

PARTICIPATORY ECOLOGICAL LAND USE MANAGEMENT (PELUM) Tanzania

OUR SEEDS OUR RIGHTS



PROJECT PROCESS, OUTCOME, IMPACT, LESSONS AND
SUCCESS STORIES



Brot
für die Welt

Bread for the World –
Protestant
Development Service



2017 - 2020



OUR SEEDS OUR RIGHTS

PROJECT PROCESS, OUTCOMES, IMPACT, LESSONS, AND SUCCESS STORIES

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Abbreviations

ACT	Anglican Church of Tanzania
ADP	Actions for Development Program
AICT	African Inland Church Tanzania
ASA	Agricultural Seed Agency
ASDP	Agricultural Sector Development Programme
CSO	Civil Society Organization
DMK	Diocese of Mount Kilimanjaro
ESAFF	Eastern and Southern African Small Scale Farmers' Forum
FMSS	Farmer Managed Seed System
GAP	Good Agricultural Practices
IADO	Isangati Agricultural Development Organization
IRDO	Integrated Rural Development Organization
KIUMBESO	Kikundi cha Uzalishaji Mbegu Songwe
LGA	Local Government Authority
MFEC	Mogabiri Farm Extension Centre
M&E	Monitoring and Evaluation
MRHP	Mwanza Rural Housing Programme
MO	Member Organization
MP	Member of Parliament
MVIWATA	Mtandao wa Vikundi vya Wakulima Tanzania
NAP	National Agricultural Policy
NGO	Non-Governmental Organization
NPGRC	National Plant Genetic Resources Centre
NYDT	Nyakitonto Youth for Development Tanzania
PELUM	Participatory Ecological Land Use Management
QDS	Quality Declared Seed
RECODA	Research Community and Organisational Development Associate
SAIPRO	Sustainable Agriculture Improvement Programme
SMECAO	Same/Mwanga Environmental Conservation Advisory Organization
TABIO	Tanzania Alliance for Biodiversity
TAGRODE	Tanzania Grass Roots Oriented Development
TOAM	Tanzania Organic Agriculture Movement
TOSCI	Tanzania Official Seed Certification Institute
VICOBA	Village Community Bank

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Background Information about PELUM Tanzania

Participatory Ecological Land Use Management (PELUM) Tanzania is a legally registered network of Civil Society Organizations (CSOs) working with smallholder farmers and livestock keepers in promoting sustainable agriculture in Tanzania. Founded in 1995 by five members, the current membership of PELUM Tanzania is 42 legally registered CSOs spread in Tanzania Mainland and the membership is still growing. The network has its headquarters in Morogoro Municipality.

The mission of PELUM Tanzania is to strengthen capacity of Member Organizations (MOs) in ecological agriculture for improved smallholder farmers' livelihood.

Main strategies and approaches used by PELUM Tanzania include: networking; capacity building of MOs; documentation and communication; lobbying and advocacy with and for farmer's rights; and collaboration and networking with like-minded Non-Governmental Organizations (NGOs) and institutions.

PELUM Tanzania is one of the 12 Country Working Groups forming a bigger regional network called PELUM Association which has its headquarters in Lusaka, Zambia with over 250 CSOs working to improve the livelihoods of smallholder farmers and enhance sustainability of the rural communities through fostering of ecological land use management (elum).

1.1 About Our Seeds Our Rights Project

Our Seeds Our Rights project started on 1 September 2017 and ended on 31 August 2020 with financing support from Protestant Agency for Diakonie and Development for Bread for the World (BftW) – Protestant Development Service implemented by PELUM Tanzania in collaboration with 20 MOs. MOs that participated directly in the implementation of this project included: Anglican Church of Tanzania (ACT) Morogoro, Actions for Development



Programmes (ADP) Mbozi, African Inland Church Tanzania (AICT) Shinyanga, CARITAS Mbeya, CARITAS Mahenge, CARITAS Kigoma, Community Habitat Environmental Management (CHEMA), ACT Diocese of Mount Kilimanjaro (DMK), Isangati Agricultural Development Organization (IADO), Integrated Rural Development Organization (IRDO), Mennonite Church of Tanzania (KMT) Musoma, Mogabiri Farm Extension Centre (MFEC), Mwanza Rural Housing Programme (MRHP), Research Community and Organisational Development Associate (RECODA), Sustainable Agriculture Improvement Programme (SAIPRO), Same/Mwanga Environmental Conservation Advisory Office (SMECAO), Tanzania Grass roots Oriented Development (TAGRODE), Rukwa Sustainable Development Organization (RUSUDEO) Nyakitonto Youth for Development Tanzania (NYDT), and Uluguru Mountains Agricultural Development Project (UMADEP).

The project was developed to enable smallholder farmers in the project areas enjoy seed sovereignty by timely access to quality, affordable and diverse seed of adequate quantity and to ensure seed legal frameworks favour Farmer Managed Seed System (FMSS).

Through this project, FMSS and the use of indigenous/local and Quality Declared Seeds (QDS) have been highly promoted. The project main interventions included: training on seed multiplications, policy advocacy (influencing policy), organizing farmers learning visits on FMSS within and outside the country, documentation and distribution of educational materials concerning farmers' seed rights, and conducting local seed campaign for recognition and influencing the community to restore, utilize and conserve indigenous seeds in ensuring accessibility, affordability, and quality of seeds to smallholder farmers in the villages.

1.2 Our Seeds Our Rights Project Summary

1.2.1 Project Objectives

The overall goal of the project is smallholder farmers in Tanzania enjoy seed sovereignty.

Objective 1:	Indicators
Smallholder farmers in the project areas have timely access to quality, affordable and diverse seeds of adequate quantity.	• The use of local and indigenous seed varieties among 400 households has increased by at least 30% until the end of the project. • At least ten newly established FMSS are functional until the end of the project.
Objective 2:	Indicators
Seed legal frameworks favour FMSS	• At least four seed related policy briefs are discussed by policy making bodies by July 2020. • At least four resolutions in favour of FMSS are commonly agreed with policy and decision makers (Members of Parliament, Ward Councillors, Directors) until July 2020. • The reviewed version of the Seed Act (of 2003) recognizes farmers' rights to seeds sovereignty (rights to access, multiply, exchange, save and sell).

1.2.2 Project Budget and Financing Partner

The total project budget was Euros 360,000, of which BftW (financing partner) contribution was Euros 350,000 while PELUM Tanzania own contribution was Euros 10,000.

1.2.3 Duration

The project was implemented for the period of three years from 1 September 2017 to 31 August 2020.

1.2.4 Project coverage

The project covered 13 regions of Tanzania Mainland (Southern Highlands Zone, Lake Zone, Western Zone, and Northern Zone). These regions include: Kagera, Kigoma, Mbeya, Iringa, Morogoro, Songwe, Shinyanga, Manyara, Rukwa, Kilimanjaro, Arusha, Mara and Mwanza.

1.2.5 Beneficiaries

Main project beneficiaries were smallholder farmers supported by MOs in the project areas. PELUM Tanzania MOs in the project areas were the project target.

2

Project Implementation Approach

The project was implemented in collaboration with MOs where their responsibility was to support farmers on FMSS in their localities including seed multiplication. In achieving the desired outcomes of the project, four key approaches were used namely: capacity building, networking and collaboration, lobbying and advocacy, and communication and documentation.

Capacity building involved training of MOs staff on seed multiplication, monitoring and evaluation, as well as identification of local and indigenous seed varieties available in the community.

Networking and collaboration among MOs and other seed stakeholders include organizing zonal and national seed fairs; organizing in country and out of country learning visits to farmers, MOs, PELUM Country Secretariats and Regional Secretariat; and participating into seed rights forums organized by other NGOs and institutions.

Lobbying and advocacy include analysis of national seed related policies, Acts and regulations, organizing national policy dialogues and seed stakeholders' forums with policy makers on farmers' rights/ seed sovereignty, and conducting farmer seed rights awareness campaigns through radio program. During this project implementation, PELUM Tanzania used collaborative advocacy approach whereby it collaborated with government institutions such as Tanzania Agricultural Research Institute (TARI), Tanzania Official Seed Certification Institute (TOSCI), Agricultural Seed Agency (ASA), National Plant Genetic Resources Centre (NPGRC), Ministry of Agriculture and local government authorities.

Communication and documentation involved developing and printing policy briefs, producing banners, and calendars with advocacy messages on seed rights, producing sustainable agriculture (Kilimo Endelevu)

e-newsletters (with best practices, success stories and advocacy messages on FMSS) and carrying out the documentation of the project best practices and successes.

2.1 Project indicators with levels of achievements

Indicators (expected changes)	Level of Achievements
Objective 1: Smallholder farmers in the project areas have timely access to quality, affordable and diverse seeds of adequate quantity	
The use of local and indigenous seed varieties among 400 households has increased by at least 30% until the end of the project	In total, MOs worked with 656 households in the implementation of this project. This is above the projected number (400) by 64%. Based on the project evaluation, the use of local and indigenous seeds by these households increased from 51% during project baseline to 93% by the end of the project. This is 42% increase, which is far above the projected increase of 30%.
At least ten newly established farmers managed seed systems (FMSS) are functional until the end of the project	A total of 21 FMSS have been established and functional during the project period. Out of these, 9 are FMSS operated by individual farmers while 12 FMSS are farmer groups. This achievement is as twice as much of the expected indicator target, which is 10 FMSS. These FMSS are functional as they are engaged in seed multiplication, saving, selling and sharing seeds with the surrounding farming communities.

Objective 2: Seed legal frameworks favour FMSS

At least four seed related policy briefs are discussed by policy making bodies by July 2020	Four documents entailing seed related policy recommendations were developed by PELUM Tanzania, shared and discussed with various policy making bodies. They include: Policy brief on the role of FMSS in ensuring food security; Policy Brief on Securing Farmers' Seed Rights in Tanzania; Resolutions from national stakeholders' seed dialogue titled "farmers rights/seed sovereignty"; and Policy recommendations to the review of the National Agricultural Policy of 2013. The recommendations were submitted to the Director of Policy and Planning at the Ministry of Agriculture for consideration in policy making processes.
At least four resolutions in favour of FMSS are commonly agreed with policy and decision makers (Members of Parliament, Ward Councillors, Directors) until July 2020	Two resolutions were made. Firstly, the government widened the selling scope for QDS from ward level to district level. Secondly, Seed Industry was included as one of stand-alone Key Policy areas in the proposed draft review of The National Agricultural Policy of 2013
The reviewed version of the Seed Act (following review of the Seed Act 2003) recognizes farmers' rights to seeds sovereignty (rights to access, multiply, exchange, save and sell).	The Seed Act amendment (bill) has not recognized farmers' right to seed sovereignty. Therefore, this indicator was not achieved by the end of the project.

The Outcomes and Impacts of the Project

3.1 Project Outcomes

- a) **Increased productivity resulting from change of behaviour, attitude and practices that value FMSS** as well as adoption of improved production practices, including application of quality seeds and other Good Agronomic Practices (GAP). Few cited cases:

- John Steria, a farmer working with ADP Mbozi in Nzoka village testified that in 2019/2020 farming season, his family harvested 20 bags each with 120 Kgs of maize per acre compared to past seasons where harvests was up to 5 bags each with 120 Kgs.
- Eric Kapingu, a member of Kikundi cha Uzalishaji Mbegu Songwe (KIUMBESO) in Songwe recorded harvests of 25 bags each with 120 Kgs of maize per acre.
- One farmer supported by NYDT from Kasulu District said: "...we are now harvesting 700 to 800 Kgs of beans per acre compared to past harvests of 300 Kgs per acre".

- b) **Up-scaled number of community members in the MOs' constituencies that purchase and apply seeds under FMSS.** Community members who were not direct beneficiaries of the Our Seeds Our Rights project benefited through buying seeds from farmers engaged in seed multiplication and beneficiaries of the project. In reference to the Our Seeds Our Rights Project End Term Evaluation, the number of farmers who bought seeds from seed producing groups and individuals between 2018 and 2019 was about 1,350 farmers.
- c) **Increased number of farmers who access seeds through FMSS.** This was done through either buying, exchange or given for free. In total, 4,115 farmers accessed seeds from FMSS operated in the project area.

- d) **Increased household income for individual farmers and/or groups that observed/adopted GAPs and other advices in seed multiplication.** Sales of the seeds and the incomes have been spent in purchasing or obtaining other basic needs like food, clothes, medical requirements, household assets and other needs. Majority of QDS farmers have appreciated increase in income between TZS 500,000/= to TZS 1,000,000/=per year. Hereunder are few cited cases:

Mr. Didas Sichona of Nzoka village, Momba district testified that, engagement in QDS production has changed the family average income from TZS 900,000/= to TZS 1,800,000/= per annum. The family sells maize seeds at TZS 1,500/= (wholesale) and TZS 3,000/= (retail prices) per kg. The farmer is supported by ADP Mbozi.

Stephen Maanda's family of Singu village, Babati District has been actively engaged in bean seed production in its one-acre field. Production ranges from 6 to 9 bags while selling prices stands at TZS 2,500/= per kg most of the times. The income generated has been invested in livelihood improvement options. The farmer is supported by ACT - DMK.

Grace Stephano's family of Sigino village, Babati District has been benefiting from bean seed production. She started with 1 acre and expanded to 2 acres. The yields range from 6 to 10 bags per acre. The selling price is TZS 220,000/= per bag. The farmer is supported by ACT - DMK.

- e) **Recognition and appreciation on farmers' movements in the application, restoration and preservation of local and indigenous seeds.** Raised anxiety and demands of seeds under FMSS that outweighs the production volumes is directly linked to the value and benefits FMSS has to smallholder farmers and other stakeholders. Few cited cases:

- In addition to individual farmers who bought seeds (maize and beans) from the FMSS, development organizations/institutions

had also bought seeds from individual farmers engaged in seed multiplication. The organizations that bought seeds from farmers included the Baptist Church, Tanzania Organic Agriculture Movement (TOAM), IRDO and Iwowo Primary School.

- Didas Sichona (farmer) said that, communities around Nzoka village have been making early orders of bean seeds even before he harvests the seeds. He testified that by May 2020, he had received orders for selling 300 Kgs seeds before harvest and by July 2020 he had already sold 200 Kgs of seeds at TZS 2,500/= per kg.
- Deodatus Killiani managed to sell all 960Kgs of bean seeds within Kambi ya Simba village, Karatu District and this did not meet the actual seed demand in the village. This has tempted him and his fellow members of Amani group to increase size of land (area) under seed multiplication in the coming farming seasons.
- Ms. Adelaida Joachim, bean seed multiplier at Sigino village, Babati district has been recognized and respected by Village/District leaders and she has been invited in various forums to showcase different types of seeds. In appreciation of her engagement, the district council once bought about 360 Kgs of bean seeds from her at TZS 3,000/= per Kg. In 2017, she was given best seed multiplier award in farmers' exhibition (Nanenane). She is currently a District seed ambassador representing her fellow farmers and Upendo group to various seed related forums at district, region and in some cases, national levels.

- f) **Notable “political will” in support of FMSS that include local seeds, traditional foods and indigenous agricultural practices.** Efforts made by PELUM Tanzania at both national and MOs at district levels to push FMSS agenda have attracted attention of both political leaders, professionals, legislators at various levels and decision makers (policy and decision-making instruments) to support the FMSS. Policy consultations and seed fairs have been some of fruitful conduits to drive the FMSS agenda.



Seed fair events: Hon. Dr Marry Nagu (MP); Dr. Sophia (ASA Director) and other parliamentarians delivering speeches, visiting local seed pavilions and taking shares of traditional food respectively

g) Readiness and active participation of legal institutions in supporting and promoting FMSS

MOs working with seed multipliers have built strong bonds with seed dealing institutions like TOSCI, TARI and Local Government Authorities (LGAs) in areas of capacity building, technical backstopping and certification processes, farmer group formation and strengthening. NPGRC has been much engaged in indigenous plant genetic resources preservation, multiplication and varietal researching. The centre promotes ex-situ conservation of local and indigenous seed varieties. In addition, the centre encourages farmers in in-situ conservation of local and indigenous seed varieties through FMSS. Cited case:

Government effort to sustain plant genetic resources including local and indigenous seeds involves establishment of NPGRC in 1991 which is responsible for promoting the conservation and sustainable utilization of plant genetic resources in Tanzania. By the time PELUM Tanzania convened the national seed fair at Chamwino, Dodoma, the centre had already collected 6,420 samples of indigenous seeds (4,000 samples had been characterized and evaluated); and established 12 farmer groups for in-situ preserving plant genetic resources. Furthermore, the farmers had been provided with skills on how to collect, select, clean/purify, preserve and multiply the plant genetic resources (as per presentations by NPGRC in Chamwino seed fair on 14 November 2019).

h) Appreciable efforts by MOs in mobilising resources for promoting FMSS

The project has significantly stimulated MOs to integrate FMSS and

mobilize resources that are geared to support smallholder farming communities in advocating and promoting FMSS as the case of IDP cited.

After learning visit to PELUM Uganda that was organised by PELUM Tanzania, IDP as one of MOs that participated in the visit, was motivated and managed to mobilize resources and organized a replica seed and traditional food fair in August 2019 based on the lessons from the Uganda's visit. The event brought together about 800 participants and was officiated by government top official at region level. Participants included farmers, political leaders, decision makers, seed companies, CSOs, NGOs, research institutions, pupils, and secondary students.

The event involved dialogues on FMSS where a number of resolutions and call for actions were agreed. On top of that, there were also farmers' competitions and awards. Some of the criteria for winning in the competition were: farmer with many and diverse varieties of local seeds, farmer who had restored the endangered seeds and farmer with seeds that covers most essential food. Three winners were awarded and announced as "seed ambassadors". The seed ambassadors are currently more motivated, informed and confident advocates of FMSS.

3.2 Impacts of the Project

a) Improved levels of livelihood options and accumulated assets: There are practical evidences from smallholder farmers showing that through FMSS, they have improved livelihoods options and accumulated assets as testified hereunder:

- Stephen Maanda's family at Singu village, Babati District which is multiplying bean seeds has been generating income from sales of QDS. The income raised has enabled the family to have half-finished house worth around TZS. 10,000,000/=; dairy cattle worth TZS 2,400,000/= and motorcycle worth of TZS. 2,300,000/= (Annex 1). This farmer is farmer supported by ACT-DMK.



Assets owned by Maanda's family

- Didas Sichona's family from Nzoka village, Momba District confirmed that, their engagement in seed multiplication for a number of seasons has contributed to increased household income from an average of TZS 900,000/= to TZS 1,800,000/= per farming season. The income generated from seed multiplication has enabled them to reinvest in agriculture by purchasing a pair of draught animals (oxen) at TZS 1,200,000/= and ox-plough at TZS 180,000/=. The farmer is supported by ADP Mbozi.

- Ms. Shida Saleh at Nanungu village, Mahenge District has been engaged in local sesame and maize (locally known as *ndandamahu*) seeds multiplication. She usually sells about half of the seeds at a price of TZS. 2,700/= per Kg for sesame and TZS 2,000/= per Kg for maize. For the period under local seed multiplication, Shida is proud that the family has managed to build a family house installed with solar power, purchase new residential plot and having 5,000 burnt bricks for the construction of a house (to rent out) as another source of income in future (Annex 2). This farmer is supported by Caritas Mahenge.



Shida's house; burnt bricks and her son on newly bought bicycle

- Nouh Mwita's family which is based at Kewamamba village in Tarime District managed to heal the gullies and turned the land

into productive asset. The family owns about three acres of land planted banana. The family earns around TZS 400,000/= per month from banana which sells at TZS 20,000/= per bunch at home and TZS 25,000/= at market centres. The gained income from banana has enabled the family to support education expenses for their children, built house and buy few livestock. The family uses local seeds for both bananas and maize that they grow. In practice the family gives for free banana seedlings to its neighbours for increased social gains and cohesion (Annex 3). This farmer is supported by MFEC.



Nouh's family surroundings



Nouh displaying and explaining about local seeds (maize and banana)

- Deodatus Killiani's family at Kambi ya Simba village in Karatu district started engaging in bean QDS multiplication in season 2018/2019 and managed to harvest 960 Kgs in their one-acre field. The seeds were all sold within the village to 16 farmers at a price of TZS 3,000/= per Kg. Returns came in timely (September

– November) as their daughter was required to report for studies at University of Dar Es Salaam. Large share of the seed earnings was spent to cover costs associated with their daughter in joining the university studies. Following high demands of the seeds he multiplied, Killiani, a member of Amani group has initiated move to involve other members in seed multiplication for the purpose of increasing volumes of bean seeds. This farmer is supported by RECODA.

b) Farmers’ freedom and autonomy in deciding the type of seed to grow. Due to seed diversity, farmers are free to choose the type of seeds to grow (Annex 4 and Annex 5). *Cited case:*

- Respicius Msele’s family of Chemchem village, Karatu District has been suffering from recurrent crop failures in their maize fields. The failures were mainly attributed by application of improved seeds which showed intolerance to drought, diseases and pests. In season 2019/20, the family resolved to grow their local varieties of maize namely: Yanga, Mehe and mixed Mehe. The agronomic practices in their fields included: Practicing conservation agriculture through minimal soil disturbances, application on farmyard manure from cattle and pigs, and applying local maize seeds (Mehe, Yanga and Mixed Mehe).



A heap of farmyard manure



Mehe (2019/2020)



Yanga (2019/2020)

- In the same season through Chainuka group, the family collaborated with RECODA to carry out trials on indigenous seeds

performance. Some of the differences that were noticed by the family were:

- While other fields poorly performed following extreme rainfall in 2019/20 season, the fields with local seeds survived well.
- Crop management costs were relatively low in local seed fields.
- Germination was at 95% for local seed where proper seed selection was observed.
- Traditional storage practices are normally applied to local seeds such as use of ashes, cow dungs and hanging in the kitchen.



Mehe crop stand 2019/2020 farming season



Part of harvests for 2019/2020 season

- In his own words, Mr. Msele testified that, local seeds are more favourable in his area as they assure his family adequate harvests (food crops) and hence contribution to household income upon selling and food security.

c) Widened selling scope for QDS. In over ten years, PELUM Tanzania in collaborations with likeminded organizations including TABIO, ESAFF, Mtandao wa Vikundi vya Wakulima Tanzania (MVIWATA) and TOAM have been advocating for the widened QDS selling scope from the ward level to the region level. In 2020, the government issued guidelines that widened selling scope from the ward to the district level.

d) Household food security ensured: Through MOs facilitation and promotion of FMSS, beneficiaries evidenced that the frequencies

of food intake and amount of food available for families have increased and that 50% to 75% of the direct beneficiaries were food secured. Cited case

Ms. Adelaida Joachim, farmer in Sigino village in Babati District; bean QDS multiplier, seed ambassador; and best farmer in national farmer's exhibitions in 2017 testified that, they usually suffered recurrent famine during the months of December to February each year (locally termed as FEBU meaning famine). After engagement in seed multiplication and adopting recommended GAPs in their farms, yields have gone up that suffice family annual food requirements and income from selling of surpluses (Annex 6).



Ms. Adelaida inspecting and sieving her harvests in the store at Sigino village

4

Sustainability of the Project Outcomes and Impacts

The design and implementation approach of Our Seed Our Rights project laid down strategies for spill-overs and sustainability of project outcomes and impacts. The strategies included:

- a) Working with MOs which have seed related projects/interventions: One of the criteria for selection of the MOs to participate in the project was their engagement in FMSS related activities. With this, it is more likely that project outcomes will continue after the project phase out. Cited case:

As part of initiatives to show sustainability of project outcomes and benefits, Island of Peace (IDP) has launched a three-year project "Kilimo Endelevu Plus +, worth Euros 825,000 focusing among other interventions, promotion and creating demands for FMSS and local foods. The project will be implemented in three districts of Karatu, Arusha and Longido. On the other hand, RECODA project will reach 31 groups from the previous 14 within each group 3 farmers will be supported to actively engage in QDS multiplication making a total of 93 QDS farmers.

- b) Established linkages between farmer seed multiplier groups and seed related institutions, agencies and authorities: The project strategically linked farmers with relevant seed stakeholders such as Local Government Authorities (LGAs), TOSCI, TARI, NPGRC and ASA. With these linkages, farmer groups and individual farmers can access required services from relevant authorities without support from the project or from PELUM Tanzania. Farmers in through their groups and local networks have started working with these institutions with minimal or without direct interventions of the MOs or PELUM Tanzania Secretariat. Cited case:

Supported by ADP Mbozi, individual farmers producing QDS in Songwe District have established their network called KIUMBESO. The network brings together 32 seed multipliers from 6 villages of Chang'ombe, Songambe, Nahalyongo, Ilasilo, Mbuyuni and Mwagala. Farmers (also supported by ADP Mbozi) in Momba District have similar network with

8 members from 6 villages of Nzoka, Mkutano, Namtambala, Ipumpila, Makamba and Chitete. Through these networks, these farmers who are engaged in the multiplication of QDS have managed to: Communicate directly with ASA in ordering foundation seeds and access seed inspectors collectively leading to reduced seed multiplication costs. Farmers through the two networks also exchange experiences on multiplication and marketing of QDS (Annex 7).

- c) Presence of skilled community paraprofessionals: Some MOs, have trained and capacitated paraprofessionals/ lead/resource farmers with the aim to create local expertise to serve the community of issues related to FMSS. With the existing extension-farmer gap, the local paraprofessionals are instrumental in delivering basic extension services. These paraprofessionals will continue serving the community even after the project. Cited case:

RECODA has facilitated Kambi ya Simba village in Karatu District to have two members of Amani group who have been trained to serve as paraprofessionals, who are training fellow farmers on seed multiplication. Similar cases were reported by farmers supported by NYDT in Mulubanga village in Kasulu District and farmers supported by IRDO in Ileje District.

- d) Imparted knowledge and skills on seed multiplication: MOs' staff as well as farmers involved in seed multiplication as a group or individuals, have been imparted with basic knowledge and skills on seed multiplication. Farmer groups have also been trained on basic aspects including group leadership and management. Additionally, lead farmers/ paraprofessionals, have been equipped with group formation and facilitation skills. The imparted knowledge and skills will continue to be applied even after the ending of the project funds.
- e) Income motivation: Local seed multiplication is attached with income gain seed multiplication. Normally the price of seed is higher than that of grain. Thus, personal income gain will contribute to continuity in seed multiplication.

f) Collection and restoration of local seeds:

IDP and RECODA through Kilimo Endelevu project have been collaborating with NPGRC in collection and researching of local seeds in 8 villages located in Karatu District. A total of 54 trials on local seeds, managed by farmers had been laid with NPGRC making follow ups and offering periodic technical advices. The farmers have been trained on GAPs that include seed selection, multiplication and storage. Based on farmers' preference through participatory research, 70% of local seeds under trials have been passed for continued application in the following seasons.



Some local maize varieties MEHE, YANGA and MEHE mixed under trials and grown by Respicius Msele – a member of Chainuka group in Chemchem village – Karatu

On the other hand, PELUM Tanzania Secretariat crossed hands with MOs in influencing the community to restore, utilize and conserve local and indigenous seeds to ensure accessibility, affordability, and quality seeds to smallholder farmers in the villages. Hence, Secretariat collected and multiplied a number of local seeds that will later be availed back to farmers. In 2020 farming season, the Secretariat multiplied two varieties of local seeds namely Mehe and Bondei yellow, which were collected from farmers in Karatu and Morogoro respectively (Annex 8). Table below summarizes the initiative:



5

Lessons Learnt

- a) Seed fairs provide suitable avenues for seed stakeholders to discuss and exchange seed related issues. Moreover, the events can be used as effective advocacy platforms given the fact that, they bring together diverse seed stakeholders among them being political leaders and decision makers. Through seed fairs, farmers gained confidence and increased interest to conserve local seeds. This farmer's anxiety is instrumental in enhancing in-situ seed conservation and important instrument for policy influence.
- b) Adoption of farmer group approach, training of paraprofessionals, and linking farmers and MOs with relevant authorities including NPGRC, TOSCI, TARIs and ASA, are pertinent strategies for sustaining seed multiplication activities.

6

Recommendations and Conclusion

6.1 Recommendations

- a) Focus on lobbying and advocacy: PELUM Tanzania as an umbrella and membership organization should focus more on lobbying and advocacy engagement at national, regional and international levels. Such engagements include ensuring FMSS is recognized by legal frameworks, campaigning against conventions which are unfavourable to small scale farmers. For example: conducting stakeholders' forums on specific advocacy issues, ensuring issues related to FMSS feature in national agricultural development programmes like five-year national agricultural development strategy; The Southern African Development Community (SADC) Protocol on seed breeder's rights required a thorough analysis to identify issues that are likely to impact negatively on small scale farmers, and
- b) Seed Fairs: Seed fairs should be sustained as an advocacy as well as awareness raising intervention. But stakeholders ought to exploit existing synergies and strengthen communication of developments occurring amongst them. Moreover, timing, duration, and media engagement should be improved.
- c) Seed market: MOs supporting seed multiplication ought to facilitate farmers' access to seed market information (market searching) and exploit the opportunities of raising demands of FMSS reported.
- d) Community seed banks: There is a need for PELUM Tanzania, in collaboration with the relevant units of the government such as the NPGRC, to facilitate establishment of community seed banks. Community seed banks would serve as in-situ seed conservation. Moreover, community seed banks would help farmers to conserve and access their seeds more easily.



- e) Local Seed Research: PELUM Tanzania should collaborate with relevant CSOs and government institutions in mobilizing resources for local seed research. Genetic makeup of well performing local seeds should be protected to avoid possibilities of piracy.

6.2 Conclusion

Our Seeds Our Rights project has stimulated significant achievements along FMSS during the period of three years (three farming seasons) of its operation. Despite these appreciated initiatives in pushing forward the FMSS agenda, PELUM Tanzania has to strengthen collaboration with legal seed institution for such as TOSCI, ASA and TARI to enable farmers overcome seed related challenges like: inadequate marketing of farmers' seeds, weather uncertainties etc. In line to these observations, there is a need for PELUM Tanzania to strengthen its advocacy capacity and engagement at national and international levels, invest on MOs horizontal learning, sustain seed fair interventions and work with other CSOs and relevant government institutions for the establishment of community seed banks and facilitate local seed research.

Annexes: Project Best Practices and Success Stories

Annex 1: Famer Managed Seed System improves levels of livelihood options and assets



Leaving crop residues unburnt for improving soil status



Contours and agroforestry practices in the family fields



Maanda attending his bean seed plot



Family motorcycle

Stephen Maanda is a 49 years old farmer residing at Singu village in Babati district. He lives with his wife and other 9 dependents. For years, the family has been engaged in both crop and livestock production. The family had been growing hybrid maize (SEEDCO) variety and local maize (Mehe) variety and local pigeon peas. On livestock, the family keeps 2 dairy cattle with 2 calves, draught animals (3 oxen) and 1 donkey.

Maanda has been participated in a number of seed related forums that include learning visits to Chitego, Kongwa, seed fairs in Chamwino, Dodoma and Karatu organised by PELUM Tanzania, and IDP respectively. In their farming activities, the family has always been observing environmentally friendly practises that include application of farm yard manure, unburning of crop residues, agroforestry, terracing and contour bunds.

Maanda is a farmer supported by Anglican Church of Tanzania (ACT) Diocese of Mount Kilimanjaro (DMK), a member of PELUM Tanzania. ACT DMK trained by PELUM Tanzania on seed multiplication as well as Tanzania Official Seed Certification Institute (TOSCI). Maanda's family started engaging in Quality Declared Seed (QDS) multiplication in 2016. The family is engaged in growing



Maanda's family house under construction in Singu village

bean varieties which include Jesca and Selian 13. Apart from knowing agricultural practices, Maanda is also skilled in seed selection, seed dressing and packaging.

Application of Good Agronomic Practices enables the family to harvest 6 to 9 bags with 120 Kgs each of clean bean seeds per acre.

Some of the benefits the family enjoys since their engagement in QDS multiplication include:

- Production of extra yields of food crops because of adoption of recommended agronomic practices in their traditional fields. This has considerably contributed in ensuring their family is food secured year around.
- Gained income from selling QDS contributed to school fees and other educational requirements for their children. One child is attending advanced level school and the other one is attending ordinary level school.
- Recognised by district authority as one of maize and bean seed multiplier in Babati district.
- Purchased 2 dairy cattle worth TZS 2,400,000/= which have now produced 2 calves.
- Purchased motorcycle that was bought at TZS 2,300,000/=. The motorcycle is important means of transport in the rural area.
- Constructed house (half-finished) worth around TZS 10,000,000/=. The house is constructed from burnt bricks mortared by cement.

Maanda's family capitalized on the following opportunities to ensure their engagement in QDS multiplication pay off and provide adequate and quality to the clients (Community members in need of their QDS):

- High demands of bean seed around November each year (Peak demands).
- Favourable weather in some seasons that support QDS production (Increase in volumes of QDS harvests).
- Potential local market: 100% of the seeds are bought within his village at a price around TZS 2,500/= per Kgs. To the family this signifies recognition of the efforts family has been making in producing quality and affordable basic agricultural inputs (bean seeds).

Annex 2: Local Seed Multiplication has changed the life of Ms. Shida Saleh



Shida's family house in Manungu village



Shida and her son on bicycle



Shida's newly purchased residential plot in Manungu village



Burnt bricks for house construction

Ms. Shida Saleh Mponda is a 43 years old single mother residing at Nanungu village in Mahenge District, Morogoro region. She is currently caring 5 children. In 2018/2019, she started producing local seeds (Sesame (mbe-gu ndefu) and Maize (Ndandamahu). She has been part of direct beneficiaries who worked with CARITAS Mahenge, a Member Organization of PELUM Tanzania.

An annual harvest per acre for Sesame goes up to 700 Kgs while that of maize reaches 600 Kgs optimum per acre. She is solely engaged in local seed multiplication that enables her to earn income for her livelihood.

She usually sells her produce at a price of TZS 2,700/= per Kg for Sesame and TZS 2,000/= per Kg for Maize. Through sales from local seeds, Shida testifies that, she has managed to:

- Build a family house installed with solar power (four bulbs facilities worth TZS 250,000/=).
- Purchase new residential plot at price of TZS 320,000/=.
- Make 5,000 burnt bricks for a new house.
- Purchase a bicycle for her son worth of TZS 120,000/= for transport to and from school, and fetching water.

She usually sells more than half of her seeds to her fellow farmers in the village, exchange a portion of it and leave behind adequate seed for the following farming season.

Seeds multiplication and sells enable Ms. Shida with income to sustain her living and her children. The income also helps to pay school fees and buy school uniform for her children as she is a single mother.

Annex 3: Banana production from a healed gully



Mr. Nohu inspecting the family banana field



Nohu's family house



Nohu Mwita is a farmer at Kewamamba village in Tarime District, Mara region. His family is blessed with 8 children who most of them are currently at varying education levels.

Mogabiri Farm Extension Centre (MFEC), a Member Organisation of PELUM Tanzania has been supportive to Mr. Nohu for quite sometimes. Mr. Nohu has participated in a number of ecological agricultural related interventions that include trainings, learning visits, agricultural related shows, reflection meetings, and local seed fairs.

Creatively through application of composite and farm yard manure, Nohu's family managed to heal the gullies and turned the land into productive asset. The healed gullies are now used as potential banana production fields that contribute to both food and income to the family.

A large portion of banana seedlings are indigenous/ local species with few of improved varieties. For varying reasons including food security and increase household income, the family prefers also to grow local maize seed varieties.

The family owns about 3 acres of land planted banana. The family earns around TZS 400,000/= per month from selling banana at TZS 20,000/= per bunch at home and TZS 25,000/= when delivered to the market centres in Tarime town.

The gained income from bananas has largely contributed to the family in supporting education expenses for their children, building a family house and buying few livestock.

In practice the family gives for free banana seedlings to their neighbours as means to increase social gains and cohesion.

Smallholder farmers usually use seed from different sources depending on the preferences (taste, aroma, size, and nutrients), availability and affordability. With farmer seeds, they contribute more than 80% of food crop in the country. Recognition of farmer managed seed system and local seeds by legal framework will help to promote local seeds and encourage the community to restore, utilize and conserve indigenous seeds.

Annex 4: Enhancing Farmer's autonomy in the seed subsector through promotion of FMSS initiatives



One of maize field trials laid in local context under farmer management with support from IDP in collaboration with RECODA and NPGRC at Chemchem village in Karatu District.



Local maize variety – Mehe harvested from trials in 2019/20 season

Islands of Peace (IDP) / Iles de Paix, a Belgian organisation based in Arusha is one of the PELUM Tanzania Member Organisations (MOs). IDP is implementing the Kilimo Endelevu project in collaboration with Research, Community and Organizational Development Associates (RECODA), Mtandao wa Vikundi vya Wakulima Tanzania (MVIWATA) Arusha and Karatu District Council in Karatu district. The project financed by the Belgian Cooperation aims to contribute to strengthen economic, environmental and social performances of the actors of sustainable family farming for the communities of Karatu District.

IDP participated in a learning visit to PELUM Uganda that was coordinated by PELUM Tanzania Secretariat in February 2019 on community managed seed system. Motivated after Uganda learning visit, IDP developed a strategy for the revitalization and recognition of the Farmer Managed Seed System (FMSS) addressing two components: seed production and advocacy.

In the frame of the sensitization/ advocacy component, IDP organized a seed and traditional food fair in August 2019. The event brought together about 800 participants and officiated by Regional government officials. Participants included farmers, political leaders, decision makers, seed companies and agencies, Non-Governmental Organisations (NGOs), Civil Society Organisations (CSOs), research institutions, and entrepreneurs who displayed seed related products at varying dimensions.



Local maize variety – Mehe mchanganyiko During trials in 2019/20 season



Local maize variety – Displayed during Seed fair conducted in Karatu District, 2019.

The event also involved dialogues on FMSS where a number of resolutions and call for actions were agreed. On top of that, farmer's competitions and awards were organized. Some of the measured parameters for winning the competition were: farmers with many and diverse local seed varieties, and farmers who have restored the endangered seeds and/or plant genetic resources. Three winners were awarded and announced to be "seed ambassadors". The ambassadors are currently brave, informed and confident advocates of FMSS. The other end results included:

- Each village under project having seed ambassador.
- Each group working with the project having seed committee.
- Number of farmers who preserve and apply seeds under FMSS had been increasing as well as expansion in areas under FMSS.

Resolutions and FMSS agenda that require coalitions have always been pushed to umbrella advocacy institutions like PELUM Tanzania, Tanzania Organic Agriculture Movement (TOAM), Tanzania alliance for Biodiversity (TABIO), and MVIWATA Arusha.

On the revitalization component: the efforts have been inculcating into seed stakeholder's minds the value, importance and contribution FMSS has on smallholder farming communities' livelihoods.

Furthermore, in the efforts to promote FMSS, IDP and RECODA are currently facilitating National Plant Genetic Resources Centre (NPGRC) to reach smallholder farmers for collection and researching local/indigenous seeds in 8 villages in Karatu district.

A total of 54 trials on local seeds under farmer management had been laid with NPGRC making follow ups and offering periodical technical advices. The

farmers have been trained on Good Agronomic Practices (GAPs) that include seed selection, multiplication and storage. Based on farmers preference (participatory research), 70% of local seeds under trials have been passed for continued application in the following seasons.

Sustenance of initiatives: IDP has just launched a three years project (2020 / 2023) “Kilimo Endelevu Plus (+)” worth Euro 825,000 focusing on among other interventions, promotion and creating demands for FMSS and traditional foods. The project will be implemented in three districts of Karatu, Arusha and Longido.

Future plans:

IDP plans to continue supporting small-scale farmers on the revitalization of local seeds; facilitate establishment of community indigenous seed banks in rural areas and continue to advocate and sensitize FMSS in collaboration with other stakeholders.

Annex 5: Local Seeds are better options to small scale farmers



Some of the harvests 2019/20 season



A heap of Farm yard manure



Local maize in the field before harvests – 2019/20 drought season

Recognizing the importance of indigenous and local seeds for smallholder farming communities, PELUM Tanzania Member Organizations (MOs) have been investing time and other resources in promoting, valuing and increasing demands of indigenous agronomic practices, local seeds, and traditional foods. This can be evidenced by various projects being implemented by RECODA in Karatu District.

Respicius Msele's family at ChemChem village in Karatu District

The family has been suffering from recurrent crop failures in their maize fields. According to head of the family, the failures were mainly attributed by application of hybrid seeds that portrayed intolerance to drought, diseases and pests. In season 2019/20, the family resolved to grow their local maize varieties locally namely: *Yanga, Mehe and Mehe Mchanganyiko*.

In that season, Msele's family applied predominant agronomic practices in their fields which include:

- Practicing conservation agriculture which is anchored on minimal soil disturbances.
- Application of farmyard manure collected from cattle and pig's pens around their residence.
- Applying local maize seeds (Mehe, Yanga and Mehe Mchanganyiko).

In the same season through Chainuka farmer's group in ChemChem village, the family collaborated with RECODA, Island of Piece and National Plant Genetic Resources Centre (NPGRC) to carry out trials on indigenous seeds. Some of the differences that were noticed by the family included:

- While fields that were grown improved maize, varieties were badly affected following the severe drought in the 2019/20 season, the fields with indigenous seeds survived significantly.
- Crop management costs were relatively low in local seed fields than in others.
- Germination was 95% for local seed where proper seed selection was observed.
- Assured harvests in local seed fields.

Mr. Msele concluded that, local seeds are more favourable in his area as they assured his family adequate annual harvests (food crops) and hence contribution to household food security and income upon selling the surpluses.

Annex 6: The Seed Ambassador

Seed Ambassador



Time for feeding livestock from stored hay



Family belonging - Friesian Calf



Bean seeds after grading



Family house and some livestock

Ms. Adelaida Joachim is a member of Up-endo group at Sigino village (Babati) since 2016. Her group has been working closely with Anglican Church of Tanzania Diocese of Mount Kilimanjaro (ACT DMK) as well as Babati District Council for a number of years in interventions like Quality Declared Seed (QDS) multiplication, Village Community Bank (VICOBA), and entrepreneurship.

On entrepreneurship, Adelaida has gained skills in soap making. In VICOBA, their group (with 30 members) had about capital base of TZS 18,000,000/= by August 2020. In QDS, she had gained capacities in production of quality seeds that were sold to fellow farmers within Sigino ward.

Adelaida and her fellow farmers in the group multiply bean QDS (Lyamungo, Selian 13 and Jesca) varieties in an area ranging from half to 2 acres. The yields range from 6 to 10 bags (one bag with 120 Kgs) per acre. The produce is sold as seeds at a price ranging from Tshs 180,000/= to Tshs 220,000/= per bag of 120Kgs. This initiative was established by PELUM Tanzania in collaboration with its ACT – DMK.

Adelaida testified the benefits accrued from her engagement in QDS multiplication and group activities as follows:

Personal and family benefits include:

- Relieved her family from recurrent food shortages affecting many families in her area known as FEBU that usually occurred in February each year.
- Enabled her to manage her enterprises skillfully through gained knowledge.

- Managed to contribute in the construction of family house.
- Established a retail shop in Sigino.
- Purchased cattle and constructed improved shelters for the family livestock.
- Paid for school requirements for her children where one has just completed college studies and the other one in form six.
- Increased popularity through participation and collaboration with many seed stakeholders (individuals and institutions like Tanzania Organic Agriculture Movement (TOAM), Agriculture Non-State Actors forum (ANSAF), Tanzania Chamber of Commerce, Industry and Agriculture (TCCIA), Small Industries Development Organization (SIDO), PELUM Tanzania, Babati District Council).

Other benefits that Adelaida enjoys include:

- Being awarded as best seed multiplier in 2017 Nanenane exhibitions (where she also had chance to sell 3 bags of bean seeds at a price of TZS 3,000/= per Kg to District and Regional authorities).
- She is currently seed ambassador representing her fellow group and community members in various forums within and outside Babati District Council.

Her influence as seed ambassador and initiatives by their Upendo group contributed to:

- Lobbying the government for accomplishment of long unfinished dispensary in their area. This was during Uhuru Torch races.
- Accessing the loan amounting to TZS 4,000,000/= for Upendo group.
- Being provided with a piece of land or plot for construction of their Upendo group's office.

Annex 7: When united, we are greater than our challenges



Farmers attending their Maize QDS fields



Leaders of KIUMBESO sharing views in one of their meetings



QDS Farmers – collecting sample

PELUM Tanzania Member Organisations (MOs) have been striving to ensure that smallholder farmers in their constituencies are attaining optimal standard of living in sustainable manner. That is, their livelihood improvements accommodate contextual, cultural, social and economic scenarios.

A good number of MOs have been involved in supporting smallholder farmers (individuals/groups) engage in seed multiplication under Farmer Managed Seed System (FMSS). The drive has been the fact that, one of the solutions to achieve food security for the smallholder farmers is based on access to quality seeds. FMSS for long time has been determinant of quantity of food harvested.

As part of their support, PELUM Tanzania has facilitated skill development to its MOs on Quality Declared Seeds (QDS) multiplication through Tanzania Official Seed Certification Institute (TOSCI).

QDS farmers in Momba and Songwe are among farmers trained and engaged on seed multiplication for a number of years, being supported by Actions for Development Programmes (ADP) Mbozi.

The farmers in the named areas have been encountered by recurrent challenges under seed multiplication that include:

- Long process and high certification



Samples – ready to be sent to TOSCI



A luggage of QDS samples addressed to TOSCI Njombe

costs for individual smallholder QDS multiplier.

- Securing land for QDS multiplication that meet minimum requirements such as buffer zones or isolation distances in the village contexts.
- Inadequate or untimely extension services of QDS farms due to shortage of qualified seed inspectors.
- Delays in receiving foundation seeds as Agricultural Seed Agency (ASA) distribution channels are not covering the whole country.

In the efforts to overcome some of the challenges that constrain their mission; the QDS farmers in two areas each has established loose QDS farmer's network.

QDS farmers in Songwe District have established their coalition named: Kikundi cha Uzalishaji Mbegu Songwe (KIUMBESO) that brings together 32(18 women) seed producers from 6 villages of Chang'ombe, Songambebe, Nahalyongo, Ilasilo, Mbuyuni and Mwangala.

Their fellow farmers in Momba have similar community entity called Kikundi cha Uzalishaji Mbegu Momba (KIUMBEMO) with 8 members from 6 villages of Nzoka, Mkutano, Namtambalala, Ipumpila, Makamba, and Chitete.

Though still at infant stages, these networks of QDS farmers have managed to:

- Communicate directly with ASA in placing orders for basic seeds. This has enabled them to receive the required amounts and warranted quality on time. It also reduces transport costs. ***In 2019/20 season, Momba network ordered 100Kgs of basic directly from ASA.***
- Reduce considerably seed multiplication operational costs. They collectively



shared transport costs for samples to and from TOSCI, inspection and certification costs.

- Work in autonomy as they conduct their activities with minimal or no support from their traditional development partners (Patrons) such as ADP Mbozi. This sustain the FMSS.
- Exchange experiences on production and marketing of their seeds – ***farmers within each network have been communicating while also there exists communication between the two networks on matters of common interests.***

This practice reduces dependency of farming communities to the supporting organisations. But also, positively indicates sense of ownership, spill-over and sustainability of benefits and impacts of projects and MO's interventions.

Annex 8 : Collection and restoration of local seeds



Samples of Local Plant Genetic Species



Local maize variety: Mehe



Local maize variety ready for harvest

Participatory Ecological Land Use Management (PELUM) Tanzania is a network of Civil Society Organizations (CSOs) working with smallholder farmers and livestock keepers in promoting sustainable agriculture in Tanzania. The current membership of PELUM Tanzania is 42 registered CSOs in Tanzania Mainland.

PELUM Tanzania had been engaged in collecting and preserving local seeds from its Member Organizations constituencies. By November 2019, PELUM Tanzania had collected 128 varieties of local seeds. Practically, PELUM Tanzania has started demonstrating the ecological agriculture practices at its office premises and Ngerengere farm by multiplying local/ indigenous seeds and keeping local chicken.

Local seeds were multiplied in farm with 25 acres divided into four blocks and grown different varieties of local seeds and Open Pollinated Variety (OPV) seeds. Largely, the fields grew two varieties of local maize seeds namely: Mehe (collected from farmers in Karatu, Arusha Region), and Bondei Yellow (collected from a farmer in Morogoro region). OPV maize variety grown was Stuka. Sunflower namely Record, was also grown.



Area under each variety: Mehe 12 acres each; Bondei yellow 8 acres; Stuka 3 acres and Sunflower Record 2 acres. Both varieties were planted at the same time for comparison of performance on: rate of germination, crop vigor, tolerance moisture stress, disease and pests, and adaptability behavior.

Despite weather stress of heavy rainfall during sowing and low rainfall during tasseling stage, PELUM succeeded to harvest: 65 bags of maize with 128Kgs each and 4 bags of Sunflower with 70 Kgs each.

PELUM Tanzania multiplied local seed in order to:

- Influence the community to restore, utilize and conserve indigenous seeds.
- Support accessibility of adequate, quality, and affordable local seeds to smallholder farmers.
- Restore and share local seeds in order to share with some farmers in the project area in order to perpetuate their existence.

Recognition of farmer managed seed system and local seeds by legal framework will help to promote local seeds and encourage the community to restore, utilize and conserve indigenous seeds.



PELUM TANZANIA

P.O. Box 390, Morogoro; info@pelumtanzania.org, www.pelumtanzania.org.