crew to go into the lake for harvesting water hyacinths thereby loading them in boats and dumping them off-shores. They use shovels and rakes to harvest the weeds which are then landed on dry land far away from the lake for decomposition. To facilitate physical removal of water hyacinths, the BMU purchased a boat, engine, wheel barrows, rakes and other necessary gadgets for harvesting the weed. The BMU also trained members on how to handle the weed once removed from the lake to avoid its spread to other areas within. Whenever possible other community members were involved in harvesting the weed. At Mkuyuni BMU, youths are contracted to remove water hyacinths from the lake and decompose them on dry land.

It was necessary to form routine schedules for inspection in the lake to detect new arrivals of water hyacinths, extent of weed destruction by weevils and control of illegal fishing. BMU members visit areas where weevils are placed to check on progress of destruction after every three months. In relation to new arrivals of water hyacinths, BMU members visit and assess the area and document the extent of the problem. The documentation is used to determine effective methodology to destroy the water hyacinths. In addition, BMU members have routine visits into the lake to control illegal fishing by checking fishing nets and fishermen's equipment.



BMU members clearing away water hyacinths

5.0 RESOURCES

The management of water hyacinths in Mwanza City was an endeavor that brought in many stakeholders since 2000 under LVEMP I. Moreover, this initiative adopted activities of LVEMP II which took off in 2013 and rejuvenated the fight against water hyacinths through Sweya Beach Management Unit. The resources for this undertaking came from Tanzanian Government, local communities and Donor Agency. The government provided expertise from the very beginning of the initiative till today. Furthermore, steps were taken to liaise with FETA which is an aquatic research institute. This institution was useful in rearing the weevils.

Government officials were also involved in organizing communities for mobilization and sensitization meetings that led to the formation of BMUs and election of BMU leaders that administer day today activities of this unit. It is these government officials who also worked hand in hand with the community leaders to ensure that a piece of land is acquired which was later used for building BMU office and allocating a site for rearing weevils (*mbawa kavu*). The sensitization meetings which were conducted prior to set up of the initiative promoted that sense of community ownership.

LVEMP II as donor therefore provided financial support which enabled the community to build BMU office which is well furnished with water, electricity and office furniture. In addition to that, the funding was further used to buy a boat, its engine and other equipment necessary for physical removal of water hyacinth from the lake apart from biological control using weevils. In order for the unit to sustain, a shade for drying sardines was also constructed within. The entire initiative amounted to fifty three million shillings (Tshs.53, 000, 0000/=) apart from other materials which were found within the area. The supervisory role of the project is co-owned between the local community through BMU and Mwanza City Council Officials while FETA is rendering expertise as far as biological control is concerned.

The whole process of controlling water hyacinth from the lake depends on the labor force which is rendered by Sweya BMU despite shortcomings they experience such as lack of assured monthly allowances from any source. It is that sense of ownership, team work and commitment of BMU leaders that make all this to happen at different levels.

Table 2: Financial Resources

ACTIVITY	FUNDS (TZS)	SOURCE OF FUND	BMU
Environmental conservation (purchase of boat, protective gears, construction of office, sardine processing rooms, plastic tanks for breeding weevils and training)	47,800,000	LVEMP II	SWEYA
	5,200,000	SWEYA BMU	SWEYA
Training and capacity building	5,000,000	LVEMP	MKUYUNI
Purchase of boat and its accessories, rakes, wheelbarrows	9,000,000	LVEMP	MKUYUNI
Construction of office and toilets	17,000,000	LVEMP	MKUYUNI
Construction of Office and toilets	1,000,000	MKUYUNI BMU	MKUYUNI
Expertise for supervision and monitoring		Mwanza City Council	SWEYA & MKUYUNI
Piece of land and building materials		Community Members	SWEYA & MKUYUNI
Man power and expertise		FETA	SWEYA & MKUYUNI
Man power		BMU Members	SWEYA & MKUYUNI

6.0 RESULTS

The role of Beach Management Units in controlling Lake Victoria water hyacinth in Mwanza CC has led to several results within the lake and its entire environment. The effort undertaken by the BMUs has led to constant reduction of water hyacinth spread within the lake and its shores thereby creating clean environment for fishing activities and decrease of breeding grounds for dangerous animals like crocodiles and snakes. When boats are not in operation to either take weevils to the lake for biological control or physical removal of water hyacinth, they are hired by fishermen to generate income other activities of BMUs.

The Council and the Mwanza community has witnessed improvements of fishing activities within the lake due to clean fish breeding grounds creating room for fish fingerlings to grow accordingly. There is also easy water vessels movement and anchoring starting from local canoes, ferries and ships within the lake. BMUs in collaboration with other authorities like TAFIRI, fisheries patrol unit in Mwanza are actively involved in arresting fishermen who use illegal fishing nets and poisons.

This initiative has resulted into emergence of small businesses within the area such as food vendors (mama lische) and other entrepreneurial activities that the fishermen need creating new employment opportunities such as hiring of the boat and/or fishermen employed by BMU members to fish sardines on their behalf, water hyacinths removers, service fees collectors from the public toilet and other amenities owned by the BMUs. Additionally, BMU members offer financial support to Mtaa activities and development projects creating mutual co-existence with the local community. Due to strength of the BMUs, members have access to soft loans from their own savings.

7.0 SUSTAINABILITY STRATEGIES

In order for the achievements realized to be maintained the following socio-economic, environmental and technical measures should be addressed:

- (i) The active involvement of students of FETA in projects as practical training area assures the constant breeding of these weevils which are then taken to the lake after every three months to destroy newly regenerated water hyacinth.
- (ii) The permission given to the BMU leaders to use the boat for hiring as a way to generate income motivates the leaders.
- (iii) The BMU office area serves as a sardine processing area and Mtaa Executive office which strengthens ownership thereby improving security matters within the area.

- (iv) Continued control of horticultural activities around the lake shores due to the fact that farm fertilizers are noted to facilitate rapid growth of water hyacinth during rainy season around the lake shores.
- (v) Domestic wastes that find their ways to the lake via rivers such as Mirongo, Mkuyuni and other streams from Igogo/Pamba area are controlled since such areas are noted to be rich of nutrients that promote rapid increase of the weed particularly in areas such as Makongoro/Clinic area, Asian Cemetery, among others around the lake.
- (vi) Continued promotion of fishermen involvement in breeding and using of *mbawa kavu* to fill the gap of production by FETA and Sweya BMU which will lead to wider coverage.
- (vii) Continued enforcement of the bye-law that prohibits use of water hyacinth as ornamental flower.

8.0 SECRETS OF SUCCESS

Underlying reasons for success of control of water hyacinth on the shores of Lake Victoria within Mwanza City Council is attributed to the following factors:

- (i) The secret of success from BMUs in this work is due to active community involvement, education and the ownership of the whole process.
- (ii) There is close involvement of research institutes and sense of sharing of expertise between FETA and other research institutes within the area. BMU officials are allowed to breed these weevils and through this they feel proud in taking part to keep the lake clean from this weed.
- (iii) There is mutual co-existence. The boat is anchored at TAFIRI area where there is adequate security while the BMU building is also shared with Mtaa Executive Officer. This mutuality enables activities to be undertaken effectively.
- (iv) The commitment of Council Management Team led to the realization of the initiative as planned.
- (v) Availability of autonomy and discretion in using funds donated from LVEMP II, this made BMU leaders responsible and accountable.
- (vi) Effective enforcement of the bye-law that prohibits people from using water hyacinth as an ornamental flower and other uses.

GEITA DISTRICT COUNCIL



VILLAGE SELF HELP EFFORTS FOR IMPROVED SERVICE DELIVERY

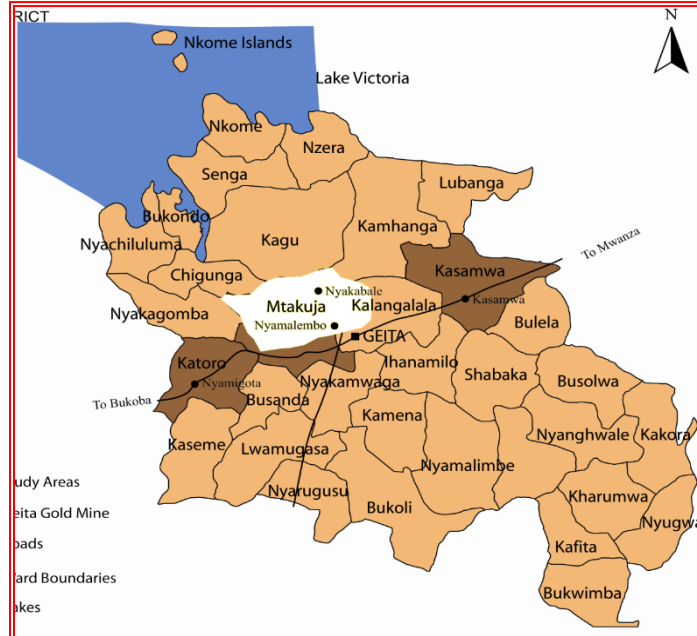


Experience of Nyakagwe Village

1.0 INTRODUCTION

Geita District Council is one of the 6 Councils in Geita Region. The land in Geita DC rises between 1,100m to 1,300m above the sea level and lies between 2°8 to 3°28 S and 32° 45 to 37° East. The Council shares its borders with Muleba DC to the North, Sengerema and Misungwi DCs to the East, Kahama, Mbogwe and Bukombe DCs to the South and Biharamulo and Chato DCs to the West. The Council covers 7,825km² of which 6,775km² is dry land and 1,050km² is covered by Lake Victoria. The Council has a moderate temperature between 17°C and 30°C with an average rainfall of 1200mm per annum. Geita DC is divided into 2 constituencies, 4 Divisions, 37 Wards, 145 Villages and 626 Vitongoji.

Figure 1: The Map of Geita DC (before split)



Nyakagwe Village is one among the 145 Villages of Geita DC. It is one of the three villages of Butobela Ward. The village was established in 1995 after being promoted from a Kitongoji of Butobela village. According to the 2012 census, Nyakagwe Village has a total population of 4,331 residents. The village is endowed with gold deposits, thus main economic activities include small scale gold mining (70%), agriculture (20%) and trade (10%).

2.0 PROBLEM

Nyakagwe Village experienced a strong need for administration, health, education and security services in the village but the funds received from the Council and Central Government have always been too limited to effectively address the growing needs. Being a mining center, Nyakagwe village has been subjected to rapid growth in population. When the village was established in 1995, the population was 600-1000 compared to the recent population of 4331. The main reason for rapid population growth is immigration of people from various places in search of gold prospects. As narrated by the former Butobela Ward Executive Officer (WEO), who has also lived in Nyakagwe as a resident of the village since 1991, the influx of diverse people into the village is associated with a lot of problems including crimes in terms of theft and armed robbery. Reports indicate that armed crimes used to occur twice every month.

According to Nyakagwe dispensary nurse, the influx of people was associated with spread and increase of diseases especially HIV/AIDS, malaria, acute respiratory infections, urinary tract infections, anemia and sexually transmitted diseases; as the most leading diseases. The population growth and engagement in mining created poor enrolments in Primary Schools. For example in the year 2011 only 119 of the school going age children were registered to start standard one compared to 283 in 2016. These challenges affected adversely the village's social and economic development.

The school children of Nyakagwe Village used to walk almost 4 km on foot to attend school at Butobela Primary School. Pupils were frequently challenged by heat, rain, floods and wild animals. This contributed to dropouts and poor performance of the pupils. The village had several health challenges; Nyakagwe villagers' especially pregnant women and children used to travel almost 14km to Bukoli Dispensary in Bukoli Ward to obtain health care services. Sometimes they had to find health services 5km away in Nyang'hwale DC, a neighboring Council.

The Village managed by strong and committed leadership realized that by entirely depending on the Council, given the limited and irregular flow of Development funds, the village like many others would have to wait for years to have the services improved.

3.0 OBJECTIVES

Geita DC acknowledges that if people are guided effectively and encouraged, they are capable of doing many things by themselves in building primary schools, dispensaries and roads; and maintain them. Nyakagwe village has proved this by being one of very few villages which have managed to improve social services by constructing improved school infrastructure, a dispensary and a police post through local community self-help initiatives. These have had a remarkable impact on social and economic development of the village. In the year 2000 Nyakagwe village with the support of the Council and other development stakeholders decided to empower the Community of Nyakagwe village for social and economic development to achieving the following set objectives:

- (i) To improve quality and availability of administrative services by constructing a modern village government office.
- (ii) To reduce the incidences of theft and armed robbery by constructing a permanent police post.
- (iii) To improve accessibility of primary medical services by constructing a village dispensary.
- (iv) To increase the enrolment of school age children by constructing a village primary school.

4.0 STRATEGIES

After realizing the challenges the Village resolved to address them through local initiatives. The initiatives were later supported by the council and other development stakeholders. The uniqueness of this case lies in the nature of the strategies used to implement the projects. Nyakagwe Village opted to address the challenges by adopting a demand responsive approach focusing on an informed choice of what the community needs and is ready and willing to contribute for. The initiatives are elaborated below.

Construction of three classrooms; the idea of building Nyakagwe Primary School started in the year 2000 after village registration in 1999. The volunteering Village Executive Officer (in 2000), District Councilor and other small mining entrepreneurs started to build three classrooms and two staff offices. This was done under collaboration between the village government, the villagers and the mining entrepreneurs. To complete these initiatives, all villagers made voluntary contributions set at a minimum of TZS 3,500 per adult. During the construction each Kitongoji participated in groups to collect stones and dig pits for school latrines. Through the MEM program, the Council contributed iron sheets, woods and cement to

complete construction. Later in 2000, the Council allocated one teacher and transferred one teacher from Butobela primary School to newly established Nyagakwe Primary School. The school was inaugurated having two teachers only.

Construction of more classrooms; in 2009 the Village Government acquired an area for small mining activities. This area was leased to small miners and enabled the village to collect revenue. Some of the revenue was allocated for building three classrooms. The village leaders decided to get a credit of iron sheets from one shop of a well to do businessman in the village. The Council contributed TZS 7.2 Million that was used to buy desks for the classrooms.

Purchase of Land for Construction of a Village Market; in March 2010 the village bought a piece of land for constructing a market. However, the area was found to have a huge gold belt. Instead of constructing a market on this land rich of gold, the village leaders decided to lease it to miners. The decision helped the village to collect huge amounts of revenue and used the funds to complete construction of the classrooms; making Nyakagwe Primary School possess nine classrooms, two office for staff, modern school latrines and two teachers' houses.

Reinforcing revenue collection; through the lease of plots of land to miners the village strengthened its revenue collection, making significant collections and surpassing many villages in Tanzania. For example, in 2010 the Village Accounts at NMB and CRDB Banks had a total of TZS 120 Million.

Construction of service delivery buildings; in 2010 Village leaders endorsed the decision to purchase a plot at the village center and construct a larger and spacious village office. In the same year the Village leaders and villagers jointly agreed to construct a dispensary to address the deteriorating health services in the village. In 2011 the construction of village dispensary and a house for dispensary staff was completed. In 2012 the village Council started the construction of village Police Post to address order and security issues. It should be recalled that the village experienced frequent attacks by bandits and robbers attempting to rob gold dealers. The OCD'S Office provided a building plan and after completion of the police post three police staff were immediately allocated. Initially the community and gold dealers contributed to house rents and meals for the police staff. Recently however, Nyakagwe village completed the construction of the police post with two staff houses.

These are purely self-help efforts as the largest proportion of the funds for these projects were community contributions. No funds were received from Central Government (CG). Besides financial contributions, the community participated committedly in mobilizing materials and providing direct labor during construction of the classrooms, village office, village dispensary and the village police post.

The case of Nyakagwe village shows an excellent example of how villages can effectively harness the community initiatives and support from other development stakeholders to improve services for social and economic development. This is because all villages of Geita DC are endowed with a variety of natural resources which offer a great potential of opportunity for social and economic development. Nyakagwe Village has managed to emerge from the rest by managing to turn these resources into service improvement and development opportunity.

5.0 RESOURCES

Implementation of the village development projects required both financial and labor resources. However, the Community realized that the funds would not be timely obtained from the Council or Central Government. It was resolved that the required financial resources be mobilized locally through

community contributions. Funds from the Council and other Development partners would have to come as a top up to the community's initiative.

Table 1: Financial Contributions by Stakeholders

Project	Funding Sources				Total
	Community	Dev Stakeholders	Council	CG	
Village office	36,105,000	-	-	-	36,105,000
Dispensary and 2 staff houses	97,800,000	-	26,000,000	-	123,800,000
Police post and staff house	65,723,800	7,600,000			73,323,800
School classrooms and latrine	105,666,000	-	-	-	105,666,000
Two in one school staff house	46,766,000				46,766,000
Total	352,060,800	7,600,000	26,000,000	-	385,660,800

6.0 RESULTS

Nyakagwe Village initiative has improved the provision administrative services to the community. Community's initiatives to improve administrative services have been realized through construction of the village government office resulting into improvement of the quality and efficiency of administrative services provided in the village. Majority of those interviewed were of the opinion that construction of a modern village government office has provided a good venue for village government meetings, reduced interferences between the Village Chairperson and VEO, improved democracy, improved service delivery, improved security and improved safety of documents.



A modern Nyakagwe Village Office

Speaking on the village office the village Chairman said that *“before construction of this office we had only one rented room that we used as an office for both the Chairperson and VEO. But as you can see in this building the Chairperson has an office that is separate from the VEO’s. We have this nice conference hall where we can seat for meetings to make important decisions. Documents can now be safely kept. If someone needs to talk to the Chairperson or VEO can now do so with confidentiality”*.

The Chairman’s views above were supported by one member of the village government who had this to say. *“Construction of this office has been greatly beneficial. It has relieved us from the annoyances of having to rent a small room for office use. Also the security activities of our “Sungusungu” has been enhanced because they have managed to get an office space in one of the extension rooms of this building”*.

Another remarkable outcome of the Community's initiatives to improve health services is that the village owns a modern village dispensary. As reported by most of those interviewed, construction of the dispensary has created a significant change as basic health services are accessible 24 hours to Nyakagwe villagers within a proximity of 1km. The dispensary serves other surrounding villages and has reduced deaths significantly and remarkably the maternal and neonatal deaths.



Nyakagwe Village Dispensary

The dispensary is also considered to have simplified the administration of vaccines. This has improved vaccination coverage whereby 99% of the children are estimated to receive the required vaccines timely. The dispensary also provides medical services on TB and HIV/AIDS that used to be provided at Geita town hospital.

Increased enrolment of school age children; Nyakagwe community initiatives to construct a village primary school has resulted into improved enrolments due to improved accessibility, learning environment and parents' participation. According to interviewed villagers, the school created great impact on the economic life because it reduced the burden of having to accompany children to Butobela for fear of bandits, wild animals, rain and floods. Commenting on this, the former WEO of Butobela Ward, also a resident of Nyakagwe Village had this to say. *"Before the existence of this school the situation was so terrible, that at one time we were forced to gather our children at the village church where we volunteered to teach them"*. Generally the presence of the school has significantly reduced truancy, improved pupils performance, increased pre-primary enrollments and promoted pupils health.



Nyakagwe Village Primary school

Improved Working Conditions; construction of school, dispensary and a police post went hand in hand with construction of staff quarters. This has led to improvement of working environment as staff are assured of housing facilities close to the working stations.



Staff Quarters for Nyakagwe Village Dispensary Staff

Commenting on this the Head Teacher of Nyakagwe Primary School had this to say. *“One of the things that make working environment difficult especially for teachers is the lack of housing facilities. Nyakagwe is my second working station since I was posted to Geita DC. I know how teachers suffer from the lack of houses. The situation is quite different here. The Community has recognized the importance of staff accommodation and endeavored to construct staff quarters through community contributions. This makes the working environment more motivating and therefore attracts the staff to stay and work in the village”.*

Improved Security; maintenance law, order and security in the village has improved because of the construction of the village police post. This defies the common policy practice where by police posts are normally found at the divisional headquarters. The police officer in charge stated that *“construction of this post was necessitated to curb frequent armed robbery incidences that threatened peace and security in the village. The crime situation has been greatly controlled by the presence of the active police staff in the village”.*



Nyakagwe Village Police Post and Staff House

The police post has a remarkable impact on peace and security matters in the village. According to the village community the incidences of theft and armed crimes declined greatly. Commenting on this, one businessman narrated that *“since the 2011 incidence that led to the death of one businessman, there has been no major robbery incidence witnessed in the village”*.

Improved social and economic development; the overall outcome of the developments achieved in administrative, social and security services is notable in the progress being realized in social and economic development. These services are reflected in the vibrant economic activities vividly observed. For example, the village has witnessed expansion in wholesale shops, retail shops and hardware stores. Modern houses that one would expect to see in major town centers are now seen in the village. Services such as electricity, mobile networks and mobile financial services are abundant in the village indicating social stability, law and order and economic vibrancy. The village has also realized increase in investments; according to the village government leaders the village has witnessed increasing investments in construction sector, retail and mining. This implies that people are satisfied with service standards and feel secure to settle and invest in Nyakagwe.

Lastly, the village has become a model village throughout neighboring villages in Geita DC, Nyang’whale DC and Kahama DC. In 2014 the Nyakagwe Village Chair was invited by the Kahama District Commissioner to have a talk with village chairpersons of Kahama District to share secrets of success of the Nyakagwe Village.

7.0 SUSTAINABILITY STRATEGIES

In order to ensure sustainability, the village has devised a number of strategies. One strategy is to have the whole of the villages’ land surveyed. This is expected to enable the village obtain sustainable revenue from the village owned mining lands. The village is committed to further improvements in openness and transparency. This is expected to be achieved by ensuring that village public meetings are held regularly and attended by every adult member of the village. Also besides posting on the village noticeboard, documents showing the village’s financial statements are prepared and given to every participating member for continued community trust and support.

Strengthening village revenue collection is an important strategy. This will be achieved through engaging the village council members in collecting revenue from the available sources on rotation basis. Incentives will be paid to collectors in terms of percentage of the amount collected. This will be implemented under plans to ensure that all financial transactions are conducted according to the prevailing financial and procurement laws and regulations. The village as well, plans to ensure that all

leaders are trained on the basics of financial management and book keeping. This is expected to be achieved by collaborating with the Geita District Council's department of finance and trade.

The village has set a strategy to establish a center to provide youths with opportunity to learn various technical skills that are useful for development of the community. This is expected to boost the village's local economy and create employment.

8.0 SECRET OF SUCCESS

As explained by the village Government, the secrets of success of these initiatives include:

- (i) Availability of Gold Mines; the village is endowed with gold deposits.
- (ii) The decision to lease the village land rich with gold deposits and collect revenue effectively.
- (iii) Willingness of the community members to contribute to their own development. The Community members have been in the forefront to initiate development plans and contribute financial and material resources towards implementation.
- (iv) Strong and committed Village leadership; most of those interviewed attribute the successes presented here to the commitment of the Village Chairperson and VEO.
- (v) Effective revenue collection and strict financial control; this enabled to ensure that all payments due could be made timely and the projects completed in time.
- (vi) Employing local artisans instead of contractors in construction projects; this is another important factor. It contributed to low costs of implementation.
- (vii) Close supervision; joint close supervision (District Council and community) was always maintained to ensure value for money is realized in implementation of all projects.
- (viii) Regular village Meetings; by conducting statutory meetings as stipulated by law, all the issues arising could be solved through the meetings to allow things to move forward. This also cultivated trust of the community towards the leadership.
- (ix) The role of Standing Committees; the committees play a very important role in facilitating implementation of the planned projects. This is done by conducting monthly meetings where by recommendations are given regarding progress of the projects.
- (x) Motivation for revenue collectors; 10% of the overall collection is paid to the village council members who collect revenue from the available sources as an incentive.
- (xi) Community involvement in every development plan to be done at the village and the presentation of progress and financial reports during village meetings.

CHATO DISTRICT COUNCIL



COMMUNITY BASED ESTABLISHMENT OF SATELLITE SCHOOLS



Experience of Chato DC

1.0 INTRODUCTION

Chato District Council is one of the six Councils of Geita Region. Other Councils include Geita, Bukombe, Nyang'wale, Mbogwe and Geita Town Council. Chato DC was established after splitting Biharamulo DC in Kagera Region in July, 2007. The Council is located between 2° 15' – 3° 15' South and 31° – 32° East. It is within altitude ranging between 1135 – 1410m above sea level. The Council covers a total area of 3,572 km² of which 3,472km² is dry and Lake Vitoria covers 100km². Administratively, Chato DC is divided into 5 Divisions of Buzirayombo, Buseresere, Kachwamba, Bwanga and Nyamirembe, 23 Wards, 115 Villages and 548 Vitongoji. According to 2012 census, the Council has a population of 365,127 (181,368 male and 183,759 female). Over 80% of residents engage in farming, fishing and mining. Food crops include rice, maize, cassava, legumes, sweet potatoes and ground nuts. Cash crops include cotton and sunflower. Other economic activities include mining, livestock keeping, beekeeping, small business and forestry and trading.

The Council has 128 primary schools of which 3 are privately owned. The total number of pupils in the 24 Wards of the Council is 104,384. The number of teachers is 1862 whereby 1230 are males while 632 are females. Statistics show that enrolment of pupils in primary schools increased from 12,814 in 2007 to 22,421(57%) in 2016 as shown in table 1 below.

Table1: Trend of Enrolment of Pupil in Primary Schools

YEAR	Enrolment		Total	Enrolment (%)
	Boys	Girls		
2007	6673	6141	12,814	105
2008	6793	6519	13,312	111
2009	6593	6370	12,963	100
2010	6340	6298	12,638	109
2011	7174	6606	13,780	108
2012	6941	6652	13,593	100
2013	7650	7264	14,914	110
2014	7473	7148	14,621	98
2015	8387	8269	16,656	113
2016	11411	10954	22,421	133

The Council has centers for domestic science and technical education. The vocational training centers are attached within the primary school compounds. These include Chato, Kibehe and Bwanga. The center for domestic science is at Chato and Kibehe primary school. These centers are useful for ensuring promotion of self-employment.

2.0 PROBLEM

The satellite schools are extensions of schools away from the mother primary school in new villages and vitongoji. These extensions serve to provide education to children in the newly formed communities and where population growth or birth rates are high. The communities build the schools and start seeking for full registration as pupils enjoy studies close to their communities, mostly using voluntary staff. They are not registered and hence are not examination centers; as a result, they are mostly attached to 'mother' primary schools. In most cases, enrolment at these schools depends on the population growth, distance from mother schools, economic activities of parents and harshness of the environment. For most satellite schools the structures are built by communities and are inadequate as pupils are concentrated in small classrooms and sometimes without desks.

Between 2007 and 2012, Chato DC population increased tremendously. In 2007 the population was 251,264 while in 2012 the population was 365,127. This implied that, there was a high increase in population at 45.3% between the National Population Census 2002 and 2012. At the core of these changes in population there was an increase in number of pupils in primary schools from 12,814 in 2007 to 22,421 in 2016. While the pressure of pupils in primary schools was increasing by 75% in 2016 in villages, the number of schools remained the same. In addition, the budget ceiling remained the same, and own source income collection alone could not even sustain infrastructures to accommodate all pupils in the Council. This situation led to acute shortage of resources in schools. Furthermore, it led to other problems such as irregular attendance, pupils drop out (2013-58.4%; 2014-68.4%; 2015-70.2%), long distance from home to schools (more than 6km-10km), pregnancies, accidents and poor performance in examinations. Though the Ministry of Education stipulates that teacher-pupil ratio be 1:45, the actual ratio was 1:69. These problems led to failure of children in new villages and vitongoji to access primary education. The parents were unhappy with this situation hence they came up with the idea of building Satellite Schools.

3.0 OBJECTIVES

The main objective of this initiative was to establish satellite schools to reduce the challenges that parents, children and teachers experienced. Specifically the Council intended to:

- (i) Ensure maximum enrolment, attendance and retention of pupils by establishing satellite schools.
- (ii) Reduce dropout rate (from 70.2% to 5%).
- (iii) Register all existing satellite schools which have already fulfilled the requirements.
- (iv) Reduce distance of accessing primary schools with 2km.

Of great importance, the Council aimed at increasing schools by providing support to satellite schools which were introduced by new villages that had no primary schools. The villages include Dodoma, Mhororo, Songambe, Imalamawazo, Ilangala, Rusungwa, Mkolani, Nyabilele, Nyarwerwe, Mkuyuni, Butobela, Izumangabo and Bwanga 'B'.

4.0 IMPLEMENTATION STRATEGIES

Chato DC adopted various roles, rights and laws concerning education and used them in addressing problems through implementation of Satellite Schools. In 2012/2013 the Head of Primary Education at the Council presented the issue of Satellite Schools for discussion. The department endorsed the idea of communities to establish satellite schools. The proposal was presented to CMT and approved by the Full Council. In September 2013, a series of consultative meetings aiming at implementing the proposal were held with village leaders.

The District Education Officer responsible for primary education communicated the intention of the Council to build satellite schools through communities and other education stakeholders participation in selected schools. School committees and teachers endorsed the proposal in December 2013 and prepared sites and building materials.



Materials brought by community at Dodoma Satellite School at Kigongo Ward



Bricks preparation and construction of satellite schools at Imalamawazo Butobela

In December 2013, the Council designed and conducted sensitization meetings at all levels (Kitongoji, villages and wards). This was done by a well-established and multidisciplinary education task force comprising five members; the district education officer, district academic officer, district land officer, ward education coordinator and councilors. The CMT as a whole was actively involved through setting strategies and receiving reports on community sensitization regarding establishing satellite schools in Chato DC. This was done in five months (July - November, 2013). The Council conducted sensitization popular meetings to the elders and parents to convince them about the importance of education and how important it is to their children. The programme also covered other educational aspects especially buying uniforms and ensuring pupils' health. In these sensitization activities communities were also mobilized to build school infrastructure (toilets, offices and desks).

Community resource mobilization; the communities through the school committees and teachers were mobilized to contribute in kind and in cash (5,000/=) for the construction of classrooms and other school infrastructure. The communities were also requested and accepted to contribute cash to be used for purchasing industrial building materials such as cements, iron sheets, nails, ceiling boards and limestone. The rates were fixed depending on the ability of the households in a specific locality. For example, in Nyarwerwe village each Kitongoji had its own rate ranging from TZS 500/= to TZS 1000/= per month per pupil. The community also contributed firewood and maize for making porridge for pupils.

5.0 RESOURCES USED

Various resources were used by Chato DC. Human resources included Councilors, Education staff, Council officers, Council Staff (Ward Patrons/Matrons), Ward Education Coordinators, Ward and Village

Executive Officers, Village Chairpersons, and teachers. The Council also used significant amounts of financial resources. Table 2 below indicates the financial resources contributed by Chato DC, stakeholders, Constituency Development Catalyst Fund (CDCF) and the community.

Table 2: Financial Resources

S/ N	SATELLITE SCHOOL	COMMUNITY	COUNCIL	STAKEHOLDER	(CDCF)	TOTAL
1	MKUYUNI (construction of the project was started in 2006) 3 km. away from Chato Pr. School	8,552,000 (Construction of four classroom and one office)	12,000,000	-	8,000,000	28,552,000
2	NYARWERWE (construction of the project was started in 1994) 15 km. away from Nyantimba and Kanyindo Pr. School	7,210,550 (Construction of three classroom, toilets and two office)	7,000,000	22,000,000	1,000,000	37,210,550
3	MKOLANI (construction of the project was started in 2010) 6 km. away from Katete 'A' Pr.Sch.	12,043,000 (Construction of five classroom, toilets and two office)	21,000,000	-	-	33,043,000
4	IZUMANGABO (construction of the project was started in 2008) 3 km. away from Bwanga 'A' Pr.Sch.	5,554,600 (Construction of two classroom, toilets and office)	-	-	-	5,554,600
5	BWANGA 'B' (construction of the project was started in 2007) 3 km. away from Bwanga 'A' Pr.Sch.	16,200,500 (Construction of seven classroom, toilets and two office)	17,000,000	-	-	33,200,500
6	BUTOBELA (construction of the project was started in 2012) 8 km. away from Mwendakulima Pr.Sch.	12,226,000 (Construction of two classroom, toilets, foundation of two classroom and one office)	7,000,000	-	1,000,000	20,226,000
7	SONGAMBELE (construction of the project was started in 2012) 6 km. away from Mnekezi Pr.Sch.	5,027,600 (Construction of three classroom, toilets and one office)	7,000,000	-	-	12,027,600
8	DODOMA (construction of the project was started in 2004) 6 km. away from Nyisanzi Pr.Sch.	8,000,000 (Construction of three classroom, toilets and one office)	12,000,000	-	-	20,000,000
9	ILANGALA (construction of the project was started in 2012) 4 km. away from Kibumba 'A' Pr .Sch.	17,783,000 (Construction of two classroom, toilets and one office)	-	-	1,000,000	18,783,000
10	IMALAMAWAZO (construction of the project was started in 2003) 5 km. away from Kibumba 'B' Pr. Sch.	15,737,000 (Construction of two classroom, toilets and one office) -Two foundation + one office	-	-	1,500,000	17,237,000
11	MHORORO (construction of the project was started in 2009) 5-10 km. away from Makurugusi Pr. Sch.	12,225,500 (Construction of six classroom, toilets, two in one teachers house and one office)	7,000,000	28,000,000	2,000,000	49,225,500
12	RUSUNGWA (construction of the project was started in 2002) 5-7 km. away from Kalebezo Pr. Sch.	5,830,000 (Construction of four classroom, toilets and one office)	7,000,000	-	900,000	13,730,000
13	NYABILELE (construction of the project was started in 2007) 4.5 km. away from Rutunguru 'A' Pr.Sch.	3,605,000(Construction of one classroom, toilets and one office)	5,000,000	-	-	8,605,000
TOTAL		129,994,750	102,000,000	50,000,000	15,400,000	297,394,750

6.0 RESULTS

Results of Chato DC satellite schools construction are enormous. Satellite schools have assisted the Council to move rapidly towards achieving the goal by 113% of increasing enrolment from 2007 to 2016 and a reduction of dropout rate (from 4%in 2012/13 to 1% in 2014/15). This resulted from shortening the distance from 7-8km to 2km from home to school something which motivated pupils to attend schools. This strategy has actually achieved several results as described below by Mwl. Angasirini O. Kweka, The District Education Officer responsible for primary education. *"... I found these initiatives already in place, what I have done is to encourage the task force to work hard in supervision of satellite schools and to work with different education stakeholders in implementing the idea. The Council has minimized dropout rate and increased enrolment..... People have realized the importance of education for their children.... and they are now*

making significant contributions..... the results of the initiative are now clear.. yes... we are achieving our overall goal....".



Educational Officers at Dodoma Satellite School

The initiative has reduced rampant accidents at Katete 'A', Rutunguru, Makurugusi, Nyisanzi, Bwanga, and Chato primary schools. Accidents used to occur as pupils had to move to schools beyond their Kitongoji. Establishment of the road humps for safety of the pupils crossing and walking along the roads also contributed to the reduction of accidents.



Construction of road humps to reduce accidents



Rusungwa Kitongoji satellite school, 18 km from Kalebezo Primary School

Performance improvement; presence of satellite schools improved performance in 2014/2015 to make Chato DC attain first position in examination results amongst other districts in Geita Region for Standard Four (SFNE) in 2014 and 2015. Examination results for 2015 are shown in table 3 below.

Table3: Performance for Standard Four (SFNE) 2015

S/N	District	Performance (%)	Region Position	National Position
1	Chato	97.45	1	17
2	Mbogwe	94.18	2	43
3	Geita (TC)	94.04	3	45
4	Geita (DC)	94.00	4	46
5	Nyang'hwale	93.13	5	53
6	Bukombe	92.90	6	57

The initiative has resulted in increased stakeholders' participation spirit. The Council, education partners and the Community have acquired skills to work together as teams to implement plans. The village council member of Kibumba Village, Mr. Shija Matoto commented; *"the people now understand the importance of participation in development activities..... thus engaging thoroughly in efforts for establishment of satellite schools. We have two satellite schools in our village, Ilangara and Imalamawazo..... both of them built by villagers, with little support from Constituency Development Catalyst Fund (CDCF)".*

To conclude on results satellite schools have facilitated improvements in academic performance year after year. This initiative has led to increase in number of appointed teachers, commitment of teachers, well organized supervision of education officers, school quality assurers, ward education coordinators and head teachers/teachers. Councilors are well organized and encourage teachers to participate fully and work hard in teaching and supporting pupils and parents. The results show that Chato DC is one of the best performer in primary education, holding first position out of the six councils of Geita Region.

7.0 STRATEGIES FOR SUSTAINABILITY

In order to sustain and advance the attained results Chato DC has set several strategies. The Full Council is poised to request Councilors to keep on encouraging people to work hard to complete the building/structures for satellite schools that were started by the community. The Council is committed

to encourage participation of different stakeholders on education matters in order to overcome the needs and demand of the society. Also Chato DC continues to encourage Vitongoji to construct and establish satellite schools that are self-initiated and self-management of own resources for sustainable development. This will completely erase the dependency syndrome to the Council and the Central Government.

8.0 SECRET OF SUCCESS

The success documented herein is a function of team work, quality leadership, political will, community participation and stakeholder's contributions in establishing Satellite schools. It also involves effective collaboration between the Full Council, Education, health and water committee, Ward Executive Officers, Village Executive Officers and faith based stakeholders. Quality leadership excelled by the DED Mr. Clemence Berege and the Chairperson Mr. Maisha Marando contributed to success in establishing of satellite school in Chato DC. Political will was another important aspect for success in Chato DC as willingness of political leaders especially the Councilors to adopt the initiative of establishing satellite schools provided great support. Other reasons for success include effective community participation, financial transparency and mobilization of stakeholders. Stakeholders such as Fr. Honoratus, Poverty Relief Fund (PRF) and H & C Whitehead LTD of Brig house Yorkshire England contributed a lot to this success.

Chapter Three:

Fiscal Decentralization and Revenue Enhancement

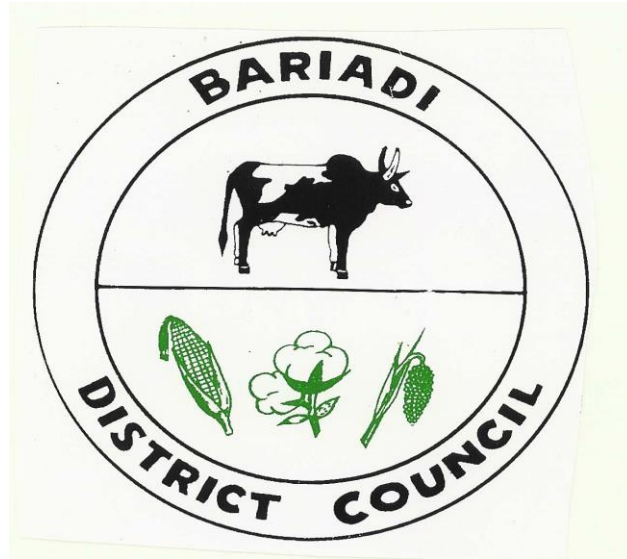
Tanzanian fiscal decentralization focuses on empowering LGAs establish sources of revenue, create efficient intergovernmental fiscal transfers, provide efficient level of funding for the delivery of mandated services, improve revenue generation, guarantee transparency and fairness in fiscal allocations and ensure equity in service delivery (Local Government Reform Policy Paper 1998). Fiscal decentralization in Tanzania encompasses in principle the following facts:

- (i) LGAs should not be assigned responsibilities or mandates that are unfunded.
- (ii) The grant system should allow national (priority) policies to be executed through LGAs, which could be funded with conditional grants and guided by national minimum standards.
- (iii) The grant system should encourage LGAs to set their own priorities through the introduction of significant unconditional and development grants.
- (iv) The unconditional grants should be provided in an equalizing manner by compensating LGAs which have weak resource base.
- (v) Calculation of grants should be done on formula basis based on reliable, fair and objective criteria.
- (vi) Grants from particular sector ministries' budgets should be avoided as much as possible.

Revenue enhancement refers to the use of autonomy granted by the Central Government to the LGAs to raise revenue and spend depending on their own priorities. Revenue enhancement includes activities such as finding the sources for revenue, widening the tax base, encouraging economic development activities that increase the sources of tax and enacting bylaws that enforce revenue collection and spending. In this chapter a case from Bariadi DC is presented.

Bariadi DC best practice is about Revenue Enhancement for Improved Service Delivery. The initiative was implemented following the Government decision to split the great Bariadi DC into three Councils. This split decreased revenue capacity of the Council. Apart from narrow tax base there was weak revenue collection task force, outdated tax rates, inadequate motivation of revenue collectors, unreliable transport, use of traditional methods and equipment and outdated revenue collection bylaws. This had adverse impact on the Council's capacity to provide social and economic services to community. This necessitated the Council to intervene and improve own source revenue collection through intensive sensitization programme, regular visits to potential sources of revenue, review of bylaws and tax rates, creation of motivation to revenue collectors, establishment of tax base and introduction of electronic payment methods. This initiative resulted into positive change in behavior of tax payers and increased revenue which facilitated the Council to fund various projects such as construction dams, classrooms and laboratories.

BARIADI DISTRICT COUNCIL



REVENUE ENHANCEMENT FOR IMPROVED SERVICE DELIVERY



Experience of Bariadi DC

1.0 INTRODUCTION

Bariadi District Council is one of the 6 Councils in Simiyu Region. The Council is located between Latitudes 2°15' and 3°10' South and Longitude 33° 40' to 35°10' East. The Council borders Busega DC (Simiyu Region) to the West, Bunda and Serengeti DCs (Mara Region) to the North, Maswa game reserve to the East, Maswa and Itilima DCs (Simiyu Region) to the South. Administratively, Bariadi DC is divided into 3 divisions namely Mhango, Dutwa and Nkololo, 21 Wards, 84 Villages and 515 Vitongoji. The Council covers a total area of 5,091.21 km² of which 1,096.21 km² are arable land, suitable for agriculture and livestock keeping, 790 km² form the Maswa Game reserve while 3,160km² make the Serengeti National Park. The remaining area of 45 km² is covered by water bodies, forests and hills.

According to the 2012 Census, the Council has population of 267,296 people of which 139,426 are females and 127,870 males, with growth rate of 3.0%. The population has increased to 300,843 in 2016. The household size is 7.5 which is slightly higher than the regional size of 6.9.

The climate of the Council is generally tropical. Annual rainfall ranges from 700mm - 950mm. The short rain season is normally between October – December with a dry spell in January and February. Long rains fall between March to May. The season between June and September is hot and dry. Average temperature ranges 19°C and 29°C .

The economy of the Council is based on agriculture which accounts for more than three quarters of income and employs approximately 80% of the workforce. Majority of households are agro- pastoralists accounting for 70% of total population. This indicates that livestock keeping is an integral part of the economy. Major cash crops cultivated include cotton, groundnuts and sunflower. Food crops grown include maize, sorghum, paddy, sweet potatoes and cassava(See table 2 below). In 2015 the number of livestock was 803,914 which included cattle (262,835), sheep (54,328), goats (113,013) and chickens (373,738). In addition, hunting tourism is done during the hunting seasons in the Serengeti National Park and Maswa Game Reserve in the northern parts of the Council.

Table 2: Area Cultivated and Production of Crops in 2014/2015

	Cultivated(Ha)	Actual Production (Tonnage)
FOOD CROPS		
<i>Sorghum</i>	12,702.0	25,755.0
<i>Maize</i>	39,051.0	68,339.3
<i>Paddy</i>	8,638.0	32,392.0
<i>Sweet Potatoes</i>	2,209.0	17,328.7
<i>Cassava</i>	7,775.0	38,875.0
<i>Sub Total</i>	70,375.0	182,690.0
LEGUMES CROPS		
<i>Beans</i>	5,778.0	3,622.8
<i>Green grams</i>	12,510.7	12,510.7
<i>Cowpeas</i>	6,068.9	4,468.2
<i>Chick peas (Lentils)</i>	6,684.9	9,301.6
<i>Pigeon peas</i>	3,216.5	3,216.6
<i>Sub Total</i>	34,259.5	33,119.8
CASH CROPS		
<i>Cotton</i>	31,027.4	34,905.0
<i>Sunflower</i>	2,872.2	4,397.3
<i>Groundnuts</i>	101.0	40.2
<i>Sub Total</i>	34,000.7	39,342.6
<i>Grand Total</i>	138,635.0	255,152.5

2.0 PROBLEM

In July 2012, the Government decided to divide Bariadi DC into two Councils namely Bariadi DC and Bariadi Town Council. Later in July 2013, Bariadi DC was further subdivided to establish Itilima DC and the current Bariadi DC. Before these administrative divisions, the great Bariadi DC had a broad tax base which resulted into significant high own revenue collections. For example during the fiscal year 2011/12 about TZS 2.7 billion was collected (see details in table 6). However, due to the Government decisions to divide the council into three councils, many areas that had potential and main sources of own revenue for Bariadi DC were allocated to the newly formed councils. These include the Bariadi Livestock auction place, Bariadi business center and Mwamapalala, Bariadi, Laini, Lagangabilili, Migato market places. Consequently, the collections for 2012/13 to 2013/14 decreased significantly. For instance, in fiscal year 2012/13 and 2013/2014, the Council collected own source revenue of about TZS 1.52 billion and TZS. 1.08 billion respectively. This had adverse impact on the council's capacity to provide social and economic services to community.

Apart from narrow tax base, the decrease in own source revenue collections resulted from weak revenue collection task force, outdated tax rates, inadequate motivation of revenue collectors, unreliable transport, use of traditional methods and equipment, outdated revenue collection bylaws and poor participation of community. In addition, there was insufficient awareness on the importance of taxpaying by the community, tax payers and other stakeholders. Even after the split of the Councils, the potential revenue tax base was not fully harnessed. Revenue collection continued to decline by 29% between 2012/2013 and 2013/2014. This necessitated the council to intervene and improve own source revenue collections.

3.0 OBJECTIVES

The main objective was to improve own source revenue collection in order to increase capacity to finance recurrent and development activities. Specifically, the Council aimed at repealing and replacing the outdated revenue collection bylaws, improving tax collection environment and engaging in creation of awareness to tax payers.

4.0 IMPLEMENTATION STRATEGIES

In order to increase own source revenue collection, the Council decided to intensify its activities in sensitization programmes, community discussions, meetings and regular visits to areas that have potential sources of revenue. The Council conducted study tour in relevant areas, improved equipment/structures/systems, reviewed and repealed outdated rate/bylaws and created a motivation scheme for revenue collectors. These strategies were effectively implemented through committing adequate human, physical and financial resources.

Supervision and monitoring; in the fiscal year 2013/14, Councilors advised the CMT to have a special study tour on proper supervision and monitoring of revenue collection. The CMT accepted the proposal and undertook intensive study tour in Moshi DC which was one of successful Councils in own source revenue collection. In addition, the Finance, Management and Planning committee visited Moshi DC for further study on mechanisms and methods used to successfully collect revenue.

Awareness creation; for two consecutive years (2014 and 2015), the Council created awareness to tax payers through public announcements, workshops and regular discussion meetings in market places, livestock auction places, business centers and in ward development committee meetings. Awareness creation focused on new tax rates, bylaws and compliance.

Strengthening of taskforce and establishment of revenue database; in the fiscal year 2014/15, the Council strengthened the taskforce for revenue collection by appointing eleven staff from other sectors (information & technology, agricultural, livestock, natural resources, land, cooperative, fisheries, health and administration) to join the finance and trade staff. The role of the taskforce was to advise the CMT on revenue related matters and conduct inspection in all areas that have potential sources of revenue. The areas inspected included markets, livestock auction places, cotton buying points and business centers. The taskforce identifies, records and establishes benchmarks for revenue database for all sources of revenue with the aim of controlling cheating by revenue collectors.

Establishment of electronic revenue collection; in 2015/16 the Council made agreement with Lwachu Company Ltd to introduce electronic revenue collection system. This was followed by conducting intensive training of tax collectors and revenue accountants on the use of the system. The Council purchased 8 electronic devices (printers and smartphones) to be used in strategic revenue collection centers and 10 devices for VEOs and WEOs. The system enabled the DT and the DED to directly view collection trends and transactions. In the agreement, the company through its server was responsible for monitoring and protecting all information fed into the system, tracing those who tampered with the system and alerting the client. The taskforce supported revenue collectors by ensuring all payments are fed into the system. However, since 15th August, 2016 the Council collects its revenue through Local Government Revenue Collection Information System (LGRIS) run by the PO-RALG which is for free except costs of internet estimated to be TZS 5,000 per device per month.

Review of Bylaws; in 2015/16, the Council amended and repealed revenue bylaws in order to updated revenue rates. The process of amending, enacting and repealing bylaws was initiated by the Legal Unit through drafting the proposed bylaws. These were discussed at the user departments, Council Management Team, Administration and Finance Committee and the Full Council. Then proposed by Laws were submitted to the Ward Development Committees and other stakeholders in order to collect suggestions. The Council forwarded the proposals to the RS and after scrutiny the RS submitted the proposed bylaws to the Minister Responsible for Local Government for Approval. Approved bylaws were submitted to the Attorney General and were published in the Government Gazette. The Council effectively enforced revenue bylaws by making sure that all eligible persons and businesses pay levies, duties and fees on time. Following the amendments, produce cess was increased from TZS 1000 - TZS 3000 per bag of grain. New sources of revenue introduced included fees for billboards and posters. The bylaw introduced severe penalties for tax evasion and avoidance.

Introduction of road barriers; to ensure compliance, the Council imposed 7 road barriers at Mwamoto, Igegu, Dutwa, Ngasamo, Isuyu Sapiwi, Ngulyati and Kasoli villages as check points to control, monitor and assure crop cess is paid and collected. The Council signed a contract with DAWAPA Security Company that ensures every barrier is allocated with security guards for 24hours. The Revenue Taskforce conduct ad hock inspections to detect irregularities.

Introduction of new sources of revenue and provision incentives; the Council constructed structures such as markets and public toilets (at Dutwa market center) as new sources of revenue and created conducive environment for revenue collectors by providing reliable transport/communication (vehicle and motorcycle). The Council provides incentives to motivate each revenue collector in terms of meal allowances (TZS10,000 per day).

5.0 RESOURCES

Bariadi DC used various resources to make revenue enhancement effort a success. With regard to the financial resources, the Council invested a total of TZS 131,938,529 for this initiative. The table below shows items and costs used.

Table 3: Expenses, Activities and Sources of Fund

YEAR	ACTIVITY	COST (TZS)	FUNDER
2013/14	Study Tour to Moshi District Council	13,270,000	Own Sources
2014/2015	Introduction of 7 road barriers	4,200,000	Own Sources
2014-2016	Follow ups by taskforce	26,500,000	Own Sources
2014-2016	Follow ups by FMPC	5,400,000	Own Sources
2014-2015	Task Force Meetings with tax payers	9,500,000	Own Sources
2015-2016	Task Force Meetings at market places	11,500,000	Own Sources
2015-2016	Payments for building office and public toilets	10,000,000	Own Sources
2015/16	Procurement of Electronic system	24,150,000	Own Sources
2015/16	Construction of pay office and public toilets	10,000,000	Own Sources
2015/16	Meal allowance for revenue collectors	11,707,000	Own Sources
2015/16	Training costs for revenue collectors	5,711,529	Own Sources
	Total costs	131,938,529	

The Council also used human resource in various forms. Various staff devoted their time and skills as tax collectors/taskforce to collect statistical data, supervise and conducting monitoring on revenue collection process. The Full Council in collaboration with CMT provided plans, techniques, guidelines and made various decisions, while VEOs, and WEOs supervised and monitored revenue collection process within their jurisdictions.

6.0 RESULTS AND SUCCESS

Bariadi DC successfully implemented revenue enhancement initiative and managed to realize significant positive changes within the revenue collection and service delivery. One important result is the behavior change which emanated from public awareness programme, application of charges and fines which culminated into community commitment, accountability and cooperation in supporting revenue collectors, Councilors and tax payers. The appropriate taxpaying behavior has spread to all communities in the Bariadi DC. This result is supported by the presence of multidisciplinary taskforce and revenue collection database as well as the electronic collection system.



Printer, electronic receipt and Smartphone

The results of this initiative are vivid in the availability of conducive environment for both revenue collectors and tax payers and presence of road barriers for controlling crops cess collection. Consequently, own source revenue increased from TZS 1,08 billion in 2013/14 to TZS 1.18 billion and TZS 1.2 billion in 2014/15 and 2015/16 respectively. Improved own source revenue enhanced the capacity of the Council to finance recurrent and development expenditure. Table 4 below shows some expenditure patterns after improvements and increase in revenue.

Table 4: Expenditure on Some Activities

SN	ITEM	COST IN TZS
1.	Salaries	173,136,600
2.	Casual labor wage	71,358,000
3.	Facilitation of Councilors to supervise development projects.	41,324,520
4.	Completion of development projects initiated by community	35,762,319
5.	Finance survey of 90 plots at Dutwa Trading Centre.	7,500,000
6.	Compensation for land owners at Mwasubuya and Kasoli Dam.	150,000,000
7.	Supporting Youth and Women SACCOS (TZS 5.0 Mil.)	30,324,529
8.	Total	264,911,368

The improvements in revenue collection facilitated the Council to engage in improving services in areas of water and education. For example construction of water reservoirs; after compensating for land owners at Mwasubuya and Kasoli dams, the Council constructed Mwasubuya dam. The dam is used for fishing and irrigating small farms. The Council also improved learning environment in secondary schools; For instance at Nkololo Secondary School a laboratory was completed using own source funds amounting to TZS 10,000,000.00.



Dam constructed



Dam filled with water



Dam Outlet



Newly built laboratory and used by pupils at Nkololo Secondary School

7.0 SUSTAINABILITY STRATEGIES

In order to maintain the results attained so far and make them even more fruitful, the Council has set several sustainability tactics. One strategy is the strengthening of the Council Revenue Taskforce so that it perpetually continues to visit all areas that have potential sources of revenue. This will allow data collection, identifying new sources of revenue and detecting challenges facing revenue collection process. The Council is also set to maintain awareness creation activities on tax payment to tax payers, Councilors and all stakeholders through regular sensitization and meetings. This is planned to go hand in hand with continued close supervision by Council's taskforce, VEOs and WEOs who supervise, monitor and make follow-up during revenue collection process. This will involve delegation of revenue collection to Village and Ward Levels through provision of electronic revenue collection devices to VEOs and WEOs.

Another important sustainability strategy is effective bylaws enforcement; the Council is committed to periodically review and amend bylaws related to local revenue collection to rationalize rates (competitive rates) for tax, fines, fees and penalties which reflect reality. This process is ongoing as economic status of the tax payer and tax base change. The Council is also committed to maintaining and improving conducive environment for revenue collectors and tax payers by ensuring reliable transport and allowances. This will motivate and prevent bribery amongst tax payers and revenue collectors.

Completion of Mwasubuya and Kasoli water reservoirs is another sustainability strategy. These are expected to promote economic development activities such as production of paddy through irrigation and increase the sources of revenue through water user fees and crop cess.

8.0 SECRETS OF SUCCESS

Bariadi DC made significant achievements due to a number of secrets. A committed and multidisciplinary taskforce; this taskforce operates as a team and cooperates to identify sources, conduct sensitization, monitor and ensure effective collection of Council revenue. Due to the fact that the task force comprises members of different knowledge, skills, and experiences, and backed by positive attitude towards revenue improvement, it was able to brainstorm and come up with challenging but achievable targets. The second secret involves strong leadership of the Council to coordinate all stakeholders involved in tax enhancement. Through this the Council synchronized the Councilors and the CMT to work harmoniously in increasing local revenue. This created a sense of

collective responsibility to both decision makers and executives to supervise, monitor and guide the overall process of revenue collection.

The timed repealing and replacing inefficient and ineffective bylaws is another important secret as it enabled the Council to reduce tax evasion and avoidance. The Council introduced and thoroughly enforced fine/penalty charges that compel tax payers to fulfill their duties timely. This has created a new behavior amongst tax payers; complying with paying fees and charges according to the Council's bylaws. Another secret is the presence of motivated revenue collectors who created conducive environment for all parties to fulfill obligations without the Council imposing fines/penalties. This was made effective through involvement of all stakeholders.

Introduction of electronic revenue collection system created transparency. Unlike before, the system has significantly increased openness on tax collection and accountability. Every transaction concerning tax collection is well recorded and instantly retrievable by the designated Council's points/personnel. In addition, the system has prevented forgeries and bribery.

Community initiatives created markets and livestock auction places which were harnessed by the Council as revenue collection points. This provided ample room for tax payer and revenue collectors to operate at favorable environment.

Chapter Four:

Participatory Service Delivery

Service delivery is an essential function in the relation between governments and citizens. Service is a system or arrangement that supplies public needs. Helmsing (1995) defines service delivery as a deliberate obligatory decision by the elected or appointed officials to serve or deliver goods and services to the recipients. Service delivery is a continuous, cyclic process for developing and delivering user - focused services. It involves user engagement that is, identifying users and understanding their needs. Service delivery also requires service design and development process among users, providers, suppliers, and partners in creating, designing, developing services and ensuring user needs are met. Ultimately, service delivery is about producing, disseminating, and communicating the services that are fit for purpose and relevant to user needs. In service delivery there is always a need for evaluation and improvement process to collect user feedback and performance metrics to continuously evaluate and improve upon products and services.

Service delivery is the government's key task. Government exists among other reasons because it is the only structure that can properly provide the guidance of certain critical services such as public order, safety, infrastructure and management. The requirement and concern for such provisions gives legitimacy to government activities. It is laid down in constitutions and international treaties that government is responsible for basic services in many social areas including education, social security, basic provisions, legal protection and housing. For citizens, their Local Government is the most tangible form of government; it is also the layer of government with which they have most contact in their everyday life.

The Tanzanian Local Government Structure shows that LGAs provide services that are social in nature i.e. health, water, education, welfare, waste management and those that are economic in nature i.e. Land and human settlements, infrastructure, agriculture, environment and community development.

The concept of participatory service delivery used in this handbook, refers to service delivery that attracts all stakeholders. The center of participation is the community that benefits from the services provided by the community itself, the local government authority, the central government, non-governmental organizations or even international organizations. Participatory service delivery places the beneficiary community at the center during planning, delivery of the service and evaluation of the efficacy of the service. Participatory service delivery guarantees sustainability of the services being provided. In this chapter, six cases on participatory service delivery are presented from Itilima, Misungwi, Musoma, Bukombe, Ngara, and Ukerewe DCs.

Itilima DC initiative is about Community Based Environmental Conservation and Income Generation. It was implemented along Simiyu River by Malela Group in Isengwa Village. Simiyu River which drains water into Lake Victoria was highly polluted by agro chemicals and soil erosion caused by human activities, weak enforcement of environmental laws and regulations and uncontrolled solid waste disposal. The overall objective of the Council and Malela Group was to reduce environmental stress in selected degraded sub-catchments and improve the livelihoods of communities which depend on the natural resources of Simiyu River and Lake Victoria as a whole. The Council in collaboration with experts from Lake Victoria Environment Management Project (LVEMP II) created awareness to communities

along river banks on consequences of conducting anthropogenic activities within 60 meters of the river banks, mobilizing individuals and households to engage in environment conservation, introducing environmental friendly income generating activities, formation of various community based associations to engage in the initiative and formulation of constitution and village bylaws for protecting the river, the banks and the environment at large. The initiative has evidently shown its benefits through pollution reduction, improvements in cultivation practices, reduction in river and lake pollution while communities have become friends and advocates of environmental protection.

Misungwi DC best practice focuses on Improving Livelihood and Education for Children with Albinism. From 2007 people with Albinism were persecuted because of improper beliefs promoted by witch doctors that albinos' body parts bring fortune and wealth. This led to killings and amputations of people with albinism especially the young ones. In addressing this problem the Council decided to establish a Centre at Mitindo Primary School to secure vulnerable abandoned children and provide quality education for children with albinism. Implementation of this initiative involved formation of steering committee for sensitization, construction of school infrastructure, purchase of learning equipment and mobilization of education stakeholders to fund improvements of the Centre. The implementation of this initiative made Misungwi DC become one of the special Councils in Tanzania with a Center for Children with Albinism, living in safe accommodation and pursuing primary education smoothly. The center has various amenities including buildings to accommodate 92 children with albinism, dormitories, classrooms, dining hall, kitchen and 8 stances and dormitories which ensure provision of quality education, health and security services.

Musoma DC best practice is about promotion of Community Health Fund for Improved Health Services. The Council experienced poor health service delivery due to underfunding and late disbursements by the Central Government, low community awareness to contribute to health services, poor incomes and ineffective coordination at health facilities. In addition, cash payment was complicated, there were bribery behaviors and use of fake receipt books. This prompted the Council to strengthen awareness to contribute into provision of health services, improve enrolment and coordination of the CHF and increase the capacity of health facilities to procure drugs, medical equipment and motivate staff. In addressing these challenges the Council enacted CHF bylaw and established Council Health Services Board, formed a taskforce, health facility governing committees, created awareness to community and enrolled households into CHF. The CHF enrolment increased and CHF funds were utilized for improvement of health infrastructure and provision of health services.

Bukombe DC initiative is related to Participatory Water Supply Scheme Management implemented in Uyovu Ward. The Ward experienced serious shortage of potable water. Women spent many hours in fetching water due to long distances. Women and girls faced sexually harassment on the way to fetch water. Pupils had to assist parents to fetch water before going to school which resulted into increased dropouts. There was high prevalence of waterborne diseases such as typhoid, dysentery, schistosomiasis, and cholera. The Council decided to survey for a reliable water source, construct water infrastructure and establish Community Owned Water Supply Organization (COWSO) for proper management. The implementation of this initiative reduced distance to access water from 3km to 200m, established strong COWSO, created employment and reduced waterborne diseases. Uyovu COWSO became a learning center for other COWSOs on management of water infrastructure.

Ngara DC initiative elaborates on Participatory Road Opening and Improvement implemented in Ngara, Rulenge, Kabanga and Benaco Township Authorities. Road opening in Ngara DC was challenging as communities needed to be compensated for the land where roads had to pass.

Planning of Townships and designing of roads was difficult as land readjustment was necessary. Transportation and establishment of basic social services infrastructure was difficult due to absence of paved roads. These challenges prompted the Council to engage communities in road opening activities by mobilizing and sensitizing them on benefits of the roads and cementing agreements on community participation. The communities agreed and fully participated in implementation of the initiative. As a result of road opening land value has increased tremendously, basic service infrastructure in place, commercial activities along roads have increased and transportation with the Townships have improved.

Ukerewe DC best practice narrates Integrated Community Natural Forest Conservation. Before implementation of this initiative, the Council experienced increased deforestation accelerated by various human activities such as agriculture, grazing and settlement. Booming of fishing industry in which people used wood to dry up fish led to environmental degradation. The Council decided to conserve the natural resources for regeneration by establishing tree nurseries, creating awareness to community to protect forests and promoting establishment of tree nurseries at households. As result communities have been adequately sensitized on conservation, area conserved has increased, regeneration of natural vegetation is observed and bee keeping activities in conserved area has increased.

ITILIMA DISTRICT COUNCIL



COMMUNITY BASED ENVIRONMENTAL CONSERVATION AND INCOME GENERATION

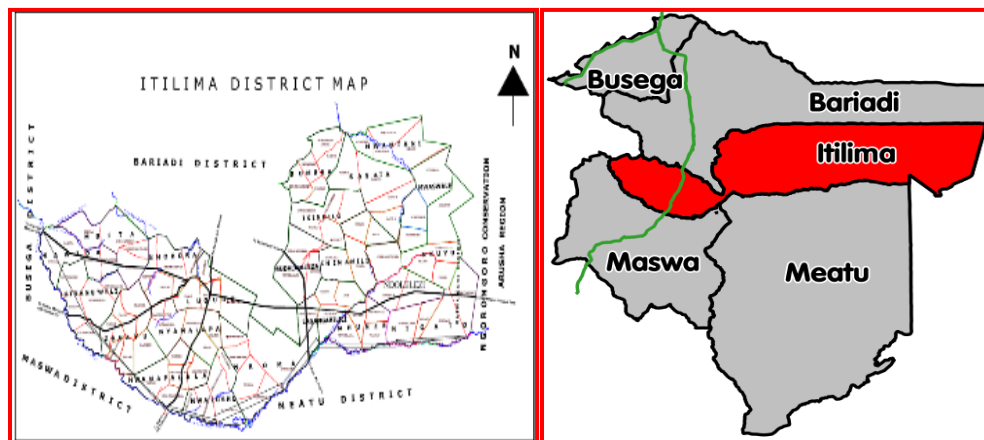


Experience of Malela Group in Isengwa Village

1.0 INTRODUCTION

Itilima District Council is one of the six Councils of Simiyu Region established in 2012 as a result of split of former Bariadi and Maswa DCs. The Council is bordered by Busega DC to the West, Bariadi DC to the North, Meatu and Maswa DCs to the South and Ngorongoro DC (Arusha Region) to the East. Geographically the Council is located at latitude 3⁰44' South and Longitude 33⁰29' East. The Council covers a total area of 2,647.7km² of which 1,938.70km² is arable land suitable for agriculture and livestock keeping, 640km² form the Maswa Game Reserve and the remaining area of 69km² is covered by water streams, bushes and hilly areas.

Administratively, Itilima DC is divided into 4 divisions namely Kanadi, Bumera, Itilima and Kinang'weli, 22 Wards, 102 Villages, 581 Vitongoji and 43,597 households. According to the 2012 Census, Itilima DC has a population of 313,900; 165,398 being females and 148,502 Males. The average household size is 7.2 with average growth rate of 1.8%. Itilima DC is inhabited mainly by one tribe, the Sukuma. The Sukuma people of Itilima are known as Ntuzu. Other tribes found in Itilima DC include Nyiramba, Kurya, Kerewe, Zanaki, Waha and Nyamwezi.



Administrative Maps of Itilima DC and Simiyu Region

The major economic activities of Itilima DC are crop production and livestock keeping. More than 80% of the population engages in agriculture and livestock keeping. Subsistence farming is the main form of agriculture. Food crop production of which maize is the leading staple food crop is mainly for meeting the family's food requirements. Sorghum, paddy, sweet potatoes, cassava, beans, green grams and cowpeas are other food crops produced in the Council. Cash crops include cotton, sunflower and yellow grams. Livestock keeping is the second predominant economic activity which contributes significantly to the Council's economy.

Malela Association is found in Isengwa Village in Lagangabilili Ward. The Association started in 5th June 2012 with a total of 60 members for the purpose of conserving the banks of River Simiyu and engaging in environmental friendly activities such as promoting sustainable agriculture practices for soil and by using contour methods, trees planting and promotion of natural regeneration (Ngitili). The association also focuses on improving water availability for livestock to reduce trampling, promoting sustainable conservation of River Simiyu banks and promote environmental friendly income generating activities along Simiyu River. In addition the association is involved in identifying alternative sites for excavation of building materials and economic activities such as bee keeping. The main economic activities of the Isengwa Village community where Malela Association is based are, livestock keeping and small scale

agriculture along the Simiyu River. Malela Group members deliberated to abandon all anthropogenic activities along the river banks.

2.0 PROBLEM

Simiyu River flows into Lake Victoria in the African Great Lakes region. As one of the six main inlets to Lake Victoria, it forms part of the upper headwaters of the Nile. Simiyu River arises on the western slopes of Mount Loolmalasin and the Ngorongoro Highlands. It flows across the Serengeti into Magu Bay of the Speke Gulf of Lake Victoria. Simiyu River has two main tributaries entering from the right, the Duma River and the Komahola River and one from the left the Maloho River. Before advancing to the Lake Simiyu River forms important source of livelihoods of communities in Maswa and Itilima DCs. This fact created pressure to the river and its banks as shown below.

The study conducted on pollution in all rivers that drain water in Lake Victoria revealed that Simiyu River contributed 42.3% of annual sediments, nutrients and agro-chemical pollution in the Lake. Communities living along Simiyu River created enormous soil erosion as a result of poor unsustainable agricultural practices, uncontrolled tree cutting, stressed grazing land capacity, wetland encroachment, weak enforcement of environmental laws and regulations and uncontrolled solid waste disposal. These resulted into degraded environment, eroded river banks and water pollution.

3.0 OBJECTIVES

The main objective of the Council and Malela Association under supervision and sponsorship of the Lake Victoria Environment Management Project (LVEMP II) was to reduce environmental stress in selected degraded sub-catchments and improve the livelihoods of communities who depended on the natural resources of Simiyu River and Lake Victoria as a whole. The project responded to the threats that faced the Simiyu catchment area within Maswa/Itilima DCs as identified by Maswa/Itilima DCs' staff in consultation with the communities along Simiyu River through O&OD approach. The threats included soil erosion and expansion of Simiyu River banks, deteriorating water quality, deforestation and forest degradation and lack of local institutions to manage the environmental and water resources.

The project therefore, aimed at minimizing the effects of the threats through sensitization of the community and building communities' capacity on environmental protection. The project intended to establish water user associations, demarcate and mark permanent Simiyu River boundaries, improve catchment vegetation cover by planting new trees and grasses and conduct effective monitoring and evaluation activities.

In supporting and facilitating the Malela Association, the Council aimed at conserving the natural resources, Simiyu River in particular while improving communities' livelihoods. Specifically, the initiative intended to initiate tree planting program along Simiyu River, engage communities in guarding and protecting the environment and increase communities income generation through improved beekeeping practices.

4.0 IMPLEMENTATION STRATEGIES

The implementation of the project ensured full involvement of communities, Council experts and LVEMP II personnel. One important strategy was community sensitization and awareness creation. This involved intensive provision of education to all communities along the river banks on adverse consequences of conducting anthropogenic activities within the 60 meters of Simiyu River. All Villages were sensitized on the environmental destruction through improper farming practices. The improper farming activities practiced earlier to the initiative involved gross tree cutting, burning of farm fields, digging the river

banks, utilizing chemical fertilizers in the farms which are right close to the river and grazing on the remains of the plants after harvesting. Education provision had modules to inform farmers on the depletion of the river, the productivity trend of the land as well as the long-term effects of the dried river.

The initial training and organization of the community was done jointly. LIVEMP II in collaboration with the Council conducted training to District Facilitators (DFTs). These facilitators were acquainted with skills on entry to the community, mobilization of individuals and households, change management, basic environmental management, income generating projects and formation of community based and environmental friendly groups. DFTs identified all households in villages that practiced human activities along the river and conducted community based meetings to introduce the change towards proper and sustainable use of the land. Based on the PRA (Participatory Rural Appraisal) communities deliberated and endorsed establishment and engagement in Communities Driven Development (CDDs) projects.

The Council facilitated all Villages along the River Banks to conduct Village Assemblies using the DFTs. These meetings were necessary for identification and endorsement of real households that legally and traditionally owned land along the river. It was necessary for the Village as a whole to agree on ownership; this would assist in formation of groups of the affected households and provision of focused assistance by the LIVEMP II and the Council. The Village Assemblies were also important for reaching effective and sustainable agreements on general environmental protection of the river banks by the whole community. It is important to note that most of the households in these communities do not only till the land for livelihoods but also practice free range grazing of animals creating more pressure to the land, the river and the banks. Agreements from all these village interest groups were necessary for smooth implementation of the initiative and sustainability.

Community organization, Village Assemblies and effective facilitation by the DFTs resulted into formation of various community based associations. One of these was the Malela Association. Willingly, after sensitization and awareness creation villagers who used to cultivate and graze animals along the river banks formed a group of 60 members called Malela TAMTAM. The group was established with a clear intention of protecting the land and the river within the legal 60m boundaries. The group formulated a constitution and registered it at the Council to legalize its operations. The operations involved registration of members and environmental friendly activities by all members, protection of the river banks at any costs, training of non-members on the importance of the river and the environment, modernized beekeeping for income generation and improved incomes, tree planting and guarding the 60m river reserves. Apart from the constitution, the group and village formulated bylaws for protecting the river, the banks and the environment at large. The group also set procedures and schedules for patrolling the conserved and protected areas.



Leaders of Malela Association

The Council through the DFTs conducted intensive training on Bee Keeping. The training concentrated on valuable information regarding beneficial beekeeping practices, production and quality aspects of honeybee products, integrated ways of improving bee products (honey and beeswax) as well as determining markets both for local and international. The villagers and association members also attended practical training on beehive making and selection, determination of sites for apiary location, beehive hanging, beekeeping calendar, harvesting time and techniques, record keeping on production and membership accruals, procurement and monetary procedures as well as packaging and marketing.



Beekeepers ready for honey harvesting



Products of Malela group.

5.0 RESOURCES

LIVEMP II, Itilima DC, WEO and Villagers played a major role in supporting and implementing the village initiatives. LIVEMP II as the major driver of the initiative in the Lake Victoria Basin protection and conservation provided the initial amount of TZS 33,700,068.00 for conservation activities. Itilima DC contributed TZS 1,685,003.00 for supporting communities to intensively engage in conservation and environmental friendly activities. The Council also extended strong expert support to implementing groups in Villages. In these initiatives, communities contributed TZS 7,190,000.00 as shown in Table 1 below. These resources were used to purchase office materials, beekeeping equipment, demarcation

and warning posters and site preparation. The Council used the funds for transport, training activities and staff facilitation. A total of TZS 42,575,071.00 was utilized to achieve the anticipated results.

Table 1: Resources Used

S/N	Source of fund	Amount in TZS	Percentage	Type of contribution
1	Communities	7,190,000.00	17%	Manpower
2	LIVEMP II	33,700,068.00	79%	Money
3	Itilima District	1,685,003.00	4%	Technical support
Total contribution		42,575,071.00	100%	

Table 2: Fund Expenditure Summary Table

S/N	ACTIVITY	FUNDS USED
1	Procurement of beehives	10,712,000/=
2	Procurement of protective gears, Honey packing materials, Honey processing machines etc.	11,901,000/=
3	Fund for training and community sensitization	7,948,000/=
4	Constitution preparation	95,000/=
5	Leaflets and Posters	72,000/=
6	Evaluation and reports	530,000/=
7	Office equipment's	158,000/=
8	Project area preparation	135,000/=
9	Billboards preparation	1,930,000/=
10	Total fund expenditure	33,481,000

6.0 RESULTS

The joint initiative to protect the environment and Simiyu River has brought about a number of results which are beneficial to Itilima DC, Communities and Lake Victoria Basin at Large. The initiative has evidently shown its benefits through pollution reduction. Improvements in cultivation practices and abstinence from encroaching into the river banks have resulted in reduced amounts of silts, sediments and agrochemicals entering the waters of Simiyu River and Lake Victoria to lowest levels. The reduction in river and lake pollution is a result of strong communities' awareness on conservation and protection of the 60m river and banks conservation area. Communities have become friends and advocates of environmental protection through Village deliberations and groups operations. The friendship to the environment is evident in control of grazing and cultivation of crops within the 60m of the river banks in which grazing and land tilling has been controlled up to 90%. Farmers and livestock keepers have at large accepted to use the land available beyond the river conservation area and use mutual surveillance practices in which every villager and group member is voluntarily responsible for reporting defaulters to the village and associations.

The second major contributor to improved environmental health of Simiyu River is the self-propagating programmes of tree planting along the river banks. Tree planting and natural forest regeneration due to absence of detrimental human activities have eliminated chances of debris getting into the river. Planted and regenerating forests have improved the soils, the tree canopies and the healing of the river banks. This is in general termed restoration of natural ecological components of Simiyu River along the banks in which the communities are active in conservation and protection. The river is acquiring its former great status of the early 1970s.



Water friendly fig trees growing

Conservation and protection initiatives have created appropriate environment once again for wild animals to thrive. Hyenas for example, which had escaped the river banks, have returned; indicating improvements in their original habitat. Hyenas feed on other animals and kill of other cats; a sign that the regeneration of the forests has brought back a number of wild animals as the various types of trees and grasses provide food and hiding places resulting in ecological balance. The trees and grasses have also controlled various calamities that used to happen. Floods and soil erosion that used to occur every rainy reason have been controlled. Control in floods and land erosion have completely eliminated loses of crops which used to be swept away by storm water. This has improved productivity and food security.

Improvement in environmental status of the river banks reserve areas has improved productivity of the land closer to the banks. Crop production has improved while harvests in honey are on the increase. These have impacted the incomes of the villagers; Malela Association Members in particular. The incomes of Malela Members have increased leading to improved living standards and enhanced motivation to engage in environmental conservation and protection. Incomes have also increased due to practicing modernized beekeeping. Malela Association has 140 beehives sited in the conserved area from which in 2014/2015 a total of TZS 6,200,000.00 was raised from selling harvested honey. Resulting from improved incomes and status of the Malela Members; one group leader has become a Councilor of Lagangabilili Ward. The popularity for the group leader to contest and win the election emerged and developed from environmental protection initiatives and beekeeping activities. All villages acknowledged his services and efforts in organizing the community and leading the association and rewarded him by electing him to become their representative to the Council.



Modern beehives sited along Simiyu River Bank

Malela Association recognizes the health value of honey. Hence it gives one liter of honey to each member household for food and medicinal purposes. Together with increase in cash from honey, the honey distributed to families has greatly increased the morale and will of communities to value environmental conservation happily engage in conservation activities. This is vividly shown by villagers’ patriotism to participate in removal of water hyacinths which threaten the River and the Lake.

Malela Association is nationally and regionally recognized as its operations are broadly shared through exhibitions and symposiums. Malela Association participates in world environmental commemorations. In one Symposium in Arusha, the association emerged as first runners-up in the evaluation of good practices in watershed Management in East African Community and Lake Victoria Basin Commission Secretariat. Malela Association participates in Nane Nane Trade fairs in all zonal centers. During the exhibitions and symposiums the group sells honey harvests well processed and packed. Photos below indicate recognition of performance at various levels.



Certificates of participation and recognition

Itilima DC now boasts of having a beekeeping learning center. Many beekeeping associations and individuals visit Malela group for beekeeping technical assistance as well as management and operations of associations. Malela Association is also a learning Centre for value addition to bee products.

To conclude on results of Itilima DC initiative, it is worthwhile noting that the villages, communities and associations have witnessed increasing community's income from non-wood products, improved community knowledge in conservation and water governance, improved equity in water allocations and well protected water resources base. Though the initiative is implemented in Itilima DC its impact has far downstream beyond the Council boundaries, all the way to Lake Victoria.

7.0 STRATEGIES FOR SUSTAINABILITY

To ensure the initiative is sustainable, the Council has set aside the following mechanisms:

- (i) The association has a bank account to ensure proper fund management and allow necessary investments in the future.
- (ii) The association is registered and operates using a functional constitution. The constitution stipulates that all members must have at least two beehives owned individually.
- (iii) Continued Communities awareness creation on environmental protection, conservation and afforestation as well as training on proper beekeeping practices is insisted as well as good packaging and marketing of bee product.
- (iv) Plans of establishment of honey collection center to cater for the needs of all villages and communities in Itilima DC.
- (v) Improving and enforcing bylaws which protect the project area. Encroachment into the conservation area is heavily punished with TZS 50,000/= fine

8.0 SECRETES OF SUCCESS

The success of this project centers on the willingness of communities to participate in conserving the environment, acceptance of the technical support provided by DFTs, effective leadership of the Chairman of Malela Association, accountability of all members and proper use of resources. The greater secret in this initiative is acknowledgement of the consequences of environmental destruction and benefits of conservation.

MISUNGWI DISTRICT COUNCIL



IMPROVING LIVELIHOOD AND EDUCATION FOR CHILDREN WITH ALBINISM



Experience of Misungwi DC

1.0 INTRODUCTION

Misungwi District Council is one of the 8 Councils in Mwanza Region situated on the Southern part. The Council shares borders with Mwanza CC to the North, Shinyanga DC to the South, Sengerema, Buchosa and Nyang'hwale DCs to the West, Kwimba DC to the East and Magu DC to the North East. The Council has a total area of 2,553km² of which 2378km² is dry land and 175km² is covered by Lake Victoria. The Council is divided into 4 Divisions of Misungwi, Mbarika, Inonelwa, and Usagara, 27 Wards, 113 Villages and 721 Vitongoji.

According to 2012 Census, the Council has a total population of 326,503 of which 166,230 are female and 160,273 are male. Population density per km² is 118 with growth rate of 2.8% per year. The Council lies within the semi-arid zones, which is characterized by bimodal and unreliable rainfall between 700mm- 1000mm per annum. The mean and maximum temperatures range between 18^oC and 30^oC and altitudes of about 1000m – 1500m above sea level. The Council has total labor force estimated at 205,001 people equivalent to 80% of the total population whereas 73.4% of the labor force is engaged in agricultural activities. The remaining 26.6% is involved in trading, employment in government and non-government institutions.

About 92% of the population live in the rural areas and derives their livelihood largely on subsistence farming, cattle rearing, a few engaged in petty business and fishing for those living along the Lake Victoria shoreline. The Council has 2,378km² of land, out of which arable land is about 1,358km² (53%), grazing land is about 960km² (37.6%) and forest covers about 60km² (2.4%). The main types of crops are sorghum, millet, paddy, cassava, sweet potatoes and cotton. People living along the shores of Lake Victoria engage mainly in fishing activities as the source of income; this contributes 5% to the Council's income and generates employment to 1% of the population. In the fishing industry, there are 837 fishermen boats using 4,162 gillnets and 80,289 long lines. Fish catches are landed in scattered beaches, which are locally established by fishing communities.

The Council is endowed with mineral resources that include gold, diamond and gemstones. Mining activities are carried out in small scale by artisan miners at various places. Artisan miners use labor intensive and low level production technologies. There are foreign companies, which are involved in exploration of mineral deposits in some parts of the Council.

Misungwi DC has 145 primary schools of which 138 are public schools; 3 schools (Misungwi, Busagara and Kigongo) are for special education for intellectual impairment and 1 (Mitindo) is special school for visual impairment, hearing(deaf)impairment and low vision including pupils with albinism. The remaining 7 are private schools (English medium), Misungwi, Exodus, Lwasa, Rishor, Butibubage and Usagara. As of January 2016 the number of pupils in primary schools were about 86,166 (43,871 boys and 42,295 girls). The actual number of teachers for the year 2016/17 is 1,492 (795 male and 697 female). Enrolment rate in 2016 was 93%. The primary school enrollment has improved significantly from 62% in 2010 to 98% in 2015. One of the reasons for increase in enrolment is abolition of school fees and public campaign on compulsory enrollment. The Council has 27 Secondary schools. In 2015/16 there were a total of 10,643 pupils at secondary schools out of which 5,173 were boys and 5,470 were girls. The total demand for secondary school teachers in Misungwi DC for year 2015/16 was 723, but only 602 (400 males and 202 female) teachers were available.

Mitindo Primary School is located in Misungwi town, 4km from Misungwi DC headquarters and was established in 1956 as a middle school. In 1961 it was changed to upper primary school and later in 1975 a post-primary school was included introducing carpentry and domestic science. In 1978 special

education was established for blind pupils; in 1989 the school started to enroll low vision pupils and in 2011 the deaf pupils were also enrolled. Up to 2016, the school had a total number of 1,317 pupils whereas 92 are pupils with albinism, 130 are pupils with disabilities (blind, low vision, deaf) and the remaining 1,095 are pupils without disabilities. Also the school has a total number of 51 specialized teachers, 1 specialized medical officer, 2 patrons, 2 matrons, 4 cooks and 1 watchman who deals with day security whereby night security is observed by 2 policemen.

2.0 PROBLEM

All people have the right to survive without discrimination, however from 2007 people with Albinism especially in Mwanza, Shinyanga and Geita were persecuted improper beliefs. Witch doctors have promoted a belief in the potential magic of albinos' body parts to bring good fortune and wealth. This led to killings and amputations of people with albinism especially the young ones. The flow of Albino to Mitindo primary school began in 2008 when the killings were intense. Efforts were made by the Council and central government to protect people with albinism from the calamity and decided to take them to Mitindo Primary School regardless of type and degree of disability. At Mitindo Primary school they were provided with accommodation as boarding pupils. Before the disaster of albino killings started, the Centre accommodated 10 pupils with albinism. After the killings had started 16 pupils from different schools were transferred to Mitindo primary school raising the number to 26 pupils in 2008 and in 2016 the school had 92 children with albinism.

VIZIWI				ALBINISM				WASIOONA				UONI HAFIFU			
DARASA	WAV	WAS	JML	DARASA	WAV	WAS	JML	DARASA	WAV	WAS	JML	DARASA	WAV	WAS	JML
AWALI				AWALI				AWALI				AWALI			
I	14	11	25	I	4	12	16	I	4	2	6	I			1
II	6	5	11	II	4	6	10	II	2	2	4	II			3
III	7	8	15	III	10	10	20	III	4	1	5	III	3	4	7
IV	2	4	6	IV	2	5	7	IV	4	1	5	IV	2	1	3
V	7	7	14	V	2	3	5	V	2	1	3	V	1	3	4
VI	2	1	3	VI	2	1	3	VI	3		3	VI	2	1	3
VII	2		2	VII	2		2	VII	1		1	VII	1	1	2
JML	40	36	76	JML	40	46	86	JML	24	7	31	JML	9	14	23
AINA YA ULEMAVU				WAV				WAS				JML			
VIZIWI				40				36				76			
ALBINISM				40				46				86			
WASIOONA				26				8				34			
UONI HAFIFU				9				11				20			
JUMLA KUU				115				101				216			

Data of pupils enrolled at Mitindo P/school

3.0 OBJECTIVE

The general objective was to establish the Centre at Mitindo Primary School to secure vulnerable abandoned children and improve quality education for people with albinism. Specifically, the Council intended:

- (i) To construct adequate classrooms, dormitories, toilets, fence and drilling dip well for pupils with albinism in order to allow them live comfortable and learn in a conducive environment at school.
- (ii) To provide enough teaching and learning facilities in order to build capacity for pupils with albinism through giving them education, love and care so that they would become productive in the society.
- (iii) To provide accommodation services for children with albinism such as shelter, health, food, security, transport and payment of all bills by establishing permanent home (Centre) at Mitindo Primary school.

- (iv) To increase knowledge to the whole community on how to stop old belief on people with albinism.

4.0 IMPLEMENTATION STRATEGIES

The Centre for pupils with albinism was established at Mitindo primary school in 2008 and all people in different communities who lived with children with albinism (age school) were allowed to bring them to the Centre to start or continue with primary education under intensified security. The establishment involved fencing the school area to ensure security. Visitors from the general public are required to get permission from the District Commissioner (DC) to visit the school.

Mitindo Primary school in collaboration with the Council, Central Government, NGOs, Education development partners, Private sectors and community provided contributions which facilitated construction of classrooms, dining hall, kitchen, dormitories and toilets. In addition the Council procured computers, thermoform machine, braille machine, CCTV magnifiers, slides and other teaching and learning materials which facilitates the process of teaching and learning to children with albinism.

The Council created a steering committee involving different social groups. The Committee was responsible for educating the society on harmful traditional practices and beliefs against children with albinism. It encouraged parents to love them, protect them and bring them to school for primary education at Mitindo Primary School. The Council also conducted community sensitization on albinism. Albinism and associated killings were made a cross cutting issue to be discussed at the level of neighborhoods, Villages and the District. Community sensitization to end old beliefs and traditions on people with albinism was aimed at changing the mindsets and attitudes. The sensitization programme was implemented jointly by different NGOs, the Council and the community. Participatory methods were used during the implementation. Adequate education was provided to different communities about the disaster, insisting on avoiding witch doctors who promote the practice that are against human rights. Communities appreciated the education programme deliberating on providing security and information of people who plan, attempt and kill people with albinism. Different meetings on the problem were conducted in schools, communities, Villages, Wards, Divisions and Council.

The Council mobilized the community members, NGOS, private sector, education development partners and other education stakeholders to fund improvements of the Centre. Lobbying was aimed at securing funds for construction of infrastructure and provision of other services. The activities included designing and budgeting for the buildings and other infrastructure, collecting stones, bricks, sand and other materials related to construction works, tender bidding, selecting and signing construction contract. The community collaborated with Council in foundation construction, wall construction and roofing, smoothing, decoration, installation of electricity and procuring furniture (beds, mattress, bed sheets, mosquito nets, pillows). The Center provides accommodation including food, treatment and safe water while teachers engage in quality teaching and learning process specifically designed to accommodate pupils with albinism.

The Council conducts effective monitoring and evaluation at all levels to ensure the safety of pupils with albinism is guaranteed by using the VEOs and WEO who involve communities and Villages in security issues. These efforts have resulted in gradual disappearance of improper beliefs and practices over albinism; allowing children with albinism realize their right to live as others.

The Council introduced a medical checkup programme for pupils with albinism in the school. Through observation and investigation, invited doctors found various health problems affecting the pupils with albinism. For example, doctors from KCMC observed skin rashes on these pupils and supported the

pupils with awareness on skin care using special lotions and creams to keep skin soft all the time and wearing hats and sun glasses to protect direct sunlight.

5.0 RESOURCES

The initiative used various resources. The management of the Centre required competent and qualified staff (teachers, matrons, patrons, policeman, watchman, cooks, doctors and counselors) and other experts such as building engineers. The society participated effectively in contributions through activities such as collecting stones, sands and made desks. Financial resources were deployed in creating physical buildings such as classrooms, dormitories, dining halls, stances, beds, mattress, pillows mosquito nets and bed sheets. The table below elaborates on financial resources.

Table 3: Financial Resources

No	Activity	Unit	Total cost (TZS)	Source of funding
1	Construction of Dining hall including kitchen	1	97,800,400	Misungwi DC
2	Construction of Classroom	3	105,000,000	Embassy of Japan, Misungwi DC & Community
3	Procurement of Computers	28	42,000,000	Lions' Clubs
4	Construction of toilets	8	4,500,000	Lions' Clubs, Misungwi DC & Community
5	Construction of Fence	1	200,000,000	Central Government
6	Purchase of Bed sheets	200		Social Action Trust Fund (SATF)
7	Building of Dormitory including beds	1	150,000,000	Lions Clubs
8	Construction of Dip Well	1	5,000,000	Lions Clubs
9	Making Desks	11	825000	Community
10	Making Desks	120	72,000,000	Social Action Trust Fund (SATF)
11	Making Tables	18	720,000	Social Action Trust Fund (SATF)
12	Making Benches	50	750,000	Living Children Centre Fund
13	Purchase of Mattress	100	7,000,000	Living Water Children Centre Fund
14	Making Benches	45	1,935,000	Good Neighbors
15	Construction of Dip Well	1	5,000,000	Lions Clubs
	TOTAL		692,530,400	

6.0 RESULTS

Misungwi DC has become one of the special Councils in Tanzania with a Center for Children with Albinism, living in safe accommodation and pursuing primary education smoothly. The center in Mitindo primary school provides care service, primary education and security for children with albinism. It has various amenities in place including buildings to accommodate 92 children with albinism, 5 dormitories, 3 classrooms, 1 dining hall, 1 kitchen and 8 stances. 1 dormitory and 1 classroom are under construction.



Classroom, Fence and Computer lab



Deep well, dining hall and Kitchen



Toilets and Dormitories

Children with albinism have found a proper refuge at Mitindo. Children are brought from all Councils around the lake zone and other Districts in Tanzania to Mitindo Centre where there is security, quality education and special care from various professionals. The tables below show enrollment trends.

Table 4: Children with Albinism Received

Year	Boys	Girls	Total
2012	20	20	40
2013	21	24	45
2014	20	22	42
2015	37	41	78
2016	42	50	92

Table 5: 2016 Enrolment

Class	Boys	Girls	Total
Pre-primary	14	10	24
I	6	16	22
II	4	6	10
III	10	10	20
IV	2	5	7
V	2	2	4
VI	2	1	3
VII	2		2
Total	42	50	92

Children with Albinism have special needs. The Centre has provided them with modern and quality accommodation facility and extends to them guaranteed food, shelter, clothes, shoes, hats sunglasses, safe water and special lotions. The primary education they receive is aided by teaching and learning materials like CCTV magnifiers, braille machine and telescopes to accommodate all vision needs. Various types of workers are employed to provide services to the children with albinism. These include specialized staff on albinism, special teachers, matrons, patrons, watchman and cooks. All these are in place to ensure that children with albinism gather confidence about their humanity, rights to education and right to live as free citizens of Tanzania.



Clothing for skin protection



Mitindo P/s staff – Head teacher, Matron, Patron and Clinical Officer

Apart from comfortable life due to quality accommodation and security services these children are guaranteed with medical examinations from time to time from various medical stakeholders. These include Bugando Hospital, KCMC and the Misungwi District Hospital. Guarantee to medical services is one of the basic need for people with albinism.

One major result of this initiative is the change that has taken place in the communities. The societies have acquired knowledge on how to care and protect people with albinism as outcome of the education provided by government and different NGOS including Under the Same Sun and UNESCO. Attitudes and beliefs against albinism have positively changed. The communities and individuals are ready to report to the police all suspicious behaviors detected that might result in abduction, amputation and killing of people with albinism.

7.0 SUSTAINABILITY STRATEGIES

Misungwi DC is determined to the sustainability of this Centre. The registration and enrollment of children with albinism having school age from different areas in Tanzania is ongoing while the Center amenities are being improved and modernized. There is also continued community sensitization in order to eradicate

barbaric beliefs and traditions concerning albinism. The CMT is also committed to making close follow up of the management of the Centre and the services extended to pupils. The Council plans to employ more teachers and specialists in teaching children with albinism. The Council is in the process of seeking stakeholders who will conduct timed evaluation on the performance of the Centre and provide recommendations on areas of improvement.

8.0 SECRET OF SUCCESS

Misungwi DC has made this success due to team building and team working at all levels. The teams at school, community, village, wards, division, district and regional level played effectively to achieve enrollments and security of the children with albinism. Readiness of the Government and various stakeholders to commit resources for establishment and improvement of the Centre is another secret. The last secret is the respect on human rights and the constitution of Tanzania; the Council adhered to the Universal declaration of human rights-1948, the right of fair hearing, the right to dignity, the right to life, the freedom of movement, and the right to freedom and security for all.

MUSOMA DISTRICT COUNCIL



PROMOTION OF COMMUNITY HEALTH FUND FOR IMPROVED HEALTH SERVICES

HALMASHAURI YA WILAYA YA MUSOMA
STAKABADHI YA MCHANGO WA
MFUKO WA AFYA WA JAMII - (CHF)

Tarehe 20/10 2016 MS 29319
Nimepokea kwa EDA JIRANI DIALDI HOYOS
ya (anwani) KUJENYI - NYABUKE
mesabu ya shilingi EFU KUMI TU senti
kwa ajili ya CHF
Maslimu/Hundi No. TALIMU

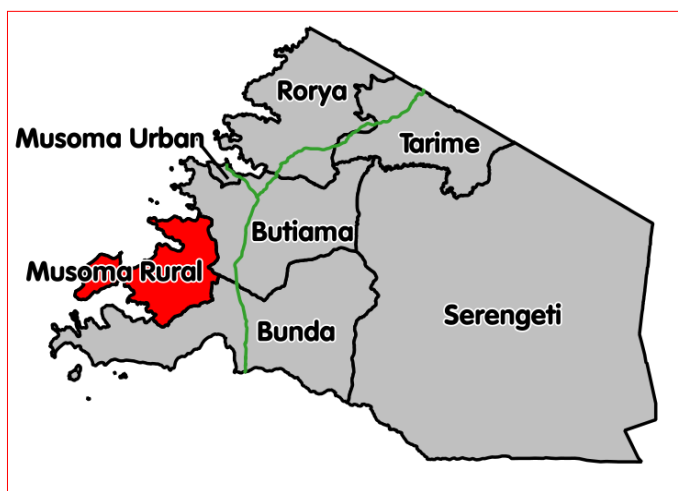


Experience of Musoma DC

1.0 INTRODUCTION

Musoma District Council is one amongst the 9 Councils in Mara Region. It covers 2,653km² of which 2,456km² is dry land and 197km² are water bodies. The Council is bordered by Butiama DC to the East, Bunda DC to the South and South East and Lake Victoria to the West. It has 21 Wards, 68 Villages and 375 Vitongoji. According to 2012 census the Council has a total population of 216,409 of which 106,163 are male and 110,246 are female.

Musoma DC has two geographical zones lying between 1000m and 1500m above sea level. The lower zone which starts at the shores of Lake Victoria raising to 1200m above sea level covers between 0 – 15 km distance from the Lake and is mainly inhabited by fishing communities. The higher zone rises between 1100m to 1500m above sea level covered with hills and lowlands especially the South Eastern parts while the Western zone has bays, gulfs, rocks, plains and small rivers rushing to the Lake. The rainfalls range between 800mm to 1000mm with two seasons. The short rains start in October and end in December while long rains start in March and end in June and moderate temperatures ranging from 24°C to 32°C. The physical features of the Lake, land, rainfall and temperature create conducive environment for cultivation of cassava, sweet potatoes, millet, maize, beans, paddy, cotton and sunflower. The climate also allows horticulture such as cultivation of tomatoes, cabbages, eggplants, peppers, bell peppers, spinach, onions and cucumbers. The inhabitants of Musoma DC engage in fishing, farming and livestock keeping.



Map of Mara Region indicating the position of Musoma DC

The Council has no District Hospital. However, it has 1 Health Centre and 27 dispensaries of which 4 are owned by Faith Based Organizations (FBOs). There are 5 Ambulance vehicles placed at Murangi Health Center, Mugango, Nyakatende, Masinono and Kurugee Dispensaries. There are 206 Health workers. All health facilities have bank accounts and have functional Health Facility Governing Committees (HFGCOs). Health services are provided partly through government subventions, Council own source revenue and community contributions through the CHF.

Community Based Health Financing (CBHF) emerged in developing countries as a response to the existing challenges in the health financing system which include low economic growth, constraints on the public sector and low organizational capacity. CBHF is a mechanism whereby community members (households) finance or co-finance costs associated with health services, offering them greater involvement in the management of community financing scheme and organization of health services.

Emanating from the CBHF concept, the Community Health Fund (CHF) scheme in Tanzania was a result of studies conducted at National level from 1990 to 1992 which showed that the majority of people in rural and urban areas were willing to contribute in order to tackle the problem of shortage of drugs and medical supplies in health facilities. CHF was designed in 1995 by Tanzanian consultants and piloted in Igunga District Council in 1996. According to the survey conducted in 1996, 21,046 people out of 26,308 accepted to contribute for Community Health fund. Before the implementation of CHF each facility received essential drugs through push system worth TZS150,000 per kit, this supply was 45 % of the requirements of the health facilities. The funds generated bridge the gap between health care needs and the limited local resources for health services. The process used to initiate Community Health Fund was a mechanism of mobilizing local resources to complement the financing of health care services.

According to the Community Health Fund Act No.1 of 2001 the objectives of the CHF are; (i) to mobilize financial resources from the community for provision of health care services to its members, (ii) to provide quality and affordable health care services through sustainable financial mechanism and (iii) to improve health care services management in the communities through decentralization by empowering the communities in making decisions and by contributing on matters affecting their health.

The Community Health Fund (CHF) is a voluntary scheme which allows mobilization of financial resources from the community for provision of health care services to its members. CHF entails pre-payment of premium for health care and risk sharing by the way of provision of user fee. There is exemption mechanism for poor and vulnerable groups. A waiver is granted to those patients who do not automatically qualify for statutory exemptions but are in need of the same and are classified as “unable to pay”. The scheme operates in partnership with communities and the Government. The Government provides “Matching Grant” to CHF scheme at Council level while communities can pay premium contributions when they have cash and enjoy services throughout the year. Community Health Committees mobilize and manage the fund. The CHF scheme is not intended to replace the government funding for health services.

CHF is expected to provide quality and affordable health care services through sustainable financial mechanisms. It facilitates health care management in the communities through decentralization. It ensures adequate medical supplies and equipment at health facilities. CHF improves quality of health care services by ensuring availability of adequate, skilled and motivated health providers and above all it improves community participation.

2.0 PROBLEM

Tanzania, like many countries in sub-Saharan Africa, faces the twin pressures of a tight public health care budget and the need to improve access to health services, especially for the poor and those working in the rural areas and/or the informal sector. As part of wider reforms in health care financing, Tanzania introduced user fees in 1993. This followed the failure of the government to provide free health care to all its citizens through tax financing due to the increase in treatment costs, emergence of pandemic diseases such as HIV/AIDS and the overall poor performance of the economy (Quijada and Comfort 2002). Over time, other financing mechanisms have been added including the introduction of schemes resembling prepaid insurance such as the National Health Insurance Fund (NHIF), Community Health Funds (CHF) and its urban equivalent, TIKA and various Micro Health Insurance Schemes (MHIS) such as Umasida and Vibindo. More recently, the National Social Security Fund (NSSF) has introduced a health care benefit package known as Social Health Insurance Benefit (SHIB).

Before 2007 Musoma DC experienced poor health service delivery due to underfunding and late disbursements by the Central Government. Also, there were challenges in relation to poor own source revenue, low awareness of community to contribute for health services, poor household incomes and ineffective coordination at health facility level. There was also limited number of health staff, poor data

management system and weak referral system that worsened health service provision. Delivery of health services at facility level operated using direct cash payments by patients which faced complications in collection mechanism and occasionally culminated into bribery behaviors such as use of fake receipt books. In addition, there were limited supply of drugs, shortage of medical equipment and lack of staff motivation which accelerated morbidity and mortality rates.

3.0 OBJECTIVE

The overall objective of the Council was to improve health service delivery. Specifically the Council intended to:

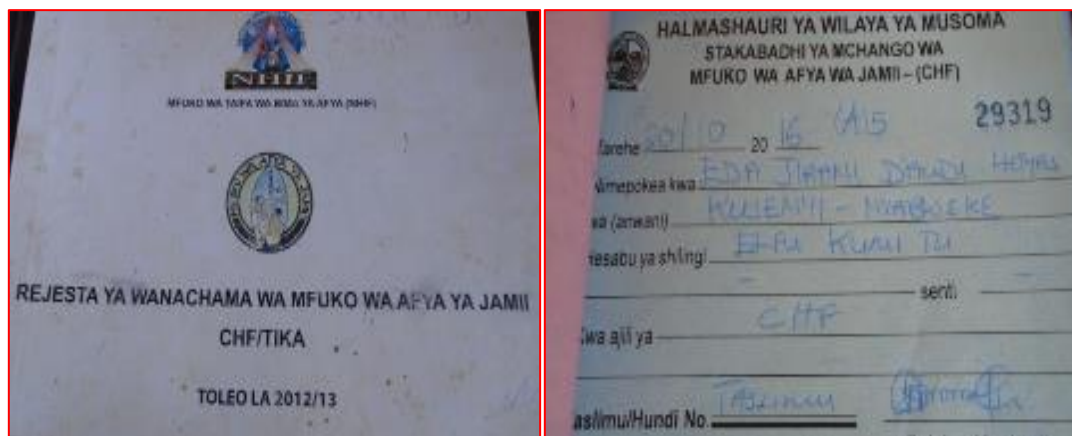
- (i) Raise community awareness to contribute into provision of health services
- (ii) Improve enrolment and coordination of the CHF.
- (iii) Increase the capacity of the Council and health facilities to procure drugs and medical equipment, motivate staff and improve health facility management.

4.0 IMPLEMENTATION STRATEGIES

To enforce the implementation of CHF, the Musoma DC prepared, deliberated and enacted a CHF By law in 2002 and established the Council Health Services Board under the Section 86A of Local Government District Authorities Act No. 7, 1982.

Through collaboration with the Ministry of Health, Community Development, Gender, Elderly and Children (MHCDGEC), Musoma DC implemented the Tibu Homa project from March 2011 to September 2015. The project supported the Councils of Lake Victoria Zone to reduce morbidity and mortality among children under five by increasing proper diagnosis and treatment of severe fever. Musoma DC took advantage of the Tibu Homa (“treat fever”) initiatives to increase the availability and access to child health services, and increase linkages within the community to promote healthy behaviors. The implementation involved;

- (i) Formation of task force (4 members) within CHMT for CHF sensitization. The task force was responsible for supervising awareness meetings within the community.
- (ii) Awareness creation on CHF; TIBU HOMA project facilitated awareness creation to Village and Ward leaders by conducting sensitization meetings through Village assembly meetings, Village Council meetings and Vitongoji meetings. The task force in collaboration with health facility workers and community facilitators were responsible for sensitization meetings and house to house visits. To emphasize on community awareness regarding CHF, Musoma DC directed that CHF enrollment be a permanent item of agenda in all statutory meetings such as Full Council, CMT, WDCs, Village Assemblies and Vitongoji meetings. During sensitization meeting the CHMT members carefully provided explanation to the community on CHF enrollment and operations.
- (iii) Formation and strengthening of health facility governing committees; through village assemblies, representatives of the community were elected to form health facility committee for each dispensary and Health Centre. The health facility committees’ responsibilities include community sensitization, management of funds, purchase of drugs and medical equipment and supervision of daily operations of the health facility.
- (iv) Capacity building of health facility committee members; training was conducted to chairpersons and secretaries of the committees on their responsibilities. To improve performance of the committees, the Council directed that committees should meet at least twice a week and quarterly to pursue CHF enrolments and operations. The Council also directed that the CHMT and health facility committees meet occasionally to deliberate on CHF operations.
- (v) Enrolment of CHF members in CHF register; each household was encouraged to enrol in CHF (6 members/household) by paying 10,000 per year. Receipts are used as identification cards for members to access health services.



CHF register and receipt

- (vi) Designing close supervision and management (weekly & monthly follow up); the committees make follow up on CHF operations twice a week.
- (vii) Enhancement of availability and access of drugs, medical equipment and other services; this involves purchasing by using CHF fund. The health facility committee is responsible to ensure collections are deposited into Council holding account and requests are made on time. The Council transfers the fund into health facility account, thereafter drugs and medical equipment procured accordingly.
- (viii) Strengthening customer care; in each health facility, a separate reception desk was established for CHF members to ensure prompt services. Later, a window for elderly (60+) was established to facilitate quick health services. In addition, direct cash payment rates were raised from TZS 1,000 to 2,000. These arrangements were purposely designed to attract more enrolments of households into the CHF and discourage direct cash payments.
- (ix) Strengthening CHF control mechanisms; all health facilities are required to use official receipts and keep records, deposit all the collections to the Council Holding Account, make official requests for expenditure of CHF funds, maintain duly filled CHF forms, submit the forms to the Council CHF coordinator on time, and prompt purchase of drugs and medical equipment.

5.0 RESOURCES

The Council used the following resources;

- (i) Community sensitization and related activities TZS 5.6m supported by TIBU HOMA project
- (ii) Unidentifiable amounts from the NHIF for supporting fuel, brochures and subsistence costs during sensitization.
- (iii) Human resources, Councillors, CMT members, 4 task force members, Health staff at facility level, community local leader and health facility committee members.

6.0 RESULTS

The Council achieved a number of results summarized below;

- (i) CHF enrolment increased from July 2014 28% (9554 members) to 44% (15,013 members) in 2015.
- (ii) Qualification for Matching Grants; due to effective enrolments and collections of CHF contributions, the Council has experienced increasing local collections leading to increasing matching grants from the Central Government. In 2015FY the Council applied for TZS 22.9m and received TZS 18.9m. For 2016FY the Council applied for TZS 65.7m matching grant.
- (iii) Guaranteed and decentralized procurement of drugs and medical equipment.

- (iv) CHF funds are utilized for rehabilitation and construction of health facility buildings (maternity Ward, Reproductive and Child Health (RCH) building, incinerators, toilets, offices and staff houses).



Tegeruka Dispensary



Maternity Ward at Murangi health center



Staff house and on-going construction at Mugango dispensary

- (v) Availability of essential drugs and medical equipment increased from 47% in 2014 to 80% in 2015.
- (vi) Pregnant women delivered in health facilities increased from 33% (2014) to 74% in 2015
- (vii) Maternal and under five mortality and patients referral to regional hospital reduced.
- (viii) Health facility committees are able to pay start-up allowances of about TZS100,000 to 200,000 for newly recruited staff.
- (ix) Motivated health staff characterized by commitment to work due to improved working environment and equipment.



Nurse Midwife Mugango dispensary and Medical officer in-charge at Murangi H/centre

7.0 SUSTAINABILITY STRATEGIES

In implementing the CHF promotion initiative, the Council has experienced challenges such as frequent shortages of drugs and medical equipment at Medical Stores Department, coverage of health facilities, referral mechanisms and late disbursement of matching grants. To overcome these challenges and ensure the CHF initiative is sustainable, the Council has set the following strategies:

- (i) Continued community sensitization and mobilization in enrolment to CHF.
- (ii) Continued provision of drugs and medical equipment using other source (HBF, NHIF, Partners etc.).
- (iii) Continued improvement of infrastructure and utilities (electricity, shelves & minor rehabilitation and construction).
- (iv) Improvement of CHF referral system (referring patients from dispensaries to Murangi Health Centre and Regional referral hospital).
- (v) Expanding geographical coverage of CHF enrolment to cover all Villages.
- (vi) Increasing own source revenue allocated to health service delivery.
- (vii) Internal arrangements for sharing drugs and medical equipment whenever there are shortages and emergencies amongst health facilities are in place.

8.0 SECRETS OF SUCCESS

- (i) Council efforts to coordinate various stake holders (NHIF, TIBU HOMA, MCSP) in realizing promotion of CHF.
- (ii) House to house sensitization by the Council task force, health facility staff and health facility committee members (commitment and team work).
- (iii) Discouraging user fee and encouraging CHF by raising direct cash payment rates.
- (iv) Piloting (sensitizing catchment communities from a few selected facilities before scaling-up).
- (v) Transparency; regular reporting in Village assembly meetings, Vitongoji meetings on collections and CHF operations.
- (vi) District commissioner took CHF campaign as one of his priority, District leadership and entire team of politicians provided support for the campaign.
- (vii) Registered CHF members can access service in all health facilities within the Council.

BUKOMBE DISTRICT COUNCIL



PARTICIPATORY WATER SUPPLY SCHEME MANAGEMENT



Experience Of Uyovu Ward

1.0 INTRODUCTION

Bukombe District Council is among the 6 Councils in Geita Region. Bukombe DC lies between 1,100m to 1,300m above sea level and between 2°8' to 3°28' South of the Equator and 32° 45' to 37° East of Greenwich. The Council borders Geita and Chato DCs to the North, Biharamulo DC in Kagera Region to the North West, Mbogwe DC to the East, Urambo DC in Tabora Region to the South and Kibondo DC in Kigoma Region to the West. The Council area covers 8,482km². Administratively, the Council has 3 divisions (Ushiroombo, Siloka and Bukombe), 17 Wards and 52 Villages, 97 Mitaa and 372 Vitongoji.

According to 2012 Census, Bukombe DC had a population of 224,542 of whom 110,857 (49.3%) are male and 113,685, (50.7%) are female. Population density in the Council is 27 people per km² with an annual average growth rate of 5.9%. The factors for population growth are births (55%) and migration (45%).

Economically, agricultural sector dominates in the Council; both crop production and livestock keeping. Major food crops grown are maize, rice, cassava, beans, potatoes, while cotton, groundnuts and sunflowers are cash crops. Farmers also keep cattle, goats, sheep, donkey, pigs, chicken, ducks and dogs. Other economic activities include trade and mining. The Existence of trade is mainly a function of development of small and Large – scale-mining activities which attract a great number of immigrants. There is a diversity of activities ranging from petty businesses run by informal sector to limited companies run by big companies such as Tanzania Electric Supply Company (TANESCO), Nsagali Gold Mine (NGM) Tanzania Posta Bank and Kahama Cotton Mill.

The natural resources sector in the Council comprise of forestry and wildlife. Forests are important in maintenance of climatic stability, protection of water resources, soil fertility and controlling land degradation. Water is the most wanted item in human life, however if it is not clean and safe can be a source of diseases in human body. Communities in Bukombe DC depend on unsafe water from rivers. The council realized this situation and designed actions to support community access clean and safe water.

2.0 PROBLEM

In 2006, Uyovu Ward and the surrounding villages experienced serious challenges of potable water. According to 2012 Census Uyovu had a population of 29,909 who used to fetch water 3 – 4km from their homes. Others used local wells which were also not clean and safe for human consumption. Women were the most affected group as they spent much of their time (3-5 hours) fetching water; they had wake up between 4:00-5:00am every day. As a result women were economically incapacitated due to little time available to engage in production activities such as running small business. Due to long distance some girls were sexually harassed, raped, infected with sexual diseases and impregnated. Pupils had to assist parents to fetch water before going to school which resulted into increased dropouts.

Water was expensive as it was sold at TZS 500 to 1,000 per 20lts. Based on the health statistics in Uyovu health center, about 40% of the reported patients were infected with waterborne diseases, such as typhoid, dysentery, schistosomiasis, and cholera.

3.0 OBJECTIVES

The main objective was to provide clean and safe water to the community. Specifically, Bukombe DC intended to establish water source and develop Community Owned Water Supply Organization (COWSO) that would provide water services and conduct daily monitoring and evaluation of piped water scheme system, making connection to water users and ensure maintenance and general operation of the project.

4.0 IMPLEMENTATION STRATEGIES

The Council in collaboration with the communities devised several implementation actions and strategies as explained hereunder.

Conduct feasibility study for identification of possible area with sufficient water; in 2009 the Council in collaboration with experts started feasibility study to determine areas for drilling deep wells in which Lwoboka area was identified. In 2011 the Council managed to drill trial wells through a quick win approach. For three months all activities related to drilling and water supply were under the supervision of the Ward Executive Officer; unfortunately the initiative was not successful.

Formation of water management committee; in order to ensure proper utilization of water the Council decided to organize community and form water management committee. The committee comprised of 12 members from four *Vitongoji*, each with three representatives. Its responsibilities included supervision and management of all activities related to the project such as infrastructure maintenance, distribution and construction of more distribution points. The committee was required to open a bank account and conduct annual meetings.

Formation of Community Owned Water Supply Organization (COWSO); in order to enhance water project the community was supposed to own it for sustainability. The COWSO was established specifically to take over the management role from the consultant immediately after handing over; this would enhance community participation and ownership.

Construction of water tank and expansion of water distribution points; in FY 2013/2014, the Council allocated TZS 486,463,960/= for extension of the water project to cover the whole Ward, hence the name Uyovu Water Project. To ensure sufficient and constant flow of water, the Council constructed 2 tanks, one with capacity of 90,000lts and another 45,000lts. After the project was completed, the Council reviewed water policy to include new mechanisms to ensure sustainability.

Provision of education on effective uses and management of water was made to the COWSO and the public. Provision of education on water use management was conducted by DCDO, Ward and Village/Mtaa leaders in collaboration with Uyovu Ward Councilor. Uyovu – COWSO also engaged in sensitization through public announcement, meetings and internal training of leaders.

The Council and Uyovu COWSO sensitized the community to form tree planting groups and plant trees nearby water sources to conserve them. This sensitization was conducted by District Environment Officer, District Water Engineer, Community Development Officer, WEO and the Councilor. All statutory meetings were used as an opportunity to sensitize the community.

Rehabilitation of Musasa Uyovu water project; in 2007 via World Bank financing the Council rehabilitated Musasa Uyovu water project in which a water tank with the capacity of 10,000lts and 8 water points were constructed; 4 water points to serve Musasa Village and the other 4 Uyovu Village.

5. RESOURCES

To implement the aforementioned activities the council and the community committed financial, human and physical resources. The Council spent TZS 51, 886, 000 million for construction works while operations depend on cash collected by COWSO which collects TZS 25,000,000 quarterly. The collected amount used to pay 27 employees. The COWSO has 12 members and 27 employee who manage and operate the water scheme. The COWSO has sub committees which include technical committee and planning and finance committee. The community participates in providing information whenever there are problem in the scheme and advices on operationalization of the project.

6.0 RESULTS

Uyovu Water project has resulted into the following;

Presence of potable water in Uyovu Ward; this is the most important output of the initiative as the community can access safe and clean water within a short distance (from 3kms to 200m). Waterborne diseases that affected people have been reduced significantly. Women can now fully participate in economic activities while pupils engage fully in attending schools.

Presence of strong established COWSO and two committees which have sustainably managed the project. Apart from collecting cash, the COWSO attracts new customers, procures water connection materials and construct new distribution points. Uyovu COWSO is strong in the sense that it finances all project activities. For instance, TZS 7,460,000 was used to extend the project and procured a new pump at the cost of TZS 8,000,000.

Creation of employment; Uyovu COWSO has employed several people for maintenance and operations of water distribution points. Employments opportunities occurs as the distribution points increase. Employees are needed for collection of revenues, safeguarding and operating distribution points. There is also increased mutual collaboration between the technical committees, COWSO and the Council.



Water distribution points

Provision of water service to schools and health facilities; COWSO has managed to make extend services along Uyovu – Bwanga road to serve Uyovu Health Centre and Runzewe Secondary School. In addition 24 households, 2 public institutions and 1 private institution have benefited the service. COWSO has received more than 20 water connection applications.



Left the 45,000lts tank and right is the 90,000lts capacity

Uyovu COWSO has become a learning center as other COWSOs from Meatu DC, IKuzi, Nampalahala, Kabagole and Musasa visited Uyovu water scheme for learning purposes. In addition the scheme has managed to improve water supply tremendously from 10, 000lts tank to two tanks with total capacity of 135,000lts which has reduced shortage of water significantly. The number of people using clean and safe water has increased from 2,201 in 2014 to 5,012 in 2017. There are 27 distribution points (DP) operating whereby every Mtaa has 1-3 DPs.



Left Tank with 10,000lts



New Tank with 45,000lts and 90,000lts

7. SUSTAINABLE STRATEGIES

To make the project sustainable several strategies are in place. There is continued strengthening monitoring, evaluation and supervision of water scheme and at every Mtaa one COWSO member is assigned to manage and provide information on emerging problems. COWSO has a Constitutional guides affairs of the scheme include meetings, financial management and other operations.



COWSO members in Meeting.

COWSO has managed to reduce operational costs from TZS 1,200,000 per month (diesel pump operated) to TZS 300,000 per month (connected to TANESCO national grid). Also COWSO is committed to regular maintenance of the scheme to ensure sustainable potable water supply. The photo below shows cleaning of the borehole.



Vehicle cleaning boreholes Uyovu Water Project October 2016

COWSO is in process of extending of project to nearby villages of Kanembwa, Azimio and Buganzu in order to serve citizens as well as collect more revenue. In addition, COWSO will fix prepaid meters to all DPs to control revenue collection and wastage of water.



Distribution point

COWSO has a long term plan of establishing other water sources to increase volume and distribution capacity to meet demands, tree planting initiatives along water sources to overcome draughts and construct office to avoid overheads.

8.0 SECRET OF SUCCESS

The success of this initiative is a function of a number of factors. These include strong COWSO, effective collaboration between the Central Government, the Council and Community, technical expertise and trainings conducted to Uyovu COWSO members on management and operations of the scheme.

NGARA DISTRICT COUNCIL



PARTICIPATORY ROAD OPENING AND IMPROVEMENT



Experience of Ngara, Rulenge, Kabanga and Benaco Township Authorities

2.0 THE PROBLEM

Ngara Dc is served by 849.0 kilometers roads network. These roads are grouped into four categories which includes Trunk roads (86.8 kilometers), regional road (278.9 kilometers), District roads (483.3 kilometers) and feeder roads (306 kilometers). 90% of the regional roads have gravel measuring course and the remaining 10% are earth roads. The graveled roads are passable throughout the year and the earth roads are passable with little problems during the rainy seasons. About 0.6% of the district roads are tarmac. The Tarmac roads are in Ngara and Rulenge Township Authorities only while 39.2% of District roads have gravel wearing course and 60.8% are earth roads.

Before 2008 Community road construction was done after compensating the owners of the land of which the road has to pass through, the compensation was not limited only to the land but also crops that are affected. The valuation process involved a qualified value jointly with the projects affected people represented by community leaders (Hamlet chairperson). By the year 2010 a lot of cases and complaints pertaining to community compensation emerged due to the inadequate fund for compensation from the District Authority. By the time the council had no sufficient fund for compensation hence it was difficult to convince the community to allow their land to be used for free.

During the process of construction of street roads around Ngara, Rulenge, Kabanga and Benaco townships, The council as well encountered some challenges in achieving its target because of financial constraints to pay compensation for the land and crops affected. Similarly, most of areas were unplanned, there were traditionally residing in the areas with houses and plants since time immemorial. The planning of the Townships and designing of roads required land readjustment which will ultimately require a principle compensation for houses and plants on the identified road areas. Because of unavailability of funds for compensation the project had to delays and in some cases non-implementation of opening up the roads.

While the Council management team (CMT) were stacked with the exercise of road construction because of limited budget for compensation there were increases of public cries for roads. The Council needed a total amount of Tsh 500,000,000 for compensating 150 Families that were supposed to surrender houses and plants to allow opening up of roads, upgrading the roads and constructing drainage furrows. The communities were in need of roads because it allows easy transportation and access of services in their areas. In general citizens were highly in need of the road because they experience several problems as explained in the following paragraphs;

First, there were higher costs for construction of residential houses due to difficulties in transporting the construction materials to the site. This was reflected by one of the citizen Hamduni Musa et al (2016) who said that *"Zamani wakati tukijenga nyumba zetu, vifaavya ujenzi tulikuwa tunamwaga kule juu na baadae tuna ajiri watu/vibarua wakuyashusha hadi kwenye eneo la ujenzi"*. Literary mean *"in the past when constructing our houses it was difficult bring construction material direct to the site rather you had to put them somewhere and employe labor to bring them to the site since no car could access the site"*.

Second, it was also difficulties in establishing basic social services like electricity lines, water pipes and sanitation or drainage furrows since they are constructed along road line. As a result there were lack of such services like Electricity services, Water services, Transport and Transportation, Education services, Environmental cleanliness and sanitation and Healthy services. It was difficult for transportation and travel to public amenities like schools, hospitals and offices. For any emergency happened in the families, like death, illness, people consumed more time to reach for events.

3.0 OBJECTIVES

The main objective of Ngara District Council was to improve service delivery in the Ngara communities through construction and maintenance of quality roads. Specifically the initiative intended to; construct

street roads that are passable throughout the year in Ngara Township, Rulenge township, Kabanga and Rwakaremela/ Benaco Townships, improve delivery of social services in the community such as water systems, Electricity, Residence, environmental cleanliness, sanitation and transport and transportation, create awareness to the communities on the importance of Town Planning, create awareness on cost sharing in Construction of the community roads by contributing their areas/land without claiming Compensation.

4.0 IMPLEMENTATION STRATEGIES

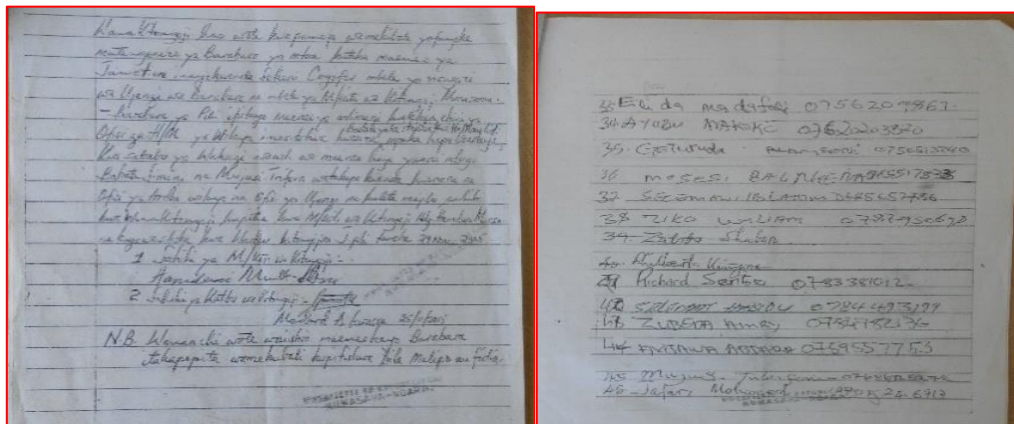
The Government of Tanzania, through its Vision 2025 has emphasized importance of systematic and sustainable construction and maintenance of road network. This has been mirrored in National Transport Policy which places road infrastructure as crucial in providing linkage between rural communities and urban market where agricultural inputs and products are transported to and from the farm gate respectively. The National Strategy for Poverty Alleviation and Economic Growth “MKUKUTA II” has set three clear priority objectives; Growth of income and reduction of poverty, improvement of life and social well-being and good governance. It is recognized that roads infrastructures play a key role in socio-economic performance of the country in facilitating increased farm produce, access to markets and supporting private sector growth. This makes road transport infrastructure amongst the pillars towards achievement of MKUKUTA, Five Years Development Plan and Vision 2025. In realization of these objectives Ngara DC and the community implemented the following strategies to enhance road construction in the council;

Convene of mobilization and awareness creation meetings; Ngara DC started the initiative by convening meetings with stake holders to share idea of participatory road construction. The meetings were organized in 44 Vitongoji. These meetings were chaired by Chairpersons of Ngara Township Authority, Benaco (Rwakalemela village), Kabanga and Rulengeand. In the meeting they discussed the strategies to be used to involve the community in road construction, convincing citizens to surrender their houses and plants that will be indentified during opening up of roads. The meetings were successful as it was jointly agreed that the community contributes to street road construction in kind. This would involve provision (surrender) of land where the roads are ear marked to pass. Also, the community agreed to demolish the temporary structures like houses and toilets and clear their crops so that the machineries for the construction can be engaged. The communities and households also agreed to provide land without claiming/demanding compensation for the land and properties found. The households agreed unanimously to removing crops (Banana trees, Coffee trees, Irish Potatoes, avocado trees, hard wood trees) and stumps on their own and leave the area plain or open for the roads to be constructed using machineries. The last important agreement involved tasking the communities and households to joint monitoring and supervision of the construction process to avoid misunderstanding and interpretations on the areas that the roads have to pass. The photos below show the attendance of citizens in one of the meetings held.



Community meetings to deliberate on surrendering of houses and plants

Cementing the Agreements on community participation; the CMT ordered that all stakeholders especially works department, Land department, Township Authority and the Community in need of road opening and upgrading need to convene cell, Kitongoji and Village Meetings, prepare meeting minutes, endorse them through signatures and circulate them to show that the community has officially agreed and is willing to contribute in kind by providing areas (land) and crops which fall along the road alignment/plan. To justify this willingness the projects affected people (PAPs) agreed to sign the agreement/minutes and participate in uprooting grown crops (coffee tree, Banana trees, Avocado trees, Mango trees, Beans, Maize, Irish potatoes) and trees (Griveria, accrocapus, Eucalyptus) as well as demolishing the temporary properties in the designated areas. This was practiced the vitongoji of Mumasama, Nyamiaga, Kibimba, Nakatunga, Kabanga, Rulenge and Benaco (Rwakalemela village). The minutes were submitted to the District Executive Directors (DED)'s offices through the Works departments, TEOs Offices and the Land and Natural resources department. The photos below show one of the agreement made by the community submitted to the council.



Minutes submitted to the Council

Road Tendering process; After the communities meetings and submission of minutes to the work department, the council continued to allocate budget for roads in each particular financial year for approval and funding by the central government (Road Fund).The central government disbursed funds for the budgeted roads and the District Executive Director (DED) through procurement unit (PMU) proceeds with tendering process whereby the qualifying tenderers/bidder were awarded the contract and work road construction starts.

Construction of road and supervision; the construction of the roads were done by the contractor however monitoring of the construction process were under the department of Work. The works department is the overseas of all construction projects in the Council; they made frequent monitoring and evaluation of all development projects including roads construction. The department ensured that the contractor constructs the street road according to the set standards. The photos below show the one of the road before and after construction.



Before construction of Msikitini –sokoni Road

After construction of Msikitini- Sokoni- Road

5.0 RESOURCES

Road Construction works are inherently expensive; in order to succeed the council had to collaborate with the community to share costs of construction. The community contribution in terms of kind and willingly surrender of land and properties to allow road pass through. On the other hands, the council contribution in terms of provision of technical support and financial support in construction work. The opening and construction of roads in Ngara DC was participatory in which community and the local government shared resources for construction. Thus resources utilized were termed on financial, physical (land) and human resources; in terms of Human resources, the initiative was propagated by the council officers at Council level (District Executive Director (DED) of Ngara, others officers from Ngara Township Authority, Works, Land, Rulenge Township, Ward Executive, Street Leaders, Councilors and chairman of respective streets were the key persons to mobilize the implementation processes. Among the role performed by these people include creation of awareness, educating the residence on importance of road networks and conversing them to willingly surrender their land areas and properties to allow the construction of the respective roads without compensation.

In terms of physical resources, council vehicles were allocated for the implementation of such activities and fuel about 500 liters with the value of 1,000,000 was allocated and used. During the construction of the roads, casual laborers were used from the respective areas to save costs and provide employment opportunities to the community. In terms of financial resources, the council allocated budget in each financial year. The table 1 below shows a summary of percentage of financial contribution between the Council and the community in the construction of one among the roads in the council.

Table 1: Roads Constructed costs without Compensation

S/N	Name of the Road	Length (Km)	Community Contribution (TZS/%)	Government (Council) Contribution (TZS/%)	Total Value (TZS/%)
1	Bilegea to Ngara Secondary Road (Kumzenga Hamlet in Ngara Township Authority)	0.25	5,400,000.00 (64.3%)	3,000,000.00 (35.7%)	8,400,000.00 (100%).
2	Msikitini to Kojifa Road (Mumasama Hamlet in Ngara Township Authority)	0.9	13,120,000.00 (51%)	12,600,000.00 (49%)	25,720,000 (100%)
3	Katani to Msikitini road in Rwakalemera Benaco	0.45	8,880,500.00 (58.5%)	6,300,000.00(41.5%)	15,180,000.00 (100%)
4	Kanisani Makaburini Boarder Road in Kabanga Town	1	5,490,000.00 (28.2)	14,000,000.00 (71.8%)	19,490,000.00 (100%)

6.0 THE RESULTS

Indeed, road construction has got weight within social and the economic aspect. In Economic aspect, the benefits of road not only in quantitative terms (tons transported), but also in economic terms such as source of wealth, employment and in terms of support given to other economic activities. Through numerous mechanisms, investments in the road sector benefit the whole society by providing access to territory and allowing poverty alleviation to take place. Consequently, the road network creates and stimulates positive synergy and enhances social cohesion and integration by giving citizens access to the same opportunities.

In terms of social aspect, construction of roads socially has got much positive impact. In the short term, the planning, construction, operation and maintenance of the road transport system helps to create jobs with direct implications on the economic prosperity of people. In the long run, road networks have direct influence on basic production parameters (type of production, transport of raw materials, product distribution, storage arrangements...), which in turn, will foster economic development. It is worth noting that a large part of road transport is auto-produced and auto-consumed (i.e. transport services that are produced and consumed within non-transport companies). Thus the implementation of Ngara road constructions has resulted into a number of social and economic aspects as summarized below;

Presence of a Road network with a total of 26 kilometers which is passable and were constructed and improved with only TZS 240,000,000/= (Two forty hundred million) without cost for compensation compared to a total of TZS 800,000,000/= (Eight hundred million) which could have been spent with compensation. (Refer to Table 1 above). The construction of road saved TZS 560,000,000 that otherwise could be used to compensate citizens.

The value of land and plots has increased in the areas where roads pass through; In all areas which roads were constructed the Value of Plots rose from TZS 1,500,000/= to TZS 3,000,000/= million per Plot (High density) and TZS 3,000,000.00 to TZS 6,000,000.00 for plots in medium and low density due to the easiness of transport and transportation of building materials. The value of Plots at Kibimba and Kumzenga Hamlets in Ngara Township Authority has raised up because of better roads networks constructed under this initiative.

Development of physical infrastructure along roads has increased. Residents of the areas with roads are satisfied with the initiative; this is evidenced by construction of modern buildings along roads. This happed due to accessibility of transport and transportation of building materials easily. There is also improvement in access of other social services such as water; electricity. The roads are passable throughout the year hence there in no blockage of services because of poor road networks. The photos below show some of the modern houses that are being constructed because of accessibility of services.



Improved residential buildings along the roads

Commercial activities have increased because of presence of road networks; Citizens along road sides have constructed business premises for hiring and shops. The increase of commercial activities promotes the individual and community economy at same time the council increases their sources of revenue through fees, business license and permits. As a result the capacity of the local government to deliver services such as water, electricity, street lights increases.

Improved collaboration between the council and Vitongoji and township leaders; since the initiative began with collaboration between council and Vitongoji leaders, it has created close relationship among these leaders which have paved the way in implementation of other development initiatives undertaken in grassroots levels. The spillover effect includes the increase in other communities and villages out of project area to demand road construction without compensation by using the same modalities as the project area implemented.

7.0 SUSTAINABILITY STRATEGIES

To ensure sustainability of road construction through community participation, the Council is engaged in continued awareness creation to the communities on the importance of surrendering areas without compensation in order to continue to construct more street roads, Continue to educate the community on the importance of making contribution to their own programs including Town Planning, Continued Cooperation with residents/community along the road to notify road administrator about complains and problem of the road such as road damages/bottleneck. This cooperation with residents have a better point that it makes easier to communicate about the road user satisfaction, hence setting budgets for routine maintenance, rehabilitation and security, continued doing joint land demarcation of plots for town plan drawings so that the development activities are done with accordance with town planning continue to increase the road network coverage as well as increasing the street roads paved with tarmac.

8.0 SECRET OF SUCCESS

The successfulness of this initiative was highly contributed by involvement of citizens, this was done thorough use elders and prominent figures in making persuasion to the community, use of street and Vitongoji chairpersons to educate their citizen on importance of Participation on community development particularly Town Planning in their respective areas. There were also regular meetings at street and hamlet level to persuade the community on continuing contributing to their own development projects.

The failure of the community to construct modern houses due to absence of passable roads to transport building materials lead to see the importance of providing their own land for road passage. Also the inadequate social services in their street like electricity, water services, difficulties in transport and transportation contributed in the need to open up the roads so that these services are made available.

UKEREWE DISTRICT COUNCIL



INTEGRATED COMMUNITY NATURAL FOREST CONSERVATION



Experience of Ukerewe DC

1.0 INTRODUCTION

Ukerewe District Council is one of the 8 Councils of Mwanza Region, located between latitude 1°45 and 2°15 South and Longitude and 32° 45 and 33°45 East. The Council borders Magu DC to the South, Musoma DC in Mara Region to the North and Sengerema DC to the East. Ukerewe DC is the largest island in Lake Victoria situated 54 km away from Mwanza City, being an agglomeration of 38 Islands out of which 15 of the islands are permanently inhabited and the rest are temporarily inhabited mainly for fishing and fishing related activities. The Council has a total area of 6,400km² whereas 5,760km² is covered by Lake Victoria water. Administratively, the Council has 4 Divisions, 25 Wards and 76 Villages.

According to 2002 Census, Ukerewe DC had a population of 260,831 people; out of which 128 842 were male and 131,989 female. The population growth rate was estimated to be 2.9% higher than the national average of 2.6%. During the 2012 Census the population had increased to 345,147 and the current population density is more than 500 people per km². The increase in population contributed into a rapid land fragmentation; a serious problem on land management and production; favoring land degradation, poverty and encouraging encroachments on protected reserved lands.

Topographically, the Council is undulating consisting of small hills, valleys, lowlands and numerous small seasonal rivers (seasonal because of deforestation but once were permanent). The Council has too remarkable ecological zones; the Eastern Zone – which is receiving moderate rainfall and characterized by clay black cotton soil, its mountains are dominated by *Cumbretum spp* and the lowland dominated by *Acacia spp*. The Western zone which receives heavy and reliable rains than the Eastern Zone; its mountains are dominated by *Maesopsis Emenii*, *Albizia sp*, *Melicia excelsa (mvule)*, and *Markhamia sp (Mtalawanda)*. Ukerewe is a mountainous land, once had thick closed equatorial forests, however, due to high population and economical activities the Council currently has five forests, one owned by Central Government and the rest by Local Government. Three forests are found on a mountainous land in the western zone of the Council.

The main economic activities are agriculture, fishing, trade/business, and lumbering (From Rubya forest and several individual tree plots). 92% of the population depend on agriculture to sustain life; main crops are cassava, potatoes and rice; these are both food and cash crops. The Council is rich in varieties of fruits but citrus fruits are dominant. Once the Council used to supply food crops to nearby councils such as Bunda, Magu, Musoma and Mwanza city; but the trend has changed to the point that the Council is now supplied with food from outside this is because of increased population and poor environmental management in Ukerewe which has contributed to low production to the extent that currently only fruits, fish and sawn timber are sold beyond the Council.

The history and efforts of forest conservation started back before colonial era, Chiefs of Ukerewe took initiative to conserve forests and small islands. Thick closed forests mostly were considered as place of worship for performing rituals to ask Gods to favor mankind out of difficulties such as outbreak of diseases, hunger absence of rain or any calamity befell them. Both colonial governments (Germany and British) built on chiefs efforts, The British government went further and gazetted five forests in 1957, four of them were for Ukerewe Local Authority forest reserve; these were Kabingo 250ha, Mkigagi 116ha, Itira 109ha, and Negoma 698ha. The Rubya Forest reserve 1920ha which was owned by Central Government in late 1950's was turned into forest plantation and new fast growing exotic species namely *Pinus caribea* were introduced. Until independence (1961) that was the status of forest reserves owned by local and central government. Yet there were several natural forests on public land especially on hills and un-inhabited small islands were respected and untouched. However, in the mid-1970's the forests suffered degradation due to increase in population, human activities and lack of legal framework for protection.

The integrated community natural forest conservation initiative is implemented in Muluseni Village. The Village is located just along the Lake Victoria shores in Ngoma Ward - Mumbuga Division about 12 Km from Nansio Township centre which is the Council headquarters. This Village is situated East part of Ukerewe island, it borders Hamkoko Village to the West, Nantare Village to the North and Bunda District to the South and East. Most of the people depend on subsistence farming / Livestock keeping, fishing and fishing related activities; others depend on trade and petty businesses. Food crops include cassava, sweet potatoes, maize and legumes such as beans and cowpeas.

2.0 PROBLEM

Before 1990 the Council experienced increased deforestation caused by rapid increase of population which accelerated various social and economic human activities such as land for agriculture, grazing, settlement and for institutional use. Other factors include increased demand for wood materials for construction of houses, fishing vessels and the most important demand for source of energy; all these led to heavy cutting of trees. Booming fishing industry is another factor which contributed much to deforestation in Ukerewe DC; 90% of the Council area is covered by water so automatically fishing is a major economic activity engaging almost 60% of the population second to agriculture which engage almost 90% of the population. In late 1950's up to 70's there was a heavy catch of fish especially *Bagras docmak* which was transported outside the Council to other parts of Tanzania, Kenya (especially Kisumu) and Kampala Uganda. The only means of fish processing was through smoking which called for high demand of fuel wood. Many trees were cut to meet the need hence forests on public land were depleted.

The trend of processing fish through smoke increased much between 1980's to 1990's. During this period fishermen engaged in fishing *Nile perch* type of fish which also required to be smoke dried. This was accompanied by construction of temporary fishing camps' houses in the villages along lake shores. Fishing industry improved economic power which resulted into high demand of wood for building modern houses using burnt bricks; this accelerated forest degradation. Lack of legal frame to protect forests on public land was an outstanding factor which led to uncontrolled forest harvesting.

3.0 OBJECTIVE

The overall objective was to enhance regeneration and conservation of natural forest on public land in Ukerewe DC. Specifically, the Council intended to curb soil erosion which is a major source of land degradation and loss of soil fertility, to ensure adequate availability of wood for fuel, create conducive environment for the forest inhabitants and improve weather condition (wind current reduced, pleasant temperature).

4.0 IMPLEMENTATION STRATEGIES

Ever since forest degradation was noticed, the Council has taken several initiatives to rescue the situation. In collaboration with other stakeholders such as World Bank, the Council developed several strategies towards realization of integrated community natural forest conservation. The strategies implemented are described below.

Establishment of central tree nurseries; in 1970's through Rural Integrated Development Project (RIDEP) funded by World Bank, the Council managed to establish central tree nurseries and distributed tree seedlings to villagers free of charge. For 12 years the Council was able to distribute more than 120,000,000 seedlings of different species to villagers for free.

Awareness creation; in 1995 people of Muluseni Village and other surrounding villages were trained on forests conservation. The trainings were delivered under Forest Resource Management Project (FRMP) focusing on creating awareness to citizens on the importance of conserving forests, establishment of tree nurseries, establishing beekeeping and forest conservation through awareness creation meetings, group

discussions coupled with film shows on impact of environment degradation and methods to be adopted in establishment of intergraded forest management.

Establishment of village tree nurseries; after the training villagers were highly motivated and put in practice lessons learnt by establishing tree nurseries and forests. Their effort and commitment attracted public interest, appreciation and recognition. In 2005 their forest was visited by Uhuru torch (Mwenge) to reward their effort, through this appreciation the villagers were further motivated in forest conservation which prompted them to invest more on forest conservation in public land. The council assisted the villagers to formulate forest conservation committee and enact bylaws for forest conservation. The committee composed of 10 members was established and trained by Forest Officers.

Training of individuals on establishment of tree nurseries; in the 1990's FRMP supported training of individuals groups and institutions on establishing home based tree nurseries, beekeeping and construction and use of improved woodstoves in 25 villages. The project phased out in 2000, yet individuals, groups and institutions continued to produce and distribute tree seedlings commercially. These included 11 individuals, 3 secondary schools, 13 primary schools and 13 groups. Best performers were Mutunguru Secondary School, Bure garden in Mukunu Village and HUNAU group in Maregea Village.

5.0 RESOURCES

The implementation of strategies in this initiative attracted resources from different stakeholders including villagers, Ukerewe DC, Central Government and Development partners. Resources are categorized into financial, human and physical resources. Human and physical resources include labour contributed by villagers, technical and advisory services provided by the Council, Central Government and Development Partners. Financial resources are presented in Table 1 below.

Table 1: Financial Resources

S/n	Description/project activities	Source of fund/revenue	Amount TZS
1	Awareness creation on Environment Training on natural forest conservation Training on improved stoves, Tree nurseries. Tree nursery establishment and management. Conservation of forests on public land. Construction of improved woodstoves.	Central Government/ District Council through FRMP	360,000,000
2	Training on Beekeeping Purchase/Supply of Beehives	HEIFER International	2,300,000
3	Conduct Practical training on Tanzania Top Bar Beehives making Provision of working tools, equipment and other necessary materials.	ROTARY International and ROTARY Club-Nansio Ukerewe Island	4,800,000

6.0 RESULTS

The implementation of forest conservation in Ukerewe DC realized results described below;

Communities have been adequately sensitized on conservation; this initiative has prompted conservation of 13,700ha of forests in public land in 34 villages. This achievement has motivated other villages of the Council and beyond to adopt and sustain the initiative.

Bylaws regarding forest conservation are in place and functioning; the villages have established bylaws to enforce forest conservation. Bylaws clearly define roles of conservation committees, penalties, harvesting plans and utilization of forests products.

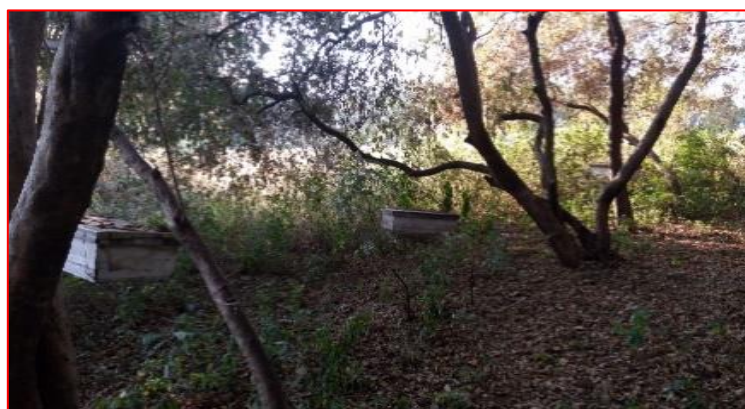
Regeneration of natural vegetation in conserved areas; natural vegetation affected earlier by human activities has regenerated and vegetation along the lake shore have contributed in reducing soil erosion. The photo below shows regenerated vegetation along the lake shores.



Regenerated Vegetation along Lake Shores

There is considerable increase of fuel wood as a result of planned harvesting as well as improvement of ecosystem. Animals that perished because of environmental degradation have returned to the conserved areas. The successful implementation of the strategies/activities through participatory approach has enabled nurturing the skills related to natural forest conservation to the community and individual. The communities and individuals have been motivated to establish their individual tree nurseries for commercial purposes. Forest conservation has promoted employment among villagers who engage in tree nurseries and generate incomes.

Introduction of beekeeping in Ukerewe DC; people of Ukerewe were not beekeepers except very few who do it for ritual purposes. The communities adopted beekeeping as a revenue generating activity and ever since have shown remarkable progress and achievements. The Council has 224 beekeepers, 53 groups of beekeepers, 1,463 traditional and 23 modern beehives and recorded harvest of 413kg of honey in 2016. Among the best and early adaptors of beekeeping were people of Muleseni and Busiri village.



Beekeeping at Muleseni conserved forest

7.0 SUSTAINABILITY STRATEGIES

In order to ensure sustainability of results, the Council in collaboration with villagers and forest reserve stakeholders has developed strategies for sustainability. Bylaws developed by the villagers are enforced. The bylaws enacted restrict any human activities in the forest unless it is decided by the villagers themselves. This

also provides an opportunity for guided harvesting under the supervision of forest conservation committee. The Village Members convene meeting to discuss the conservation progress on quarterly basis, this has created a sense of ownership among the community members.

The villages formulated a strong and active forest conservation committees; the commitment of the committee members to use the bylaws in their day to day supervision enables them to take action against very few people who attempt to mismanage the forest. This is also backed up by the Muluseni Village Council. The harvesting calendar has been developed to guide villagers on when to enter in the forest to harvest (by pruning some of the tree branches). This helps to control unsustainable forest harvesting.

8.0 SECRET OF SUCCESS

Successful implementation of this initiative was contributed by a number of secrets. The sense ownership of forests among community members. Community willingness and participation in decision making as well as commitment to implement the agreed activities promote success.

Effective supervision, monitoring and evaluation regarding the conservation; communities have quarterly meetings to discuss success and challenges and set strategies to improve the situation. There are strong forest conservation committees which coordinate management of conserved areas. Good collaboration between community, Ukerewe DC and Development Partners in forest conservation contributed to the success of this initiative.

Chapter Five:

Local Economic Development

Chapter five has six best practices related to local economic development efforts in relation to newly introduced One Village One Product movement (OVOP). The movement is focused on endogenous development theory by means of promoting and branding unique products. The OVOP movement originated from Oita Prefecture in Japan during the late 1970s and aimed to vitalize the prefecture's rural economy.

The concept is targeted to achieve social and economic development of the regions through voluntary capacity building of the people from grassroots level. Also, it aims at building bonding and/or bridging social capital, impacting upon community capacity development, knowledge creation and sharing. The subsequent introduction of value-added products, community policy, supportive structures, new or unique produce, agricultural processing techniques, tourism and ways of conceptualizing community were other strategies.

The OVOP movement is seen as a way of enhancing local communities' entrepreneurial skills by utilizing local resources, knowledge and experience; creating value addition activities through branding of local products and building human resources in the local economy. In particular, the use of knowledge and local resources without jeopardizing environmental soundness is a critical element of OVOP development, which also can be associated with endogenous development theory. In OVOP movement, there are popular phrases such as "think globally but act locally". The chapter presents six best practices from Misenyi, Ukerewe, Itilima, Tarime, Rorya and Bunda DCs.

Misenyi DC Initiative is about Producers' Empowerment, Market Linkage and Rural Financing in Kilimilile and Mushasha Wards. Before the implementation of this initiative, people of Kilimilile and Mushasha Wards experienced poverty and vicious development circle due to lack of formal, reliable, credible and coordinated markets of various farm and hand craft products. The Council initiative aimed at achieving producers' empowerment, market linkage and rural financing ultimately leading to poverty reduction and economic empowerment. To implement this, the Council in collaboration with MIVRAF and the GEODATA Consultant Ltd created farmer' groups, conducted training, linked farmers with micro-finance institutions, assisted farmer in preparation of simplified business plans and marketing strategies and organized groups for collective marketing. The implementation of this initiative led to increased production and guaranteed food security, introduced reliable markets, increased individual and group incomes and linked farmers with financial institutions.

Ukerewe DC best practice presents initiative on Cassava Production and Value Addition. The initiative was implemented after realizing decrease in production of cassava caused by infertility of soil, occurrence of cassava diseases, poor processing techniques, poor markets and food insecurity. The Council aimed at improving livelihoods of farmers through income generation and increased food security at household level by supporting value chain and addressing major production, processing and marketing bottlenecks. The Council in collaboration with stakeholders carried research to identify best cassava varieties, promote and organize farmers into groups for easy production, processing and marketing. The initiative resulted into increased production and processing of quality cassava products, expansion of cassava market and increased incomes and food security.

Itilima DC initiative describes the Promotion of Conservation Agriculture for Food Security implemented in Kabale Village. Before the initiative, villagers experienced low crop production because of poor farming

technology, declining soil fertility and soil and water loss through erosion coupled with unreliable rainfall. To address the challenges Itilima DC introduced Conservation Agriculture in order to promote food security for improved rural livelihood, assist farmers to adopt new farming technology, empower communities to engage in agricultural activities that conserve environment, use technologies that reduce costs of production and increase crop outputs per unit area. To realize this, the Council facilitated farmers to organize into groups, created awareness on Conservation Agriculture and established demonstration plots for practical learning. This led to increased production, improved incomes, ensured food security, and maintained soil fertility.

Tarime DC best practice elaborates on Promotion of Cloned Coffee Production for Income Security. Before the initiative, farmers experienced low production, escalation of diseases and pests and low incomes. The Council deliberated to improve farmers' livelihood through increased production and productivity of coffee by introducing new coffee varieties (clonal coffee) which have high yields and are resistant to coffee berry and leaf rust diseases. The Council built capacity of farmers to adopt new innovations on improved methods of coffee production and processing, preparation and distribution of Clonal coffee seedlings, organizing study visit and creation of networking with coffee stakeholders for assistance and technical advice. The initiative resulted into increased production and incomes, increased revenue capacity of the Council through cess and strengthened collaboration among famers, Council and coffee stakeholders.

Rorya DC best practice narrates initiative on Irrigated Paddy for Improved Income and Food Security implemented at Irienyi Village. Before 1999, the Village experienced food shortages, poor incomes, low yields, dependency on seasonal rains, use of unimproved seeds, inadequate extension services, poor irrigation infrastructure and disorganized paddy growers. The Council intended to improve incomes and household food security of Irienyi Village community by identifying land for irrigation, constructing water reservoir, training farmers on improved paddy production and value addition, forming farmers' organization (UWAIRO) and constructing modern irrigation canals and warehouse. The initiative has resulted into presence of modern irrigation scheme, increase in paddy production, presence of strong farmers organization (UWAIRO), improved incomes of farmers and availability of employment opportunities.

Bunda DC initiative explains Cage Fish Cultivation and Restoration of Breeding Sites. Before implementation of this initiative, there was severe depletion of fish stock in Lake Victoria caused by overfishing and illegal fishing. The Council implemented the initiative with the aim of building capacity of the Beach Management Units (BMUs), institutions (822KJ) and local communities around Lake Victoria on Cage culture techniques to ensure high fish production both in cages and breeding sites. The Council identified stakeholders and created awareness on Cage Fish Cultivation, formation of fish farming groups, provision of training to groups and construction of fish cages. The initiative resulted into effective and healthy collaboration between the Council, UNDP, ESRF, the military detach 822KJ staff and the Karukekere community. This collaboration resulted into adoption of new technology of fish rearing, reduction of illegal fishing, increase of wild fish and balance of the eco-system.

MISSENYI DISTRICT COUNCIL



PRODUCERS' EMPOWERMENT, MARKET LINKAGE AND RURAL FINANCING



Experience of Kilimilile and Mushasha Wards.

1.0 INTRODUCTION

Missenyi District Council is one of the 8 Councils of Kagera Region established in 2007 after the split from Bukoba DC. The Council is located on the Western side of Lake Victoria. It borders Uganda to the North, Karagwe DC to the West and Bukoba DC to the South and East. The Council has Lake Victoria shores in Kashenye and Kanyigo Wards. Administratively, the Council has 2 Divisions, 20 Wards, 77 Villages and 352 Vitongoji. According to 2012 Census, the Council has a population of 202,632 of which 100,085 are male and 102,547 are female. The average population growth rate is 1.1% and the density is 70.2 people per km².

The Council is at an altitude of 1400m, vividly hilly in most of Kiziba Division while Missenyi Division is characterized by open and undulating landscape. Both Division have a network of drainage and streams that feed Ngono and Mwisu Rivers which flow into Kagera River before entering Lake Victoria. The Council experiences rains in two seasons; short rain season is experienced between September and December while heavy rain season occurs between March and May. The highland belt receives 1000mm - 1300mm of rainfall while the Western part of the Council has only 600mm - 1000mm. Average temperature is 20°C with minimum and maximum being at averages of 15°C and 28°C respectively. About 96% of the population engage in agricultural activities with average holdings of 2.7 acres of farms. Petty businesses cover 2.8% while services account for 1.2% of Council's economy.

Missenyi DC is among the two Councils in Kagera Region implementing Marketing Infrastructure, Value addition and Rural Finance Support (MIVARF) programme. The Government through the Prime Minister's Office in collaboration with Development Partners i.e. the International Fund for Agricultural Development (IFAD) and African Development Bank (AfDB) has been implementing MIVARF program for a period of seven years (2011-2017). The goals of the program are to reduce rural poverty and accelerate economic growth on a sustainable basis within the National Development Strategies including MKUKUTA/MKUZA, KILIMO KWANZA, Agricultural marketing Support Development Programme (AMSDP 2002-2009), Rural Financing Support Programme (RFSP) and District Agricultural Support Programme (DASP). This project emphasizes on training farmers using demonstration plots which has resulted into high harvests of maize and beans.

Missenyi DC rolled out MIVARF in 2014 after the Government had requested the Councils to write project proposals on agricultural fields that donor could support reduce poverty in rural areas. Proposal selection was competitive and involved all Councils in Tanzania. In Kagera Region, Missenyi and Muleba DCs were selected. Missenyi DC project proposal was on *producers' empowerment, market linkage and rural financing project*. The Council solicited and procured a project consultant under the supervision of MIVARF expert in which GEODATA Ltd of Mwanza won the post. Implementation of the program started in February 2015 based in Kilimilile and Mushasha Wards.

2.0 PROBLEM

Production of is viewed relevant only if it has value in the market. In this regard, market is one of the most exciting areas of business and it is the heart of trade (Curry, 2000). It is explained that if a producer does not market or fail to secure market for his/her product he/she will automatically perish in the national and international markets since he/she will not be able realize profit which is essential in production development. Curry (2002) explains that agro-products marketing in Tanzania face marketing problems. It is estimated that 67% of the ripe products or fruits in Tanzania get rotten in farms due to failure of immediate markets. For those who manage to reach the market, 25% get rotten before consumption due to low sales (DTB Market survey, 2007).

In 2010 Misenyi DC observed that the Government has been putting much efforts and emphasis on production of goods while access to markets was not given adequate priority. People of Misenyi DC like many others in Tanzania experience poverty and vicious development circle due to lack of formal, reliable, credible and coordinated markets of various farm and hand craft products. This was the case for Kilimilile and Mushasha Wards which necessitated council interventions.

3.0 OBJECTIVES

Misenyi DC initiative aimed at achieving producers' empowerment, market linkage and rural financing ultimately leading to poverty reduction and economic empowerment. Specifically the project intended to; group farmers into producer groups and facilitate them to practice modern farming, empower rural producers through training, workshops and meetings to enable the groups manage all producer and group functions.

4.0 IMPLEMENTATION STRATEGIES

Implementation of the project adopted predetermined result areas. In result area one, all activities focused on imparting knowledge and skills to members and leaders of targeted groups on undertaking activities agreed upon so as to attain the objectives of establishing a business driven collective marketing structures and arrangements. As for result area two, the implemented activities were an extension of the activities done in area one that focused on enabling the groups to secure buyers, collect, store, minimize post-harvest loses, and decide on mode of delivery while considering profitability margins rather than higher prices alone.

Result are three intended to enable groups collect and process information that would result into groups' profiles and utilize them to attract buyers, agro-dealers and financial service providers and engage in business with them. The last result area of developing financial services dealt with linking the groups and individual members to SACCOS as well as utilization of the internal savings in marketing of produce.

A joint coaching plan was developed by Geodata staff and Council staff. Moreover, progress review meetings were conducted that involved the Regional and district MIVARF implementation committees. Same teams conducted field visits to assess implementation progress and emerging impacts to groups and members. Misenyi DC realized the lack of linkage between small holder agricultural producers and markets. The Council deliberated and engaged in the strategies elaborated below.

Empowering producers; In collaboration with MIVRAF and the GEODATA Consultant Ltd, the Council created farmer' groups, linked farmers to micro-finance institutions, prepared simplified business plans and marketing strategies and mobilized farmers to strengthen their groups and sell their produce collectively. Value addition principles such as use of appropriate seeds, optimized planting and timely harvesting to secure reliable markets were introduced. The photos below show Uvuke group farm and members sorting seeds.



Uvuke Group farm and members

Formulation of farmers groups' targets; the initiative intended to have collective markets, production, prices and development strategies; 18 groups were formed having production and marketing strategies. Table 1 below shows groups formed and targets set.

Table 1: Farmers Groups and Targets

SN	GROUP NAME	VILLAGE	MEMBERS			PRODUCTION TARGETS - MAIZE			PRODUCTION TARGETS - BEANS			SALES TARGET	
			Men	Women	Total	Acres	Kgs/Acre	Total Kgs	ACRES	Kgs/Acre	Total Kgs	Maize	Beans
1.	Vijana Sasa Kazi	Kenya	10	8	18	9	7	6,500	11	3	4,950	4,350	3,960
2.	Uvuke	Kenya	12	11	23	41.5	7	23,850	22.5	3	6,250	16,900	4,190
3.	Fikiria	Mwemage	5	12	17	31.75	7	16,565	23.75	3	4,940	12,475	4,025
4.	Tweyambe	Mwemage	6	12	18	33.5	7	18,200	34.5	3	8,400	13,400	6,920
5.	Chapakazi	Mwemage	6	14	20	48	7	23,600	23.5	3	4,750	15,700	3,160
7.	Boresha	Kenya	12	18	30	41	7	26,000	30.5	3	9,410	11,120	5,235
7.	Shubira	Kenya	13	9	22	37.5	7	24,990	28	3	5,500	13,230	3,710
8.	Abajunangani	Mwemage	18	9	27	64.5	7	22,400	58	3	10,900	16,300	8,750
9.	Jikwamue	Kenya	14	16	30	16.5	7	11,550	12	3	3,600	6,950	2,050
10.	Jitihada 1	Kenya	16	19	35	21.8	7	15,225	16.5	3	4,875	9,050	2,980
11.	Jitihada 2	Mwemage	17	8	25	38	7	17,750	32.5	3	10,130	11,600	7,720
12.	Mwangaza	Kenya	7	17	24	26.5	7	83,50	21	3	4,150	3,750	2,090
13.	Nazareti	Kenya	3	4	7	7.5	7	4,200	6.5	3	1,100	2,850	740
14.	Tegemeo	Mwemage	14	6	20	30	7	39,900	30	3	11,050	34,200	9,250
15.	Wajane	Bulembo	0	12	12		7			3			
16.	Umoja	Bulembo	9	7	16	10.5	7	1,950	10.25	3	600	1,100	260
17.	Hekima	Bulembo	6	8	14	9	7	8,500	5	3	1,460	5,660	815
18.	Shamrashamra	Kenya	1	5	6	9.5	7	1,960	7.5	3	1,190	1,280	570
19.	Sisimuka	Mwemage			30	28.5	7	14,950	24.5	3	5,200	8,650	3,180
20.	Juhudi	Mwemage	11	8	19	26.5	7	10,900	19	3	5,000	7,070	3,840
21.	Umoja Nguvu	Kenya	10	4	15	18.5	7	10,600	21	3	5,350	7,070	4,000
22.	Furahisha	Kenya	4	7	11	16.5	7	4,360	14.5	3	3,960	1,560	2,750
23.	Upendo	Mwemage					7			3			
24.	Abanabashome	Mwemage	17	9	26	26	7	6,280	23	3	3,375	3,840	1,935
25.	Majaribio	Mushasha	4	8	12	8.5	7	960	7.5	3	410	470	220
	Total		214	226	471	600		311,190	483		116,550	208,575	82,350

Conducting Stakeholders Workshop; after forming farmers groups a collaborative meeting was organized that aimed at mobilizing different stakeholders to discuss strategies for helping farmers to have reliable markets for maize and beans and thus be able to improve their incomes through farming. On 05/05/2016 MIVARF organized a collaborative stakeholders meeting aimed at mobilizing beneficiaries, traders, inputs suppliers, financial institutions, Government representatives and other stakeholders to discuss how best Misenyi farmers can access markets for maize and beans. The meeting informed farmers on the following;

- (i) Farmers should strive to use herbicides for minimizing weeding costs.
- (ii) Every group should establish savings and credit services including increasing savings that will generate funds for internal loans.

- (iii) Groups need to join Tumaini and Kyaka SACCOS so as to access loan from SACCOS of which will be supported by CRDB bank (adhering to meet criteria for loans and timely repayment).
- (iv) Groups should increase production in order to motivate buyers to buy big consignments from centralized locations. It is costly to buy scattered small quantities and buyers at times prefer to buy maize from as far as Tabora and other places that have big volumes.

Conducting study tours; through PEML implementation at Mushasha and Kilimilile Wards it was evident that programme beneficiaries needed marketing experience and exposure from different areas. The MIVARF regional committee insisted on producer study visit outside the local areas to gain experience and exposure and help farmers to change their mindsets towards programme development and improved performance. It is for this reason the Council in collaboration with the Service Provider came up with the proposal to facilitate farmers attend Nanenane Exhibition with the aim of learning best agricultural practices and marketing practices from other successful farmers. Nanenane study visit included 15 farmers under PEML from Mushasha and Kilimilile Wards where by 8 farmers were male and 7 were female. Groups that participated in the study tour were Jitihada, Sisimuka, Tegemeo, Shubira, Wajane, Jitihada, Boresha, Jikwamue and Vijana sasa kazi. The tour also involved one representative from Service Provider (Geodata Consultant), Council Agricultural Officer, Irrigation and Cooperative Officer (DAICO), Regional Focal Person, District Focal Person and one Ward Extension Officer from Mushasha. Farmers visited different demonstrations on different crop varieties such as maize, paddy, beans, sunflowers, horticultural crops (onions, tomatoes and carrots), bananas, coffee and sweet potatoes.

Visiting exhibition pavilions; participation was organized in such a manner that participants were able to visit all important exhibition pavilions including Kagera Region Councils, TANICA, Kagera Sugar, Kagera Tea, SIDO Kagera, TACRI, Magereza, ARI – Maruku, World Vision Tanzania, Missenyi ADP and MAYAWA pavilions.

Display of farm produce; Missenyi DC arranged for a special display pavilion for MIVARF group participants in the regional nanenane exhibition at Bukoba Town. Participants under PEML subcomponent attended Nanenane exhibition and displayed 1,239kg of maize and 410kg of beans. 451kg of maize were processed into flour and sold at TZS 1,000 per kg. The remaining unprocessed maize and beans were packed in simple bags of 1kg and sold at TZS 700 and TZS 1,300 per kg respectively. Producers earned TZS 551,600 from selling 788kg of maize and TZS 533,000 from selling 410kgs of beans making a total cash of TZS 1,084,600.

5.0 RESOURCES

Implementation of this initiative involved Human and financial resources. The human resources included the Council staff and GEODATA Consultant Ltd personnel who provided technical expertise. Financial resources included TZS 18,000,000 that were used to facilitate transport, study tours, training of farmers and purchase of agriculture inputs.

6.0 RESULTS

Implementation of this initiative created a number of results presented below.

Increased production and guaranteed food security; as a result of the targets set by 18 farmer groups' production increased to 5,106.5 bags (equivalent to about 511 tons). This assisted farmers to set aside 1888 bags (about 190 tons) for food and 3,221.5 bags (about 321 tons) for sale which were kept in group stores while collecting market information and linking to different buyers. All 18 groups agreed to sell the farm produce collectively.

Introduction of reliable market; Geodata Consultant linked farmers to micro-finance institutions, simplified business plans and marketing strategies mobilizing them to strengthen their groups and sell their produce collectively. Before the initiative farmers used to sell their produce to middlemen at varying low prices that greatly benefited these businessmen. Some farmers even sold their maize before harvesting based on buyers price estimation. As a result of the network, one trader (maize buyer, Wilbroad) bought 45,360kgs from 7 groups. Buying price was TZS 416.00 per kg. Considering that average production cost is TZS 295.00 per kg the profit margin is TZS 121.00 (41%). Individual farmers outside the organized groups – and some members that were still skeptical about group selling sold maize at prices as low as TZS. 278 per kg; those who sold collectively to wholesale traders sold their maize at as high as TZS. 461 per kg. The prevailing price was TZS. 450 per kg while an overall average was TZS 418 per kg.

Increased individual and group incomes; A total of 104 tons were sold by the groups in the two wards earning a total of over TZS 42million, setting aside about 188 tons for food security. Farmers from these wards have actually improved their income through the initiative. Fidon Muta from Kenyana Village and Pancras Nazali of Mwemage Village testify, *“We had a number of projects but this one is unique. We used to have projects that dealt with farming techniques. But this one leads us all the way from farming to the final stage of selling. There is also close follow up right to our groups in the village. We are now realizing the true value of our efforts. Before the project we were selling a sack of maize (120 kg) between TZS. 18,000 and 30,000 (TSZ. 125-250/kg) but this time we are selling at TZS. 45,000. We are now realizing the value of collective selling and villagers who are not in groups envy us. We are sure in three years’ time we will be very far in improving our income”*. With proof of the benefits of collective selling, groups are motivated to keep the momentum in all seasons.

Records from the groups indicate that maize for sales are 104,060kgs which is equivalent to 1040.6 bags and hence amount set aside for home use is 188,500kg, 32.3% of the amount harvested. Therefore the groups gained extra TZS 10,000,000/- by selling collectively due to utilization of the marketing strategies gained from PEML interventions. Through experience gained from PEML, 7 groups in Kilimilile Ward sold 40 tons of beans collectively at a rate of TZS 1,250 per Kilogram, while other farmers sold at TZS 1,000 per kilogram.



Ownership of motorcycles as a result of group marketing



Jitihada Group selling maize by cross-checking bag weight

Introduction of improved crop storage; 200 bags of Purdue Improved Crop Storage (PICS) were supplied to groups. The bags have standard weight of 100 kg each which eliminates chances of forgeries and provide safe storage of grains and legumes for long periods as a food security measure. During the study tour at nanenane farmers were updated on the storage techniques using PICS bags and linked to the supplier (MAYAWA).

Link farmers with financial institution; the Council has linked the 26 groups with financial institutions and 3 groups (Jitihada, Jikwamue and Boresha) have joined Kyaka SACCOs as a way of accessing credit facilities. The CRDB bank facilitates SACCOs to service their members with soft loans and credit.

Active participation increased; due to remarkable achievements in production and earnings participation of members and groups has increased to 26. Women members' participation as well has increased by 14%. This has strengthened collective production, processing and marketing of agro-products. Other results include;

- (i) Groups' participation in learning activities has increased by 31%.
- (ii) 16 groups have completed formation of basic marketing organizational structure including preparation of constitutions and registration.
- (iii) The Council and the groups use the capacity building approach to create market linkages to include beans.
- (iv) Groups participating in collective marketing have increased from 14 to 20.
- (v) 15 groups have prepared productions and sales targets.
- (vi) 23 groups have prepared group profile for creating marketing linkages and attracting agro-dealers and financial institutions.
- (vii) 5 groups have been linked with agro-dealer (MAYAWA) and have obtained PICS bags.
- (viii) 9 groups are engaged in accumulating savings to be deposited at the SACOSs. These groups are Juhudi, Jitihada (Kenya), Tegemeo, Upendo, Vijana sasa kazi, Boresha, Jitihada (Mwemage), Jikwamue.

7.0 STRATEGIES FOR SUSTAINABILITY

The Council is committed to ensure that the results of the initiative are sustainable by adhering and reinforcing the predetermined key result areas, continued facilitation of farmers, continued budgetary

allocation for facilitation of groups, training, study tours, participation in various exhibitions. In addition, strengthen collaboration with stakeholders, project service provider, financial institutions, the central government and continued search for markets.

8.0 SECRET OF SUCCESS

Factors which contributed to the success of this initiative include; stakeholder's meetings which assisted farmers to know other facilities and opportunities such as financial institutions and markets and study tour programmes which changed mindsets towards programme development, improved performance and participatory techniques. Introduction of market collection centers have linked the groups with reliable markets and buyers thus motivating farmers to participate more in collective production and marketing.

UKEREWE DISTRICT COUNCIL



CASSAVA PRODUCTION AND VALUE ADDITION



Experience of Ukerewe DC

1.0 INTRODUCTION

Ukerewe District Council is one of the 8 Councils of Mwanza Region, located between latitude 1°45 and 2°15 South and Longitude and 32° 45 and 33°45 East. The Council borders Magu DC to the South, Musoma DC in Mara Region to the North and Sengerema DC to the East. Ukerewe DC is the largest island in Lake Victoria situated 54 km away from Mwanza City, being an agglomeration of 38 Islands out of which 15 of the islands are permanently inhabited and the rest are temporarily inhabited mainly for fishing and fishing related activities. The Council has a total area of 6,400km² whereas 5,760km² is covered by Lake Victoria water. Administratively, the Council has 4 Divisions, 25 Wards and 76 Villages.

According to 2002 Census, Ukerewe DC had a population of 260,831 people; out of which 128 842 were male and 131,989 female. The population growth rate was estimated to be 2.9% higher than the national average of 2.6%. During the 2012 Census the population had increased to 345,147 and the current population density is more than 500 people per km². The increase in population contributed into a rapid land fragmentation; a serious problem on land management and production; favoring land degradation, poverty and encouraging encroachments on protected reserved lands.

Topographically, the Council is undulating consisting of small hills, valleys, lowlands and numerous small seasonal rivers (seasonal because of deforestation but once were permanent). The Council has too remarkable ecological zones; the Eastern Zone – which is receiving moderate rainfall and characterized by clay black cotton soil, its mountains are dominated by *Cumbretum spp* and the lowland dominated by *Acacia spp*. The Western zone which receives heavy and reliable rains than the Eastern Zone; its mountains are dominated by *Maesopsis Emenii*, *Albizia sp*, *Melicia excelsa (mvule)*, and *Markhamia sp (Mtalawanda)*. Ukerewe is a mountainous land, once had thick closed equatorial forests, however, due to high population and economical activities the Council currently has five forests, one owned by Central Government and the rest by Local Government. Three forests are found on a mountainous land in the western zone of the Council.

The main economic activities are agriculture, fishing, trade/business, and lumbering (From Rubya forest and several individual tree plots). 92% of the population depend on agriculture to sustain life; main crops are cassava, potatoes and rice; these are both food and cash crops. The Council is rich in varieties of fruits but citrus fruits are dominant. Once the Council used to supply food crops to nearby councils such as Bunda, Magu, Musoma and Mwanza city; but the trend has changed to the point that the Council is now supplied with food from outside this is because of increased population and poor environmental management in Ukerewe which has contributed to low production to the extent that currently only fruits, fish and sawn timber are sold beyond the Council.

The climate supports the growth of cassava which is the staple food as well as cash crop for Ukerewe. On average 14,000ha are under Cassava cultivation every year whereas production ranges from 2.4 to 2.9 tons per hectare. In 2005, the Council experienced occurrence of Cassava Brown Streak virus Diseases (CBSD). The local cassava varieties were mostly vulnerable to the disease. This episode compelled the Council in collaboration with Agriculture research Institute – Ukiriguru and other development partners to introduce improved cassava varieties resistant to CBSD and Cassava Mosaic Virus diseases (CMD). The introduction of new varieties focused on increasing clean planting materials to boost cassava production through research trials, multiplication and distribution of the verified varieties resistant to the diseases. A total of 425 varieties were placed in the trials. Only three varieties being Mkombozi, Nigeria and *Kashura mpya* attested resistant. However, the two varieties of *Kashura mpya* and Nigeria failed after three years and so only *mkombozi* remained feasible.

2.0 PROBLEM

Traditionally cassava production per unit area was very high (2.9 tons per Acre) before 1970 where most of the farmers used to practice rotational cultivation. This farming system promoted and maintained soil fertility. During 1990 farmers started to experience low productivity. The situation became worse in the year 2005 due to multiple causes mainly the soil fertility degradation and occurrence of cassava diseases which affected production per unit area. In some areas, farmers experienced a loss of up to 85% of the expected production. Thus there was food insecurity and farmers could not sustain their families for food all year long. In addition to the low production cassava was processed locally with poor technology and hygiene.

3.0 OBJECTIVE

The main goal of Ukerewe DC was to facilitate the cassava value chain development by addressing the major production; processing and marketing bottlenecks to improve livelihoods of farmers through income generation and increased food security at household level. Specifically the Council aimed at: promoting improved cassava crop production through improved agronomical practices and introduction of resistant cassava varieties, build the capacity of selected farmer groups in post-harvest handling, add value to cassava crop by processing and packaging and establish market centers and market information system.

4.0 IMPLEMENTATION STRATEGIES

Ukerewe DC and Development Partners implemented a range of interventions to improve and safeguard cassava production. Strategies adopted by the council and the community are described below.

Research strategy; in 2009-2010, Ukerewe DC and Lake Zone Agricultural Research Institute at Ukiriguru conducted research in Ukerewe on different varieties of cassava. About 425 different varieties were identified and tested but only 3 varieties; Mkombozi, Kashura Mpya and Nigeria were proved to be resistant to CBSD. However, in the course of production only Mkombozi proved to be resistant, whereas Kashura mpya and Nigeria failed.

Formation of groups; in order to facilitate cassava production, the Council encouraged farmers to organize themselves in groups for easy support and operations. This awareness was made through conducting meetings. The community agreed and several groups were created and assisted by the council to establish cassava field in varying sizes; Jipe moyo – Gallu (5ha), Inuka – Bugorola (4ha), Songambebe – Bukiko (1ha), Umoja MUVI – Kameya (5ha), Bure Garden – Mukunu (5ha) and Mpango na kazi – Hamuyebe (4ha).

Registration of groups; in order to have groups which are officially recognized, the Council encouraged groups to get registered. Registration enabled groups to conduct their activities officially and interact with other authorities. Bure Garden Group was initially registered at the Council with a registration No: B.G.G/CBO/UK2 of 13/10/2005 and later on registered at BRELA with a registration No: 270408 of 29/08/2013.

Provision of early training to group members; in collaboration with the Lake Zone Agricultural Research Institute the Council organized training on improved cassava seeds multiplication. Theory and practical training was provided to group members and other interested villagers in improved cassava production. Some of the group members underwent a special training on identification of (affected) diseased cassava plant in order to avoid or prevent the spread of the disease.

Multiplication of Mkombozi variety; Mkombozi was the only variety which proved tolerance of CBSD. Due to the need of free disease cassava cuttings, the Council created awareness, distributed the cuttings

to groups and propagated this variety in some villages with the purpose of getting well organized groups dealing with agricultural activities so that they are supported with Mkombozi variety.

Promotion of Cassava processing; the Council and Development Partners supported various groups to purchase cassava processing machines, tools and equipment for value addition of cassava. The groups were provided with processing facilities/ necessary tools, materials and machines to enable business oriented cassava production in their respective groups, cassava processing facilities were installed. The photos below show some of the processing machines provided by the Council.



Cassava Grater

Squeezing Machines

5.0 RESOURCES

The Council in collaboration with Lake Zone Agricultural Research Institute at Ukiriguru and farmers utilized various resources to realize intended outcomes of the initiative as explained below.

Financial resources; Development partners and members of various groups have been contributing to finance the cassava production. Table 1 below shows the financial resources committed by different stakeholders to support this initiative.

Table 1 Financial Resources

S/N	Activity description	Year	Source of Fund	Amount (TZS)
1.	Purchasing of five Acre (Farm) for Cassava production and cassava grater	2010	Bure Garden Group	13,000,000
2.	Purchase of Power tiller	2012	Bure Garden Group	1,600,000
3.	Construction of a Shallow Well	2008	American Embassy (DSM)	4,994,000
4.	Plastic tanks @2000L	2008	American Embassy (DSM)	800,000
5.	Purchase of Cassava processing Machine(cassava grater)	2011	MUVI SIDO-Mwanza	3,500,000
6.	Purchase of Power Tiller	2012	Ukerewe District Council-DASIP	6,400,000
7.	Land clearing		Famers	48,000
8.	Land cultivation		Famers	150,000
9.	Planting, weeding, harvesting		Farmers	190,000
10.	Transportation and cassava processing		Farmers	130,000
Total Cost of production and processing				30,812,000

Human resource; group members were involved in various activities in cassava production and value addition such as cassava production, construction of offices and fixing cassava processing machines.

6.0 RESULTS

Through training farmers have gained knowledge and skills on improved cassava production and value addition. The production of cassava has increased per unit area as shown in table 2 below.

Table 2. Bure Garden Group Cassava Production and Profit 2011-2013

S/N	Year	Area(Ha)	Production (tones)	Production cost (TZS)	Sales(TZS)	Profit(TZS)
1.	2010/2011	12.0	23.8	6,216,000	11,020,000	4,804,000
2.	2011/2012	32.4	64.5	16,783,200	37,089,000	20,305,800
3.	2012/2013	75.2	218	38,953,600	91,593,600	52,640,000

Construction of office; Bure Garden group have managed to construct offices, toilets, and cassava processing buildings. The group used the money collected from cassava flour sales to cover costs for building materials. The office was highly needed because initially members used to meet and conducting their meetings under the mango tree shade, they had no proper place to keep their documents and records. The photo below show the mango tree and the new office.



Mango tree (initial meeting area) and new office



Bure garden group new office

Improved methods of processing cassava have been adopted by the producers; through proper way of cassava processing, the value of cassava has been improved. Previously, farmers used to dry cassava on the stones; it was easy to be contaminated with fungus and bacteria. Currently, they are using special drainage facilities which are clean and free from contamination. The quality of cassava flour has been improved to attract more customers.

Adoption of new cassava production technologies by famers is another result; most of farmers have adopted improved cassava variety which is resistant to CBSD. Furthermore, capacity of farmers to identify diseased cassava plant has been increased; they are now taking corrective measures to prevent the spread of the disease in the farm whenever they detect disease.

Cassava Multiplication Farms established; another area which shows great success to the Council is the establishment of eight cassava seeds multiplication farms. Cassava multiplication farms serves both as demonstration farms and production sites of quality cassava cuttings (seeds). Farmers are able to learn how to produce best cassava and also get the quality variety of cassava. The photo below shows one of cassava multiplication farm.



Cassava multiplication farm

Increased market value for cassava products; in addition to improvement of cassava production, post-harvest handling and processing the Council has linked farmers with the market to ensure that all cassava products are sold instantly. The processed cassava flour has high demand, and the product fetches good price at the market. The Council supported farmers to establish modern cassava processing facilities to ensure quality of cassava flour which ultimately attract buyers. The photo below shows a well-established cassava processing facility of Bure Garden Group.



Cassava processing facility (machine house, store and change room)

Four contracts between Bure Garden Group and buyers have been established; following the improved methods of cassava production, farmers from Bure Garden group have been granted with reliable market. They have entered into contract to supply bags of cassava flour with four potential buyers on monthly basis. Table 3 below shows the buyers and the amount of cassava demanded.

Table 3 Cassava Flour supply on monthly basis

S/n	Place	Bags In 5kgs
1	Ghana Island	200-300
2	Nansio Township Center	100
3	Ukara Island	25-30
4	Muriti Trading Center.	15-20

Quality of cassava flour and packaging has been improved; the packages also have the brand name of the producing group which is necessary in marketing of the product. Furthermore, because of improved processing and packaging, producers have been granted with a certificate by Tanzania Food and Drug Authority (TFDA) that certifies the quality of cassava flour produced. The photos below show the packages by the Bure Garden group and the Certificates granted by the TFDA.



Packed Cassava flour



TFDA certificates for quality control

Multiple cassava products are produced; the group produces other valuable products out of cassava flour; for example cassava sweets and cakes which are sold for income generating. The photos below show some of the products produced from cassava.



Cassava flour and sweets

Group members' income has been improved, this is due to the sales of cassava flour and other products made from processed cassava flour as a result, members have been able to cover costs for other basic needs; for instance one of the members has started construction of good quality living house, one has bought a plot for house construction, moreover some of them have started cereal crops business.

Nutrition status in terms of quality and quantity at household levels has been improved as a result of consuming cassava products. This is because cassava is among foods which are rich in starch, low in fats and more protein than other root foods like yams and potatoes. Cassava leaves are a good source of dietary proteins and vitamin-K. Vitamin-K has a potential role in blood clotting and bone strengthening by stimulating cells activity in the bones. Cassava carries some of the valuable B-complex group of vitamins and has adequate amounts of potassium (271 mg per 100g or 6% of RDA) which is important component of cell and body fluids that help regulate heart rate and blood pressure.

Accumulation of experiences in cassava production has brought diversification in production of other crops. Bure Garden Group has established sunflower production and processing as another economic activity for the purpose of income diversification. They have bought sunflower processing machine worth TZS 2,600,000 and installed sunflower processing facilities. Another success story is creation of employment opportunities in cassava farms and in processing of cassava and sunflower. Bure Garden Group has created an employment to three people. These are responsible for the day to day tree nurseries management, group office work and a watchman to take care of the group properties especially during the night. The photos below show one of the small factory for processing sunflower.



Sunflower processing plant

7.0 SUSTAINABILITY STRATEGIES

To ensure sustainability of the initiative, the council and farmers have developed a number of strategies. These includes continued technical support from the Council in producing cassava varieties which suit Ukerewe area, continued supervision and provision of advisory services regarding smooth and profitable group project investments. The advisory service given by the Council acts as a catalyst, thus builds the capacity of the group members to carry out their activities with enough confidence.

Diversification on utilization of cassava flour to make different products has become common to a good number of people in different localities on the Islands of Ukerewe DC. This has motivated more farmers to produce cassava. Availability of market for cassava products has been ensured because of the increase in demand of cassava flour to make different products/delicious snacks which compete with other products in the market.

Commitment of the Bure Garden Group members as well as the sense of ownership enables the group members to continue with day to day activities in a successful way. Dedicated group leaders, also contribute to the better performance. Diversification of group economic activities resulted in starting three viable economic activities; cassava production and processing, sunflower production and processing, and tree nurseries has enabled the group members to earn more money to cover for their basic needs hence they are willing to sustain the results.



A poster portraying diversified economic activities of Bure Garden Group

8.0 SECRET OF SUCCESS

The success of this initiative is a result of cooperation among key stakeholders which include Ukerewe DC which offered technical and material support, financial institutions; Muunganisho Ujasiliamali Vijijini (MUVI), Cassava Adding Value for Africa (CAVA), Lake zone Agriculture Research Development, TFDA, Tanzania bureau of Standards (TBS); these institutions supported material and technical support to ensure quality production of cassava. Participatory decision making is also a key to successes; all matters related to the group affairs are decided together by the group members. Every member of the group has the right to present any issue for the betterment of day to day activities.

Close collaboration between Ukerewe DC and the producing groups is another secret for success. There is very good two-way communication system between the groups and the Council whenever assistance is required. Presence of several small islands with high demand for quality cassava flour stimulated production of cassava, product demand is high in the main island as well as other island such as Ghana Island and Ukara Island. Commitment of the community is another indicator of success; group members are all responsible regarding division of labor and duties assigned to, which are decided democratically by members. Ability of the group to sensitize and mobilize the community to unite, organize the available resources and work together as a team was another secret of success.

Community ownership of the project; the spirit of project cycle management among the members contributed to sustainable group performance, creativity among group members in diversification of activities which complement each other has made success of this initiative. For example, Bure Garden Group has a number of projects apart from Cassava production and processing such as Tree nurseries (started with), Sunflower production and processing and soap making as shown below.



Tree nurseries, sunflower processing and soap making

ITILIMA DISTRICT COUNCIL



PROMOTION OF CONSERVATION AGRICULTURE FOR FOOD SECURITY



Experience of Itilima DC

1.0 INTRODUCTION

Itilima District Council is one among 6 Councils of Simiyu Region. The Council borders Kwimba and Magu DCs to the West, Bariadi DC to the North, Meatu DC to the East, and Maswa DC to the South. Administratively, the Council is divided into 4 divisions namely, Kanadi, Bumera, Kinang'weli and Itilima, 22 Wards, 102 Villages and 599 Vitongoji. According to 2012 Census, the Council has a population of 313,900 of which 165,735 are female and 148,165 are male. The Council covers 2,647.7km² of which 1,938.70km² are arable land, 640.000km² Maswa Game Reserves and 69.00km² are rivers, water bodies and hills.

The climate is generally of a tropical type; the annual rainfall ranges from 700mm to 950mm. The short rain period is between October and December with a dry spell in January and February. Long rains fall in between March to mid-May. The type of soil and climate allow farmers to grow food crops like sorghum, maize, paddy, sweet potatoes, cassava, beans, green grams and cowpeas. Cash crops are cotton, sunflower and yellow grams. Economic activities in the Council depend on agriculture which contributes about 80-95% of the Council's GDP. Other economic sectors include forest activities, trading activities and small scale industries which are estimated to contribute 5 – 20% of the Council's GDP.

2.0 PROBLEM

Kabale Village is one of the Villages which form in Zagayu Ward. The Village economy depends on agriculture. Most of the peasants engage in subsistence agricultural activities which depend mainly on rainfall. Before 2010 villagers experienced problem of low crop production per acre; for example production was 5 to 8 bags of maize per acre compared to optimal production of 25 – 30 bags per acre. Major issues that contributed to low production were poor farming technology/methods applied, low and generally declining soil fertility, soil and water loss through erosion.

Conventional farming practices such as burning or removing crop residue and intensive tillage often make these problems worse. Kabala village had a tendency of using fire as a method of field preparation. Though the method is cheap, it contributed to deforestation and leaving the land bare hence accelerating soil erosion and infertility. The use of fires also resulted into destruction of vegetation for example trees which could be used to protect the environment and attract rainfall. Other factors which contributed to low production included climate change which caused erratic and unreliable rainfall.

The village experienced inconsistency of rainfall seasons and decrease in amount of rainfall per year; formerly the range of rainfall per year was about 700mm-800mm but in recent years (2005-2015) rainfall has declined to less than 700mm per annum. Farmers used to graze their cattle in the farms. It is a common practice of farmers in Tanzania to graze or remove all crop residues from their fields after harvesting. This is a bad practice as it leaves the soil bare and susceptible to water and wind erosion. The top fertile soil is eroded over time, leaving unfertile and degraded soil for crop production. This, coupled with low use of organic or inorganic fertilizers resulted in declining yields. Other factors which contributed to low production included the use of unimproved agriculture tools such as hand hoes and unimproved seeds. Eventually, families experienced less food and incomes for purchasing services and improving their shelter.

3.0 OBJECTIVE

Conservation Agriculture is an application of modern agricultural technologies to improve production while concurrently protecting and enhancing the land resources on which production depends. Application of Conservation Agriculture promotes the concept of optimizing yields and profits while

ensuring provision of local and global environmental benefits and services. Zero tillage, along with other soil conservation practices is the cornerstone of Conservation Agriculture. Itilima DC implemented this initiative to promote food security for improved rural livelihood of small scale farmers through the scaling up of Conservation Agriculture as a sustainable land management. Specifically, the initiative intended to; assist farmers to adopt a new farming technology which would increase their crop production per unit area, empower communities to engage in agricultural activities that conserve their environment, use technologies that reduce the cost of production and increase crop outputs per unit area by five folds.

4. IMPLEMENTATION STRATEGIES

Conservation agriculture emerged as an alternative to conventional agriculture as a result of losses in soil productivity due to soil degradation. Techniques involved include zero tillage, mulching, mixed cropping, crop rotation, and Integrated Pest Management (IPM) using botanicals rather than chemical pesticides. This is cost effective in terms of labour and time requiring minimum inputs, unlike other types of agricultural production activities that are labour intensive and demand more inputs. In many parts of the world, Conservation Agricultural practices have been widely adopted by farmers, the most extensive adoption is found in the Southern corner of Latin America.

In Tanzania Conservation Agriculture was introduced in some districts including Itilima DC to improve agricultural productivity. In Itilima DC, the initiative was introduced in 2010. This method involves tilling the land where the seeds are planted leaving the rest of the land reserved for regeneration. In implementing this initiative the Council in collaboration with stakeholders implemented the following strategies.

Awareness creation on Conservation Agriculture; in collaboration with Tanzania Gatsby Trust (TGT) the Council provided support to farmers to attend training for increasing awareness on Conservation Agriculture. In 2012 the Council organized farmers into groups of about 60 members and provided sponsorship to attend training in Moshi. In this training, farmers were facilitated to adopt Conservation Agriculture which involves increase in productivity (high yields in a small piece of land). Upon return, the best trainees were selected and confirmed to be the best facilitators to disseminate the skills, knowledge and experience to the household level.

Sensitization meetings; the lead farmer (Mr. Emanuel Mahangila) conducted sensitization meetings to inform other farmers on conservation farming. He explain to his fellow villagers the benefits of adopting Conservation Agriculture. In this aspect the advantages of Conservation Agriculture were explained. Details were given on how the farmer will use small piece of land but harvest more crops, no tillage of the whole field but just to deal with the area for planting the seeds, even if the rainfall will not be there for more than two weeks plants will still survive due to mulching effects. All these efforts were supported by Tanzania Gatsby Trust and the Council Officers. The photo below shows demonstration of Conservation Agriculture.



Demonstration plot

Training on Conservation Agriculture; field training sessions were arranged after villagers had organized themselves into groups. Tanzania Gatsby Trust (TGT) and Itilima DC facilitated the training. Farmers were trained on preparation of land through practical demonstration using tractor rippers, Magohe rippers (oxen driven) and hand hoes. The training covered different crop spacing in which rippers are set depending on the type of seeds to be sown. Photos below show the training on progress.



Training on how to use Magohe and Modern Rippers

Establishment of demonstration plots; in order to make the training effective; in collaboration with the Council, Tanzania Gatsby Trust encouraged Villages to establish demonstration plots. Initiative to establish demonstration plots was implemented in all 102 Villages (one plot in each village), but the leading plots were those of Kabale, Zanzui, Chinamili, Lagangabilili, Nkoma, Ngeme and Mwalushu Villages. Demonstration plots were meant for villagers to learn Conservation Agriculture practically and apply the skills in their own farms. The photos below show farmers participating in establishment of demonstration plots.



Farmer Setting a Ripper

Practical Learning

5. 0 RESOURCES

In order to ensure this initiative is successfully, the Council in collaboration with Tanzania Gatsby Trust organized several resources. The most important resources used to furnish the project were grouped into Human, physical, and financial resources. Description of resources and utilization is presented as follows;

- (i) Human resources; these include people who devoted their efforts to ensure this initiative is accomplished. Itilima DC through its Agriculture Department Team worked together with team of officers from Tanzania Gats by Trust during the whole period of implementation. The tasks of the team were to assist in technical issues including land preparation, pesticides application, as well as machinery operation.
- (ii) Physical resources included transport facilities such as vehicle for monitoring and supervision of activities. The vehicle for monitoring was provided by the Tanzania Gats by Trust. The Council provided motorcycles to field officers so as to ensure everything planed is done on time.
- (iii) Financial Resources; these include funds used for fuel, allowances, and hiring of training facilities. These funds were supported by Tanzania Gatsby Trust, the Council and community. Tanzania Gatsby Trust contributed initial amount of TZS 22,000,000, Itilima DC TZS 2,500,000 for experts and the community contributed about TZS 1,500,000/= which make a total of TZS 26,000,000. These resources were used to mobilize training equipment, training materials, allowances for extension officers and buying agriculture inputs.

6.0 RESULTS

Conservation Agriculture is generally a "win-win" situation for farmers and the environment. It leads to attaining higher yields with less land, labor, water and fewer chemical inputs. Conservation Agriculture aims to conserve, improve and make more efficient use of natural resources through integrated management of available soil, water and biological resources combined with external inputs. It contributes to environmental conservation as well as to enhance and sustain agricultural production. Because of benefits it gives, Conservation Agriculture is practiced throughout the world; its benefits have become widely recognized by farmers, researchers, and extension officers. In Itilima DC, the implementation of Conservation Agriculture has created results narrated below.

A group 60 members from Kabale Village was formed to propagate Conservation Agriculture; the group is active and facilitates community members from the household level on Conservation Agriculture. Through this facilitation farmers have adopted and are practicing Conservation Agriculture. Adoption of Conservation Agriculture has increased production per acre from 5-8 bags to 25-30 bags. Most of

households have been able to store enough food until another harvest season eliminating famine. Photos below show the increase in production of crops.



Increased farm produce and Food security at homes

Workload and time spent in farms has been reduced significantly allowing farmers to engage in other activities as Conservation Agriculture involves zero tillage; land tillage is made only on areas where seeds are sown and the rest of the land is conserved (about 50 percent of the land is conserved). Labor is reduced as lesser land is cleared before planting leading to less weeding and pest control. Conservation Agriculture has brought about significant transformation from traditional farming methods to adopting modern farming technology. The photo below shows improved agricultural methods.



Modern farming

There is increase in lead farmers (facilitators) within the community which has simplified knowledge transfer to other farmers. These facilitators include those who attended training in Moshi and who showed exemplary performance after adopting Conservation Agriculture. Through them, 65% of farmers have being taught on to identify quality soils for crop production, application of improved technologies, utilizing crop residuals, farm preparation, herbicides, fertilizer and pesticide. This has developed the knowledge and skills of farmers for increased production.

Increased farmers' incomes; due to increase in production of crops, the incomes of farmers have increased. Farmers have excess produce for sell resulting into ability to construct improved houses with corrugated iron sheets instead of grass thatched ones. Parents have acquired the ability to pay school fees their children and make contributions for Community Health Fund (CHF).

There is improvement in the quality of land as many areas are under conservation. Conservation Agriculture improves soil structure and protects the soil against erosion and nutrient losses by maintaining a permanent soil cover and minimizing soil disruption. Another result is spillover effect to nearby villages; villages surrounding Kabale Village have been impressed by the initiative and adopted Conservation Agriculture. Kabale Village lead farmers facilitate implementation of Conservation Agriculture in other villages.

7.0 SUSTAINABILITY STRATEGIES

Kabale Villagers are aware of the risks if effective sustainability strategies are not designed and implemented. Some of the risks include degradation and infertility of the land, soil erosion resulting into low crop production. In order to sustain the achievements of this initiative, the Council in collaboration with Kabala Village and other stakeholders has the followings strategies:

- (i) The Council involves political leaders, Ward and Village Leaders to emphasize on Conservation Agriculture practices in their areas. The local leaders have great influence to local people than facilitators from outside. Through them, the Council intends to scale out Conservation Agriculture to farmers in other villages in the Council.
- (ii) The Council continues to provide further training to agricultural extension officers on Conservation Agriculture..
- (iii) The Council has a plan to increase demonstration plots in Villages for farmers to continue learning and adopting Conservation Agriculture.
- (iv) The Council has a plan to provide one tractor to each Ward to support the implementation of Conservation Agriculture.

8.0 SECRET OF SUCCESS

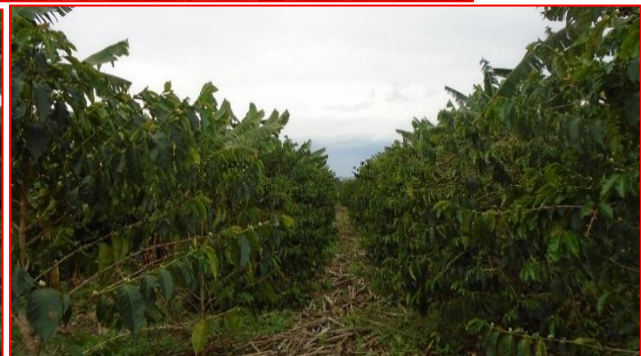
The success of this initiative was contributed by the factors listed below.

- (i) Willingness of the farmers to change from conventional agriculture to Conservation Agriculture.
- (ii) Use demonstration plots to prove wrong conventional Agriculture.
- (iii) Willingness of the farmers to devote time and resources during training and after training.
- (iv) Commitment of Tanzania Gatsby Trust and the Council on Conservation Agriculture.
- (v) Strong support from leaders at different levels like Mr. Njalu Silanga (Member of parliament- Itilima) has great influence on conservation Agriculture after witnessing the success of it from Kabale Village. He has supplied 48 bicycles to lead farmers of Kanadi, Itilima and Kinang'weli Division to facilitate outreach to other farmers in the Council.
- (vi) Effective facilitation from TGT and Council staff accelerated transfer of knowledge and skills to farmers theoretically and practically.

TARIME DISTRICT COUNCIL



PROMOTION OF CLONED COFFEE PRODUCTION FOR INCOME SECURITY



Experience of Tarime District Council

1.0 INTRODUCTION

Tarime District Council is located in the North-West of Tanzania. The Council lies between Latitudes 1° 00' - 1°45' South and Longitudes 33°30' – 35° 00' East. The Council is bordered by Kenya to the North, Serengeti DC to the East, Rorya DC to the West and Musoma DC to the South. The Council has a total area of 1,489.08km². Administratively, the Council has 4 Divisions, 26 Wards and 88 Villages.

Major economic activities in Tarime DC are agriculture and petty businesses. Agriculture is the most economic sector employing 85% of population. The Council has a total of 50,600 households practicing mixed farming using implements such as plough, tractor and hand hoe. The Council has two agro – ecological zones. The highland agro ecological zone that is situated at an altitude between 1500m and 1800m with average annual rainfalls between 1200mm and 1600mm. The midland zone is situated at an altitude of 1300m – 1500m with an average annual rainfall between 900mm and 1250 mm. Major crops grown in the highlands include maize, finger millet, sorghum, banana, sweet potatoes, irish-potatoes, cassava, beans, onions, tomato, coffee, tea and tobacco while midland zone is suitable for cultivation of maize, millet, finger millet, sorghum and sweet potatoes.

Tarime DC experiences bimodal rainfall regimes one being in August to December and another in February to May. The area has fertile arable land that contributes to high agricultural productivity. Total arable land is 90,630ha out of which 69,155ha (76.3%) is under cultivation. Mostly crop production depends on rain fed agriculture although 210ha are under traditional irrigation schemes for horticultural crop production. The Council produces enough food for domestic consumption and surplus for sale; a total of 279,006.6 tons of food crops and 5,505.4 tons of cash crops are annually produced.

Extension services are conducted at all levels of Village, Ward and Council targeting at building the capacity of farmers on proper crop husbandry. The service is provided in collaboration with stakeholders through private public partnership. The Council collaborates with 12 private institutions in provision of extension services to farmers.

2.0 PROBLEM

Tarime DC decided to engage in improving production of cloned coffee in collaboration with TACRI and Tarime farmers due to a number of problems that encountered coffee and other crops production during the 1990 – 2008. Some of the challenges included; low production of coffee per unit area and escalation of diseases and pests leading to bewildering low incomes for farmers. There was inadequate response from other coffee stakeholders with regards to coffee development strategies as well as limited extension services at all levels. This situation discouraged farmers to engage in coffee production.

3.0 OBJECTIVE

The main objective of this initiative was to improve farmers livelihood through increased production and productivity of coffee. Specifically, the Council intended to introduce new coffee varieties (clonal coffee) which have high yields and are resistance to coffee berry and leaf rust diseases, to build capacity of farmers adopt innovations, eliminate diseases and pests that reduced the efficacy of coffee productivity, revive farmers interest in coffee production, raise incomes of farmers, create food security and improve livelihood. In addition the Council intended to strengthen public private partnership and collaboration with the government for facilitating coffee production.

4.0 IMPLEMENTATION STRATEGIES

The initiative started in 2001 when Tanzania Coffee Research Institute (TaCRI) based in Moshi established a substation in Sirari. TaCRI came up with innovation of cloning coffee for improving production and productivity through provision of coffee seedlings that are resistant to pests and diseases. The average production in 2001 was 2300 tons per year while hectares under cultivation were estimated to be 2900. In order to attain the above objectives, the Council in collaboration with TaCRI implemented the following activities;

Introduction of clonal coffee variety; based on the fact that coffee growing farmers were discouraged with low production of old coffee trees and undetermined price fluctuations, TaCRI in collaboration with the Council decided to intervene by introducing clonal coffee. A Clonal coffee is a variety which is resistant to leaf rust and coffee berry diseases compared to the old existing variety. The Council and TaCRI provided seedlings to farmers and encouraged farmers to uproot the old varieties and replace with improved ones. Photos below show the actions of uprooting and replacing old coffee with the new improved varieties.



Farmers removing old coffee trees ready to plant clonal coffee trees

Conducting study tour at TaCRI in Moshi; the tour involved selected farmers from coffee producing villages to learn how to prepare farms, spacing between coffee plants, how to prepare coffee seedlings, application of pest sides, harvesting, processing and storage of coffee. Petro Bururyo who later became very successful and promoter of clonal coffee production was among the first team that visited TaCRI in Moshi. Upon his return he started to produce coffee and encouraged other farmers to uproot old coffee and replace with improved varieties.

Capacity building to farmers; the Council organized training in Tagota, Kenyamanyori and Manguch Villages to train farmers about clonal coffee production. Village based training was designed and covered modules on clonal coffee multiplication, rehabilitation of old coffee trees, formation of farmer groups and associations and establishment of clonal coffee nurseries. Up to 2015/2016, 3,024 members from 19 groups and individual farmers were trained on coffee production and field management. The photos below show farmers attending training in the field.



Training on coffee seedlings cloning

Preparation and distribution of Clonal coffee seedlings; the Council in Collaboration with TaCRI established coffee nurseries for producing clonal coffee seedlings and distributed to villages as shown in table 1 below.

Table: 1 Clonal Coffee Seedlings Distribution

YEAR	AMOUNT DISTRIBUTED	AREA IN Ha.
2007/2008	3826	2.8
2008/2009	10000	7.40
2009/2010	11610	8.6
2011/2012	24480	18.13
2012/2013	26217	19.42
2013/2014	36712	27.19
2014/2015	182,468	135.16
2015/2016	32,416	24
TOTAL	327,729	242.76

Establishment of vegetative propagation unit; vegetative propagation units (VPU) were established at village level in which one VPU has the capacity of producing 20,000 seedlings per year. Up to 2015/2016 a total of 15 VPUs were established and 3024 farmers were trained. All VPUs were decentralized to

village level for the aim of ensuring accessibility of clonal seedlings, technology dissemination and increasing sense of ownership.

Collaboration with various coffee stakeholders; collaboration between private and public institutions created efficiency and resulted into rapid dissemination and adoption of clonal coffee trees. The Council entered into Memorandum of Understanding (MoU) with the agricultural input committee and coffee buyers which required them to buy and distribute seedlings produced by farmers for the aim of reducing seedling scarcity and increasing productivity. A total of TZS 146,241,441 has been outsourced through DADPs projects under Agriculture Extension Block Grant component (AEBG). In 2007/2008, the Council provided 14.5 acres for the aim of establishing coffee mother garden to be operated in collaboration with TaCRI. The objective was to produce and distribute 10,000 new variety seedlings to farmers per year and establish a demonstration farm. The photo below shows the demonstration farm established by TaCRI in collaboration with the Council.



A farmer filed school at Council HQ

Formation of farmers groups; in order to build collaboration among farmers, the Council facilitated farmers to form coffee producing groups to facilitate access to extension services and decision making. The Council facilitated formation of 4 farmer groups in 2008 and increased to 25 groups by 2016.

Construction of Coffee Processing Units (CPUs); a CPU is a small coffee processing plant that deals with removing outer part of coffee berries, washing coffee and drying coffee beans soon after harvesting. In 2014 the Council under support of DADPs constructed 2 CPUs. The CPUs were constructed by the Council and handled over to farmer groups to ensure quality coffee cherry processing.

5.0 RESOURCES

Implementation of this initiative utilized various resources. Human resources; Extension officers were distributed to villages to provide extension services while TaCRI experts concentrated on cloned coffee production skills development. Financial resources committed by different stakeholders are shown in table 2 below.

Table 2: Financial Resources

S/N	YEAR	ACTIVITY	COST	SOURCE OF FUND.	OUTPUT.
1	2009/2010	To support TaCRI to establish coffee mother garden in three villages Tagota, Kenyamanyori and Mangucha.	4,000,000/=	DADPs	45 members trained and and 45 fields of clonal coffee established and maintained in those villages.

2.	2011/2012	To support TaCRI to establish clonal coffee mother garden at HQ.	25,000,000/=	DADPs.	One VPU, established, and distribution of seedlings is continued in which about 240 000 seedlings have been distributed to farmers.
3	2012/2013 Up to 2013/2014	To support TaCRI to establish 2 mother gardens for seed multiplication in Bumera and Itiryo.	53,597,441/=	DADPs.	About 360,000 seedling distributed to members of group and other farmers. Income generation to the group whereby one seedling produced is sold for 500 shillings.
		To facilitate pruning of old coffee in 10 wards.	20,804,000/=	DADPs.	Increase of productivity 3kg per tree to 4kg.
		To support 2 AMCOS with two coffees processing machines. In Bungurere and Nyantira villages.	24,240,000/=	DADPs	Project in progress.
4.	2014/2015	To support extension of clonal coffee mother garden at HQ.	15,600,000/=	DADPs.	One demo plot of intercropping coffee with banana established. Water tank and irrigation facilities installed.
TOTAL			146,241,441/=		

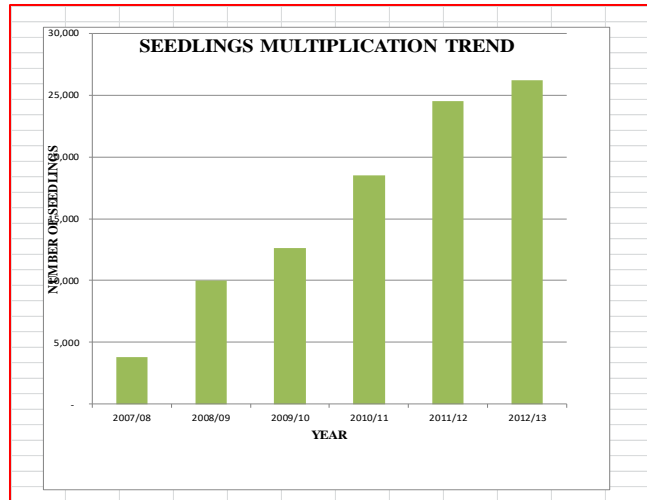
6.0 RESULTS

The initiative to introduce clonal coffee production has created several positive results as shown below. Increase of production per unit area and income of farmers. Table 3 below shows the increase in production and incomes of farmers.

Table 3: Production and Farmers' Incomes

YEAR	AMT in Tones	PRICE/KG	INCOME TO FARMERS
2009/2010	2,000	800/= – 850/=	1,650,000,000/=
2010/2011	1,905	1,500/= – 1,600/=	2,952,750,000/=
2011/2012	1,753	1,800/= – 2,100/=	3,497,562,900/=
2012/2013	1,466.2	1200/= – 1300/=	1,832,750,000/=
2013/2014	1,354.4	700/= – 1000/=	1,151,240,000/=
2014/2015	1,914.23	1,000/= – 1,800/=	2,679,488,000/=
2015/2016	2,195.21	1541/= – 1600/=	3,447,577,300/=

Production of seedlings has increased significantly indicating increase in demand for cloned coffee trees. Figure 1 below show the increase in demand of seedling from 2008 through 2012.



Farmers have acquired all necessary skills for producing cloned coffee, including cloning itself. Also mother gardens of clonal coffee have increased. The prices of cloned seedlings has also increased due to increased demand making more incomes to farmers. The photos below show the clonal coffee garden established and cloning of coffee tree shoots on progress.



Cloning of coffee tree shoots in progress



Mother garden of clonal coffee

The Council has secured a new source for local revenue and has experienced an increase in crop cess. Currently crop cess has increased from TZS 58,175,000 (2007/2008) to TZS 150 million (2015/2016). Some of funds from crop cess are used in improving extension services and monitoring of agriculture activities. For example, in 2012/2013 TZS 40 million was allocated for buying one hardtop Toyota land cruiser (Reg. No. DFP 5301) from Vi- Agroforest. In 2015/2016 TZS 16 millions of crop cess was used to implement various agriculture activities.

Farmer's satisfaction and wellbeing has improved as exemplified by one family which practice cloned coffee farming. The Successes story of Mr and Mrs Petro Mwita Bururyo; Petro Mwita Bururyo (44) with his wife Joyce 33, of Nyarero village, lived uncertain life depending totally on petty businesses and gambling before they discovered coffee growing. In Joyce's words, *"we had tough times before turning into coffee growing in 2009. My husband earned his living from gambling with its associated risks. Confiscation of household items to pay for gambling losses was common and rampant. This created serious conflicts in our marriage, what I can say is, introduction of clonal coffee variety became the rescue of our life and marriage"* Moreover, around the village, families have moved from thatched

houses to modern houses as a result of coffee production. The photos below show the thatched house and the improved one.



Petro Bururyo's family Old and New houses

Participation in National exhibitions; 4 lead farmers were appointed as best coffee growers in the Region and were each awarded TZS 1,000,000 between 2012 and 2015. The 4 farmers are used as additional staff (para extension staff) in training, strengthening farmer groups, production and distribution of clonal coffee seedlings within and out of the Council such as Ukerewe and Geita DCs. Lead farmers have been participating in Nane Nane agricultural exhibition winning several awards each year. Peter Bururyo was recognized as the best producer of the coffee in the Council.



Farmers participating Nane Nane agricultural exhibitions



Peter Bururyo Award

The Council has realised several success stories; up to 2015/2016 a total of 214,884 coffee plants have been distributed to farmers which covers an area of 159.2ha. The Council has implemented several projects using revenue from coffee; TZS16million was used to improve extension services, construction of warehouse and establish crop collection center in Pemba and Matongo Wards. In addition, the Council is implementing construction of International border market at Remagwe Village 11km from the border.

Effective collaboration between public and private sector including Mogabiri farm extension services, TaCRI, TSHTDA, Acacia, TAFIRI, SENAPA AMCOS, Syngeta, Via-agroforestry, Agro-dealers which has promoted good agricultural practices, production trends and seek of markets within farmers' capacity.

As a result of increased incomes, private processors have emerged such as medium processing industry at Muriba coffee Pulper (6000kg/Ha), Isaac and sons' sunflower processing industry, Komasa milk collection center (1500LTS) and Nyabirongo sunflower processing machine.

7.0 STRATEGIES FOR SUSTAINABILITY

In order to ensure sustainability of achievements, the Council in collaboration with TaCRI and coffee stakeholders have made strategies for sustaining coffee production. Among the strategies adopted include the following;

- (i) Advertising and increasing number of buyers for the aim of increasing competition hence price rising. The council continue to advertise, search and engage more coffee buyers (Mara Coffee, CMS, Cooperative and encourage them to consider buying Tarime Coffee.
- (ii) The Council continues to support farmers with CPU which are installed in the village level from 1 to 3 for the aim of increasing coffee quality.
- (iii) Mobilization of farmers through group formation to enhance rapid dissemination of clonal seedling technology.
- (iv) Strengthening cooperatives for capacity of market control.
- (v) Continued close monitoring by extension officers and farmer promoters.
- (vi) Continued support of farmers to participate in different Agricultural exhibitions.
- (vii) The Council continue to conduct research on coffee production in partnership with Badilika foundation for production of more resistant varieties.

8.0 SECRET OF SUCCESS

The success of this initiative was contributed by many factors. Hardworking and commitment of Council staff and community, decentralization of seedling production, Public Private Partnership between Farmers, TaCRI and Tarime DC and outsourcing coffee production activities to TaCRI.

RORYA DISTRICT COUNCIL



IRRIGATED PADDY FOR IMPROVED INCOME AND FOOD SECURITY



Experience of Irienyi Irrigation Scheme

1.0 INTRODUCTION

Rorya District Council is one of the 9 Councils of Mara Region. The Council was established in 2007 as a split from great Tarime DC. The Council lies between Latitudes 10⁰.00 and 10⁰.45 South and Longitudes 33⁰.30 and 35⁰.00 East. The Council borders the Republic of Kenya to the North, Tarime DC to the East, Butiama and Musoma DCs to the South, and Lake Victoria to the West. The total area is 9,345.496km² out of which 7,252km² is covered by Lake Victoria. The Council has 4 Divisions, 26 Wards, 87 villages and 509 Vitongoji with estimated population of 295,197 people and annual growth rate of 2.8%.

The Council has two agro – ecological zones namely the midlands and lowlands. The zones are situated between approximately altitude 800m and 1200m with temperature varying from 14⁰C – 30⁰C. The rainfall ranges between 700mm and 1200mm per annum. Main economic activities include agriculture, livestock and fishing. Other sectors contributing to the economy are petty trade, transport and communications.

Irienyi village is one of the villages in Irienyi Ward, Komuge Division. People at Irienyi Village are peasants whose livelihood depend on crop production, livestock keeping and small scale fishing. Paddy production is one the major crops produced by Irienyi people under irrigation scheme. The Irienyi lowland has a potential irrigation area of about 350ha. Currently, the area under irrigation is about 126ha used for paddy cultivation. Irienyi Irrigation Scheme was initiated by the villagers in 1996 through O&OD as their development project. The scheme is located about 72km from Council headquarters at Ingri juu.

2.0 PROBLEM

More than 89% of people living in the Council depend on agriculture for their living. The Council has 291,375ha which are arable land, where by 130,481ha are under cultivation. Area suitable for irrigation is 17,350ha however; irrigation takes place only in 1,039ha. Average land per household is 3.7ha, and average arable land per household is 2.0ha. Major food crops grown across the Council include cassava, millet, maize, paddy and beans. Although there is enough arable land for cultivation and suitable for irrigation, food production in most cases is not enough for domestic consumption and sale. The average crop production per household (cereals) is 1.0 ton. This is because most of the peasants rely on unreliable rainfalls, poor methods of cultivation leading to poor production. In addition, the average rainfall of 700mm – 1200mm per annum is not sufficient for sound crop production throughout the season hence communities are faced with poor food sufficiency and poor household incomes.

Before 1999, Irienyi community experienced food shortages and poor incomes. Every year the Council had to support households with food staffs. The situation resulted into extreme poverty reflected in incapacity to pay for school fees, medical services, better housing and other utilities. The communities used Irienyi lowland to produce cereals but yields were very low (5-8 bags per acre). Although some few peasants practiced paddy cultivation, their farms were not surveyed to allow use of improved methods of farming and irrigation technology. Farmers depended on seasonal rains which were subject to whether conditions. Farmers also used unimproved seeds and received inadequate agricultural extension services which ultimately contributed to poor productions. Market to sale farm produces was also a problem, Paddy growers were not organized for guaranteed markets and prices as a result each farmer had to seek market and decide individual. In most cases the seasonal sales of paddy depended heavily on prices set by middlemen (petty business men) from Musoma Town. The package of paddy for sales was determined by the middlemen; in most cases it was beyond standard measurement (RUMBESA) subjecting famers to losses. Another challenge was poor infrastructure which frustrated transportation of farm produce to the market.

3.0 OBJECTIVES

The main objective of the Council was to improve the incomes and household food security of Irienyi Village community. Specifically, the Council intended to; improve paddy production and productivity by construction of irrigation infrastructure, provision sufficient extension services, organize farmers into groups to safeguard production and marketing and assist farmers in value chain addition of rice by improving processing and grading facilities.

4.0 IMPLEMENTATION STRATEGIES

According to the Government Strategy Framework for implementing Policy on Irrigation sector, irrigation has been identified as a key activity in agricultural production due to its contribution in counteracting effects of unpredictable weather conditions and erratic rainfall. The implementation of Irienyi Irrigation Project is in line with the Government Policies and strategies on National Household Food Sufficiency, Poverty Reduction Strategy, Rural Development Strategy and National Irrigation Policy (2010). The Irienyi irrigation scheme was initiated by villagers through O&OD in 1996 as development project which will improve the standards of living among them. To achieve this, the following strategies were used:

Land identification; to identify land suitable for paddy cultivation the villagers in collaboration with technical staff from the Council convened a meeting. In this meeting land suitable for irrigation was identified. The land owners were also identified and negotiations with them about how to utilize it were made. Through this meeting, land for water reservoir and land for paddy cultivation was allocated. Another activity was survey of Land. In 2000 the Council staff in collaboration with villagers and Zone Irrigation office conducted land survey. This activity involved, bush clearing, mapping and drawing of plots. The community participated in bush clearing, while the Council and Zone Irrigation office provided facilities and technical support in mapping and drawing of plots (farm layout) in order to establish modern farms in the scheme. The survey also involved drawings of major irrigation canals and distribution canals to the paddy field.

Construction of water reservoir, traditional irrigation canals and distribution of plots; in 1999 the Council received fund from DIFD as a support for construction of water reservoir. Community participation in the construction activity was in form of labor. Farmers participated in the construction of reservoir by clearing bush, collecting stones and sand for construction. On the other hand, distribution of plots to farmers was made. 850 acres were identified as potential area for irrigation, however, distribution of plots began with 48 acres which were allocated to farmers (1 acre each) giving priority to those who had lost their land through water reservoir construction and land reallocation. Similarly, the construction of traditional irrigation canals for irrigation was initiated by farmers. All farmers who were allocated plots collaborated to make earth canals which could allow water supply to all plots.

Training of farmers and exchange visits; in 2011/12, the Council supported few farmers to attend training about improved paddy production in Ukiriguru Research Institute and Kilimanjaro Training Centre Moshi. In return they shared the knowledge and skills with their fellow farmers on how to improve agriculture practices. Farmers were facilitated with skills on how to prepare paddy field, use improved seeds, spacing timely weeding, fertilizer application and timely harvesting. In 2015, JICA supported fund for training to farmers on scheme operation and maintenance as well as records keeping.

Formation of farmers' organization; in order to enhance collaboration of famers, the Council assisted them to organize into a group of famers. The purpose of organization was to join effort and strengthen their capacity to access market and determine the price for their produce. After facilitation by the council staff, farmers organized into a group and elected the leadership. They also formed a number of committees to deal with various operational and administration issues of the scheme including agriculture, environment, planning and finance, marketing and construction committees. The Council supported farmers to establish constitution and registration of the organization in the name of UWAIRO (Umoja wa Wakulima wa Mpunga Irienyi Rorya).

Construction (excavation) of modern irrigation canals; in 2011 irrigation canals were improved. Farmers constructed irrigation canals of 1200m after receiving financial support from the Council through District Agriculture Sector Investment Project (DASIP). In 2013 the farmers again were supported by the Zonal Irrigation office to make lining of canals using funds from DDF and in 2014 the Council allocated own source funds to support farmers in lining the irrigation canals. Apart from external assistance, farmers' contribution was 20% in kind through material mobilization (sand and Stones) and monitoring the contractors that were involved in excavating canals of about 2,000m. The total length of lined canals is about 4,728m which has increased irrigated area from 48acres to 160acres. The photos below show construction on progress.



Farmers participating in construction of Canals

Further mobilization of resources and Scheme management; in 2015 the Council prepared a project write-up and submitted to the Ministry of Agriculture. The ministry assisted to solicit fund from development partners; later the scheme received more fund from JICA to support expansion of the scheme in terms of canal excavation, lining and maintenance. Management of the scheme is a role of five committees: agriculture, environment, planning and finance, marketing and construction committees. In order to ensure proper management, the scheme is divided into five blocks (A-E), each block covering 30acres. This arrangement was made by water committee in order to facilitate effective distribution of water in which each block is allocated water twice a week. Other committees deal with specific issues according to their tasks while meetings are conducted when needs arises.

Construction of warehouse and installation of processing plant for value addition; construction of warehouse and installation of processing plant was meant to increase value of farm produce so as to capture market and better prices. This makes farmers to sale branded rice rather than paddy. To achieve construction, the Council using DADIPs funds assisted the Irienyi Village to construct a warehouse for

storage of harvested paddy and other crops. Using the same fund from DADIPs the Council also procured a rice processing plant for milling, grading and packaging branded rice. On the other hand, UWAIRO (farmers' organization) designed and constructed a building for installing the rice processing plant. To make the construction work easier members of UWAIRO agreed each to contributed TZS 27,000 for a building. The photos below show the constructed warehouse and building for processing plant



A warehouse

Rice processing Machine building

5.0 RESOURCES

The project involved various types of resources; Human resources, physical resources and financial resources. Human resources; several professional staff from the Council, Zonal Irrigation office and Ukiriguru Research Institute including surveyors, agriculture irrigation engineers, extension officers, contractors and villagers provided support to ensure the irrigation scheme functions. Financial resources; a total of TZS 596,544,829.00 was utilized for implementation. Major activities and resources used are shown in Table 1 below.

Table 1. Resources allocation in Irienyi Irrigation Scheme

S/N	Activity	Year	Resources utilize (TZS)	Source of Fund
1.	Construction of water reservoir	2000	92M	DIDF
2.	Excavation and construction of canals (phase one)	2011	28M	DASIP
3.	Excavation and construction of canals (phase two)	2013	41M	DIDF
4.	Excavation and construction of canals (phase three)	2013	200M	DIDF
5.	Excavation and construction of canals (phase four)	2014	20M	Council own source
6.	Excavation and construction of canals (phase five)	2014/2015	422M	JICA
7.	Mobilization of material (clearing of bush, collection of sand and Stone)	2000/2015	20% of project total cost	Famers

6.0 RESULTS

The construction of Irienyi irrigation scheme has changed the livelihood of farmers and increased their incomes as a result of increase in production of paddy from 5-8 to 25-35 bags. Other results observed after the implementation of this initiative include the following:

Presence of a strong registered farmers' organization UWAIRO with 160 members, well established committees and constitution. The organization helps to secure market and decide on the price of rice which benefits farmers. The UWAIRO also owns properties such as one tractor, 3 power tillers and hulling machine which are used by farmers through hiring. The money paid is used for beefing up the UWAIRO's financial capacity. The UWAIRO has a bank account in which every member contributes monthly subscriptions. The contribution by members is used to cover costs for management and maintenance of irrigation scheme. The committee members are well trained to offer quality management of the scheme. The photos below show some of the members of UWAIRO.



UWAIRO Treasurer and Chairperson



Motivated trained farmer leader

Presence of modern irrigation infrastructure and increased irrigated area; the initiative led to construction of modern irrigation infrastructure; water reservoir, irrigation canals and distribution points. A water reservoir with a capacity of 888,300m³ and about 4800m of irrigation canals have been constructed and lined delivering water easily from the outlet chambers to the paddy plots without loss of water during irrigation, similarly the irrigated area has increased from 0 to 315 acres. Farmers who formally depended on rain water for paddy cultivation now have assurance of accessing water from water reservoir and constantly irrigate their farms. The photos below show water reservoir, outlet and the distribution canal.



Water reservoir with outlets to the paddy fields



A lined trapezoidal canal and distribution points

Production of paddy has increased from 5-8 to 25-35 bags per acre as a result of improved farming practices such as use of improved seeds, proper spacing, timely weeding and harvesting, use of fertilizers, adequate extension services and farmer's training. This increase in production is reflected in improvement of living standards of farmers. Farmers have assurance of food security and surplus for selling. The photos below show irrigated paddy field and increases in production



Irrigated paddy

Improvement in average income of farmers has increased from TZS 640,000 to TZS 4,800,000 per year. Before the scheme (up to 2010), the price for one bag was TZS 80,000. For one acre farmers harvested once a year with maximum of 8 bags worth TZS 640,000. After all construction phases of the scheme, farmers harvest twice (30 bags x 2) a year. This makes average of 60 bags per acre per year worth TZS 4,800,000. About 40 farmers have managed to own oxen sets which facilitate farm works. Farmers have improved their living standards; this is reflected in household food sufficiency, construction of better houses, affordability to pay costs for primary and secondary school education, purchase of transport facilities (motorcycles in particular), improved capacity to contribute into various development projects (desks making, building of classrooms, laboratories, dispensaries, offices and staff houses). The photos below show indication of improved life standards of farmers.



Ongoing construction of improved house and old house



Improved houses, transport facility

The Irienyi Irrigation scheme has generated employment opportunities in the village and neighboring areas. Farmers employ men during field preparation (tilling and leveling) while women are employed during planting, weeding and harvesting. This factor has contributed to retaining manpower in the village rather than moving to urban places for job searching. Moreover, the scheme has generated commercial activities because of increase of movement of people who come to buy rice. The village has several shops providing retail services in beverages, food stuffs, building materials etc. There is also a weekly open market which allows sales, purchases of various commodities and recreation. The increase of commercial activities also contributes in urbanization of Irienyi areas. The Council benefits as sources

of revenue have been widened up from produce cess to charging commercial activities such as service levies and business licenses. The photos below show some of the commercial areas in the village.



A shopping Centre

7.0 SUSTAINABILITY STRATEGIES

The Irrigation scheme benefits need to be sustained. Farmers and the Council have developed strategies to sustain the initiative as follows;

Formation of strong farmers' organization (UWAIRO); this organization is well established with constitution and strong committees assigned different responsibilities in managing the scheme. The constitution stipulates the norms to be adhered to by every member. Similarly, the committee members are well trained to perform regular maintenance of scheme infrastructure.

The UWAIRO have set a form of contribution by members, in which every seasonal each member contribute one bag of paddy per acre to meet operational and management costs and completion of a building for installation of processing plant. The organization continues to mobilize resources for expansion of irrigation infrastructure to cover the 850 acres.

8.0 SECRET OF SUCCESS

Successful completion of Irienyi irrigation scheme was contributed by a strong collaboration and commitment between farmers, Council staff, Councilors, Zonal irrigation office, Central Government and JICA. Farmers received extension services on improved agriculture practices in paddy production. Community readiness was another secret of success; farmers started to construct a traditional irrigation scheme before external assistance. Presence of strong and well established farmers' organization (UWAIRO) to manage the scheme and joint monitoring and supervision by UWAIRO and the Council contributed significantly to the success of this initiative.

BUNDA DISTRICT COUNCIL



CAGE FISH CULTIVATION AND RESTORATION OF BREEDING SITES



Experience of Bunda DC

1.0 INTRODUCTION

Bunda District Council is located at the southern part of Mara Region, 65km from the regional headquarters (Musoma Town). The Council lies adjacent to the South East shores of Lake Victoria from which it is separated by wide plains which stretch slowly into the lower and flatter lands of Serengeti National Park on the Eastern side. The Council shares borders with Serengeti DC to the East, Butiama DC to the North, Busega DC in Simiyu Region to the South, while Ukerewe DC in Mwanza Region forms the border to the West. The Council lies between Latitudes 01⁰30 and 2⁰45 South and between Longitudes 33⁰39 and 34⁰05 East. The Council has a total area of 3,088 km² out of which 200km² is Lake Victoria and 2,888 km² is land area. Serengeti National Park covers 112km², Grumeti Game Reserve covers 380km² and the remaining 2,396km² is land suitable for agriculture, livestock keeping and settlement. According to 2012 Census, the Council has total population of 335,061 with annual population growth rate of 2.9%. The Council is divided into 4 Divisions, namely Chamriho, Kenkombyo, Nansimo and Serengeti, 33 Wards and 106 Villages.

The main economic activities in the Council are agriculture, livestock keeping and fishing. Fishing is the third major economic activity and about 15,610 people are employed in the fishing industry. Fishing activities are practiced in Lake Victoria. The main fish species are the *Latesniloticus spp* (Sangara), Tilapia species (Sato), *Rastrieneobola argentus* (Dagaa) and other indigenous species of Lake Victoria e.g. *Synodontis spp* (Gogogo). Fish industry generates revenue to both central and local government. Fish provides a good source of protein to majority of people in the Council as compared to animals' protein with affordable prices.

Cage cultivation is a low impact farming practice with high returns and least carbon emission. Farming fish in cages removes one of the biggest constraints of fish farming on land since cage farms are positioned to utilize natural currents in the lake, which provide the fish with oxygen and other appropriate natural conditions while removing waste easily. In view of the high production attainable in cage culture system, it can play a significant role in increasing the overall fish production and restoration of wild fish at the fish breeding sites with low investment which requires very little/no land area. This farming method is ideal for small scale fisher folks as an alternative income source. This can be taken up as a household/women activity because labor involved is minimal and can be managed by a small family.

2.0 PROBLEM

Before the year 2000 catch production from Lake Victoria dropped notably due to increased fishing pressure and illegal fishing practices. Whether for home consumption or for commercial purposes, illegal fish, mostly the under-slots and immature fish were excessively being siphoned out of Lake Victoria. The experts say capturing of immature fish is among the leading causes of declining fish stocks within the lake. A 2012 study by SmartFish titled 'Assessment of Illegal Unreported and Unregulated Activities in Lake Victoria' marked an increase in the number of illegal gears being deployed to target undersize fish. The number of vessels increased by 37 per cent between 2000 and 2008 while the use of fishing motor boats increased by approximately by 50 per cent (Flavia Lanyero 2012)'.

In addition, access to the fish resources in the lake is open to everybody. Local fisheries administration (Beach management Units-BMUs) lacked the capability and capacity to manage fisheries on a sustainable basis hence monitoring, control and surveillance was virtually non-existent or extremely ineffective. The decline of fish stock and fish availability triggered the demand of fish within the entire community and mind-sets change of fishermen from fishing to fish farming. There was as well severe depletion of fish stock in Lake Victoria caused by overfishing and illegal fishing practices using unlawfully

gears. The data recorded in three consecutive National Frame Survey which is conducted after every two years, showed an increase of illegal gears leading to drastic fish depletion as shown in Table 1 below.

Table 1: Trend of use of Illegal Gears in Fisheries

S/n	GEAR TYPE	Recommended Gear Use	2012	2014	2016
01	Beach Seine	Illegal	212	253	120
02	Monofilament	Illegal	310	232	104
03	Under mesh Gillnets	Illegal	405	336	258
04	Gillnets'6' and >	Legal	312	317	295
05	Boat seines	Illegal	0	0	78
06	Hooks of size 8 to 11	Legal	256	219	190
07	Hooks above 11 size	Illegal	127	113	104
08	Dagaa nets of 8mm	Legal	305	235	182
09	Dagaa nets < 8mm	Illegal	0	0	0
	TOTAL GEARS		1927	1705	1331
	% of Illegal gears Operates		55	55	50

Fish decrease caused the fishermen to undertake fishing activities in sensitive parts of the lake, particularly at the fish breeding sites that exploited fish resource and totally changed the lake Bio-diversity. Despite of fish depletion in the lake there was high population growth which created higher needs for protein. Supply of protein from livestock is cumbersome due to scarcity of land and other limiting animal rearing factors, hence more dependency on fish. The high demand for fish caused fishermen to use illegal gears for fishing that increased illegal fishing, fishing pressure and destruction of the breeding sites; all leading to decrease in fish catches not only in Bunda DC but also within the entire Lake. The decrease of fish catches in Bunda DC in six years period is shown in table 2 below.

Table 2: Decrease in Fish Catches

S/N	TYPE OF FISH	2010 / 2011	2011 / 2012	2012 / 2013	2013/2014	2014/2015	2015/2016
1.	Nile perch	1,779,850 kg	845,606 kg	459,750 kg	451,478kg	537,851kg	556,436kg
2.	Tilapia	1,035,098 kg	254,301 kg	166,627 kg	164,011kg	125,991kg	131,303kg
3.	Sardine	2,082,377 kg	623,368 kg	298,091 kg	280,534kg	312,730kg	124,422kg
4.	Others*	140,760 kg	136,562 kg	147,940 kg	135,025kg	226,066kg	186,485kg
	TOTAL	5,038,085 kg	1,859,837 kg	1,072,408kg	1,031,048kg	1,202,638kg	998,646kg

*Others: (HaplochromisSpp (Furu), *Clarias*(Mumi),*Synodontis*(Gogogo),*Schilbe*(Nembe), *Protopterus* (Kamongo), *Alestes*(Soga),*Labeo* (Ningu), *Mormyrus* (Domodomo) and *Bagrus* (Hongwe)

The report by Lake Victoria Fisheries Organization (LVFO) in 2010 concerning fish biomass in the Lake indicated Nile Perch decreased from 1.4 million tons (92 per cent of total biomass in Lake Victoria) in 2005 to its lowest recorded estimate of 298, 394 tons in 2008 (14.9 per cent of total biomass).

3.0 OBJECTIVE

With decrease of fish supply in the Region and the District, the only choice to overcome people's demand for protein and to continue generating the income from fishing industry was to go for fish culture techniques. Fish culture (Cages in the lake) would add fish through farming but also increase wild fish in the protected fish breeding sites. In addition, the Government Fisheries Policy of 2015 insists that, Fish culture is an alternative way to increase fish supply to the local communities and markets hence reducing fishing pressure in either lakes or at the fishing areas.

The purpose of the initiative was to build capacity of the Beach Management Units (BMUs), institutions (822KJ) and local communities around Lake Victoria on Cage culture techniques to ensure high fish production (Both in Cages and Breeding sites). The aim being to reduce illegal fishing to its minimum

level in Lake Victoria from 95% in 2015 to 10% in 2020 in Bunda DC. The initiative intended to achieve the following specific objectives;

- (i) To establish and institute Tilapia cage culture techniques to local communities, BMUs and institutions.
- (ii) To establish mechanisms for sustainable financial resources availability for cage operations in Lake Victoria.
- (iii) To capacitate local communities, BMUs and institutions to undertake cage culture operations at various parts of Lake Victoria.
- (iv) To establish an effective relationship between local communities, fisheries department and research institutions.
- (v) To institute effective ways for feeds and pellet production for cultured fish in both cages and ponds.
- (vi) To introduce better storage techniques for both aqua and wild fish products.
- (vii) To initiate and utilize a well operating hatchery for quality fingerling production.

4.0 IMPLEMENTATION STRATEGIES

The concept of cage farming in Bunda DC originated after fish farming study visit in Kenya and Uganda. The study visit was organized by Economic and Social Research Foundation (ESRF) in March 2014 with support of United Nation Development Programme (UNDP). The visit aimed at exploring the opportunity of fish farming in Uganda and Kenya and transfer the knowledge to communities in Bunda and Bukoba DCs. The study team was composed of 2 fishery officers from Bunda and Bukoba DCs, 6 farmers from both Councils and one researcher from ESRF. The delegates recommended that the UNDP support introduction of fish farming especially cage farming to communities and institutions dealing with fishing such as the 822KJ RWAMKOMA military detach (at Bulamba). In August 2014, the UNDP accepted the proposal to support cage culture in Bunda DC for both 822KJ and the communities around.

Stakeholders identification and awareness creation; in June 2014, the Council identified stakeholders that included the local communities mostly fishermen, BMUs and 822KJ. Stakeholders were informed about cages and importance of cages. The 822KJ became the first interested institution to show willingness to implement the initiative in collaboration with the Council. Acknowledging the importance of fish farming in compensating shortage of fish from Lake Victoria, the Council in July 2014, approved cage farming activities to be undertaken by 822KJ, BMUs, companies, farming groups and individuals within the Council. The Council recognized the 822KJ as key implementer and supervisor of cage fishing activities at Bowman gulf.

Introduction of commercial rearing of fish in cages and identification of suitable places for cage farming. The Council mobilized the Karukekere village community and 822KJ military detach to undertake cage fishing activities at Bowman gulf in Lake Victoria. Two fishery staff from Bunda DC, 2 researchers from ESRF and one Aquaculture Expert from the Ministry of Agriculture, Livestock and Fisheries were involved in identification of suitable site for cage fishing activities. The site identified to be suitable for tilapia cage fishing was at Bowman Gulf which covers Karukekere, Bujige Bay (Muranda Village), Isanju, Mugara, Sikiro and Michigondo Villages.

Formation of fish farming groups; in 2015, 2 groups were formed, KIUSAKA with 25 members (17 male and 8 female) and FASAC with 17 members (11 male and 6 female). The groups were facilitated to develop constitutions and registered by the Council. The groups were supported with 5 start-up cages by UNDP and engaged in fish cage activities such as feeding, cleaning and grading of fish in cages.

Formation of Project Management Committee; after identification of the suitable site for implementation of the project under supervision of 822KJ according to Council agreement and approval, the project management committee was formed by considering members from the Council, 822KJ (As main implementers) and communities from identified villages. The committee was composed of seven members namely;

- (i) Bunda District Commissioner (DC)-The chairperson
- (ii) One Member from 822KJ Rwamkoma(Commanding Officer-CO)-The secretary
- (iii) District Executive Director (Bunda DC)-member
- (iv) District Fisheries Officer (Bunda DC)-member
- (v) Representative of Namuhula Ward (Councillor)-member
- (vi) One member from Karukekere Village (Chairperson)-member
- (vii) One farmer dealing with fish pond-member from Karukekere Village

The committee provided advice concerning the implementation of the project and facilitated the relationship between villagers, the Council and military detach (822KJ). A project subcommittee was established comprising of 14 members (10 from 822KJ, 2 from Karukekere Village and 2 from BMUs). The Committee insisted on creating the spirit of ownership and mindset change from illegal fishing practices to fish culture techniques amongst the various stakeholders.

Training of Sub-committee members; training was conducted to subcommittee members for two days by two fishery staff from the Council at Bulamba Detach. The modules included causes of fish stock depletion, fish culture techniques, importance of fish farming, fisheries managements, fisheries co-managements as well as financial and project management. The training enabled cage attendants and subcommittee members to undertake cage fishing activities.

Fish cage construction; the military detach staff (822KJ) conducted training to farmers of Karukekere village on construction of fish cages. The subcommittee members also constructed cages by using black round pipes supported by plastic drums as floats with outer surface of the cages being covered by nets of mesh (size 1.5") in order to prevent fish from escaping into water. 50 cages were made and distributed to the military unit (45) and to farmers groups (5).



Farmers designing and constructing cages at Karukekere beach

Management and operation of fish cages; the subcommittee handles routine cage fishing activities. The first activity is feeding of fish in cages. Chances of fish in cages to access satisfactory natural feed is much less compared to free swimming fish, so additional artificial feed is supplied. The artificial feed supplied is composed of raw materials of about 70% animal protein and 30% from plant surpluses such as maize,

rice brans and oil seed cakes. The second important activity is cleaning of cage nets on monthly bases. Sub-committee members ensure water quality by observing the following (i) reducing the level of organic wastes that enters the lakes; this is done by controlling the number of cattle (cows) getting into the site to avoid high level of manure in the water especially in rainy season (ii) controlling level of die-off aquatic plants since too much die-off aquatic plants can cause depletion of oxygen level in the lake through decomposition and (iii) controlling excessive aquatic plants because submerged aquatic vegetation produce more oxygen than the amount which can be held in water.

Grading of the fish size in cages; to avoid competition for feed amongst fish, similar sizes of fish are transferred to other cages leaving the smaller fish in original cages. Grading is done by lifting the cage nets from the water to allow sorting. The handy nets or perforated plastic buckets are used to select fish size wise.



Fish grading exercise

Study visit to Uganda and Thailand; 12 members of sub-Committee visited Musese beach in Jinja Uganda in 2015 to learn tilapia cages operations. In September 2015 another group of 8 members went to Thailand for the same purpose under support of the UNDP. The study visit enabled project implementers to gain and acquire a combination of knowledge and skills for cage fishing activities. Some of the lessons include the reality that cheap and available materials like bamboo plants can be used for construction of cage frames instead of using coated iron pipes which are expensive while harvesting of fish from cages is very simple as it involves only lifting nets and collecting fish. Cage cultivation also provides opportunity for utilization of the Lake by both men and women.

5.0 RESOURCES

Bunda DC used various types of resources to achieve the objectives of cage fish cultivation initiative. On financial resources; the UNDP support the initiative at its initial stages for three years (from December 2015 to December, 2018). The total cost of the project was TZS 150, 370,500.00 as shown in table 3 below.

Table 3: Project Costs

No	Activity	Amount (TZS)	UNDP	BUNDA DC	822KJ	COMMUNITY
01	Training of Project Management Committee	1,348,000	1,148,000		200,000	
02	Signing of Project Agreement	1,730,000	1,530,000	200,000		
03	Nomination and Training of Technical staff for cage culture Techniques	8,015,000	3,000,000	3,000,000	2,015,000	
04	Construction of Tilapia Cages	49,800,000	40,400,000	400,000	8,000,000	1,000,000
05	Procurement and Distribution of Hand Tools, Mixer and Pelletizer	20,827,000	16,827,000		4,000,000	
06	Study Visit to Uganda	22,675,000	22,675,000			
07	Purchase of Feed and Fingerlings	18,600,000	14,400,000		4,200,000	
08	Establishment of Information Centre	5,520,000	1,200,000		4,320,000	
09	Purchase of Office Equipment	6,600,000	6,600,000			
10	Coordination and Supervision of the Project	7,515,000		1,515,000	5,000,000	1,000,000
11	Monitoring and Evaluation Reports	7,740,000	7,740,000			
	TOTAL	150,370,000	115,520,000	5,115,000	27,735,000	2,000,000

Human resources; fisheries staff from Bunda DC, ESRF researchers and technical personnel from the Ministry created a support network, making frequent contacts with focal persons based at Bowman gulf in Karukekere Village. The site focal persons from 822KJ-RWAMKOMA and 10 security guards from 822KJ-RWAMKOMA work as project sub-committee members together with other six members from the local community groups for providing daily security and management of the project at the site.



Sub-committee members attending fish cages

6.0 RESULTS

The Council has witnessed a number of results that can be shared in all communities that have water bodies in Tanzania. The cage fish rearing technology is in place with 50 cages, well trained Project Management Committee and Sub-committee members and organized farmer groups. This has created effective and healthy collaboration between the Council, UNDP, ESRF, the military detach 822KJ staff and the Karukekere community. This collaboration has resulted into new technology of rearing fish, reduction of illegal fishing, increase of wild fish and balance of eco-system. The 822KJ takes lead in building the capacity of farmer groups to engage into cage fish rearing, construction and management of cages and maintaining security of the Bowman Gulf. Under supervision of 822KJ at the Bowman gulf, a total of 50 cages were constructed and stocked with 100,000 fish; 45 Cages are owned by 822KJ and 5 owned by groups of farmers.



822KJ staff training Karukekere farmers

There are significant gains from the fish cages; the initial fish stocked in 50 cages at an average weight of 30g per fish grows to an average of 450g each in just five months. The project beneficiaries expect to sell fish at a growth of seven months with an average weight of 600g per fish. With 50 Cages, at a stocking density of 100,000 fish at a survival of 20%, it means 80,000 fish (48, 000kgs) are harvested at the end of production. The average price for Tilapia at the beaches (Landing sites) is TZS 6000/kg, meaning a total of TZS 288,000,000 from 50 cages. This gives a net profit of TZS 137,629,500. The profit will increase more from other cycles of production due to reduced investment costs.



Nile Tilapia at age of Five months in Cage net at Bowman Gulf Karukekere

Decrease of illegal fishing at the fish breeding site; due to full security provided by the 822KJ-RWAMKOMA all the time at site, the illegal fishing operations have decreased. Previously, over 98% fishing activities conducted at the site were illegal. These have been reduced to 35%. Fishermen used illegal gears (both nets and chemicals) to target fish especially Tilapia. The average catch of wild fish per boat used to be 5-30 pieces of fish a day. Currently, there is a remarkable increase of fish availability from lake at the site after introduction of cages. The catch for wild fish has increased to an average of 80-120 pieces of fish per boat per fishing. The Fishermen at Karukekere and Muranda Villages who work in the Lake everyday confirmed increase in wild fish availability. According to Mr Kasera Ochieng', a fishermen and BMU Chairperson at Karukekere Village, the increase in catch of wild fish is a result of Fish Cage Cultivation interventions.

Women and youths involvement in cage farming; it was noted that a substantial number of women and youths have started to fully engage in fish culture. More than 26 women from Karukekere Village are engaged in Cage Farming. For fishermen, fish farming in cages is observed to be of great advantage

than spending a lot of energy for fishing and turning up with empty boats. About 76 fishermen have shifted from fishing to join fish farming groups purposely to carryout cage farming.



Women attending fish in the Cages

7.0 SUSTAINABILITY STRATEGIES

The UNDP, Bunda DC, Project Management Committee and stakeholders have continued to collaborate in setting up long term financial strategic plans to support the project. One of the agreements is to establish the revolving fund generated from the project. The funds available after selling fish will be set aside to support and expand the project activities. The commitment of the Council management, Village Chairpersons, Ward Councilor, WEOs and VEOs to incorporate the society provides a road map for sustainability of the initiative. The Council initiated co-management amongst stakeholders which leads to formation of stable Project management committee and Project subcommittee. This cooperation catalyzes and stimulates formation of more of farmers groups. More than 100 fishermen have formed 6 fish farming groups of which four groups are involved in cage farming. The working groups or team works change the fishermen's mindset from fishing to cage farming and this provides assurance for sustainability of the initiative.

Advanced knowledge and skills gained by communities and BMUs from training delivered by experts has transformed the farming groups to self-supervise. It is clear that when the support from UNDP-phase out, the local community will manage cage farming and expand the project up to the targeted 1000 fish cages at the site. Furthermore, the Council plans to allocate budget annually to support communities on capacity building and skills development to maintain the project sustainably. In 2016/2017, TZS 5,000,000 equal to 12.8% of the Council Fisheries Budget (39,000,000) was allocated to support Fish farming.

Establishment of a modern fish hatchery; the 822KJ – RWAMKOMA detach has been supported to establish a modern hatchery which will nurse fish fingerling to feed cages at Bowman gulf and all the groups that will engage in cage based fish farming.



The Hatchery Unit at Bulamba JKT (822KJ-RWAMKOMA)

8.0 SECRET OF THE SUCCESS

There are a number of underlying reasons for Bunda DC success in this initiative. One; the commitment of CMT, Karukekere community, 822KJ detach, Ward Councilors, Village Chairperson, WEOs and VEOs towards implementation of the initiative was of great importance. This commitment resulted into initiatives to sensitize and mobilize stakeholders on importance of cage fishing. Stakeholders became inspired and participated fully in implementation of the initiative.

Two; effectiveness of organized and registered fish farming groups; after realizing the fish depletion and higher level of illegal fishing, fishermen and communities formed working groups which later were registered as community development groups at the Council level. These groups arranged themselves for routine cages management. Each member of the group is assigned a special duty to perform on weekly bases; this has created sense of ownership.

Lastly, the study visits conducted under UNDP support to Uganda, Kenya and Thailand eye-opened those who participated and inspired them to engage into cage fish rearing while the strategic utilization of government institution (the 822KJ) as a key implementer, supervisor, trainer and provider of security services at Bowman gulf stimulated the morale and trust to engage in the initiative.

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