



PELUM UGANDA

Networking for a Greener Africa

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Quarterly Newsletter by Participatory Ecological Land Use Management, Uganda

Mainstreaming cross-cutting issues in Agriculture Experiences on HIV/AIDS, Gender, Climate Change & Local Innovations

In this Issue

Promoting Local Innovations among Small scale Farmers

Adapting to Climate Change in Kasese district

Gender mainstreaming in Agriculture: IRDI's experience

HIV/AIDS mainstreaming in Agriculture: Caritas Kampala's experience

FAQs about Climate Changes



Worldwide, there are many emerging issues that are affecting agricultural production and the livelihoods of small-scale farmers. Some of these issues are easily dealt with while others require joint efforts of mitigation and adaptation. Whereas there are many international and national efforts to deal with the effects of issues such as climate change and HIV/AIDS, many efforts are still required in helping the small-scale farmer at the grassroot understand the magnitude of what is taking place. Throughout Africa, there

are many rural communities who still view severe droughts and famine as curses, not understanding the real cause. In response, families spend time and money in traditional ceremonies to avert the dangers which in the end doesn't help.

Just like HIV/AIDS, Climate change effects are promising to be catastrophic to African communities especially those dependant on agriculture. Whereas natural and man-made activities are the cause, ignorance is going to play a big part in spreading the effects of such catastrophies. With the high levels of illiteracy and minimal program implementation at the grass root, small-scale farmers lack the knowledge and understanding in dealing with issues pertaining agriculture. Provision of information is therefore an urgent and vital element in helping the farmers to make timely and right decisions when faced with any agricultural related challenges. This task requires joint collaboration from all stakeholders including development organisations, government and the private sector. Only then will the farmers be able to understand and share their opinions which are necessary for policy making and implementation. Only then will the small-scale farmers engage in commercial agriculture which will in the end improve on their livelihoods.

This newsletter issue looks at how Promoting Local Innovations (PROLINNOVA) encourages, documents and shares local innovations from and among farmers, how New Eden Christian Foundation is helping farmers to adapt to effects of climate change and how Caritas Kampala's HIV/AIDS mainstreaming is helping small-scale farmers. I hope you are encouraged by the need for information shared in these articles

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Promoting Local Innovations among Small Scale Farmers

By Ruth Nabaggala-PELUM Uganda Country Desk

'Empowerment of individuals is a key part of what makes open source work, since in the end, innovations tend to come from small groups, not from large, structured efforts.' **Tim O'Reilly.**

Margret Nabatanzi has been farming her whole life. In between looking after a family of 13, she has for many years, cultivated the family land located in Kikandwa sub-county, Mityana district on small-scale level. As a small-scale farmer, Nabatanzi cultivates vegetables which she then sells to get income to feed her large family. Among such vegetables is the Amaranthus plant.

With her big family and constant drought in the region, Nabatanzi found it difficult to ably meet all the needs of her family especially providing meals. One day, while looking for a solution, she decided to pound some of the amaranthus seed, mixed it with water and salt and served it to her family members as sauce. To her amazement, the family loved the mixture and commented that it was tasteful. This soon turned into a daily item on the family menu.

In 2007, through the Director of Kikandwa Environmental Association (KEA), Nabatanzi heard about a local NGO (PROLINNOVA) promoting local innovations among small-scale farmers. With encouragement from KEA and PROLINNOVA, she went ahead to innovate more products from the amaranthus seed including flour for bread & cakes; sauce, beverages and pancakes. She also innovated snacks such as pop mara (similar to popcorns). Currently, Nabatanzi earns a monthly profit of UGX100,000/=.

Like Nabatanzi, there are a number of small-scale farmers with un-tapped innovations. Promoting Local Innovations (PROLINNOVA) which in a quest to promote Indigenous Knowledge and Local Innovations in Uganda partnered with PELUM Uganda and other NGOs as an NGO-led initiative to build a global learning network on promoting of local innovations in ecologically-oriented agriculture and Natural Resource Management. The partnership has led to the out-scaling of local innovations by providing innovators with platforms to exhibit them at international, national and local levels.

Since her innovation, Nabatanzi's family is healthy and income and food secure. *'I used to get heart palpitations whenever I took tea or coffee, but all that improved when I started using amaranthus seed as a beverage'* says Nabatanzi's 70 year old mother.

The market for her products has widened due to the exposure she gets through PROLINNOVA. Nabatanzi prides in the fact that she now owns a mobile phone purchased with profits from the sale of her products, pays her daughters' school fees in good schools.



Margaret Nabatanzi standing in her Amaranthus garden

Pushed by daily hardships such as food insecurity, climate change, unfavorable market forces and animal and crop diseases, many small-scale farmers within and outside Uganda have come up with innovations to improve their day-to-day farming related activities and consequently improve their livelihoods. However, many of these innovations are not documented or even shared widely among the community members. This lack of documentation causes a loss of information that would be useful to other communities, stakeholders like researchers not forgetting future generations.

To this effect, in 2010, PROLINNOVA identified 14 and verified 9 local innovations by small scale farmers. It is from these innovations that 4 innovations were considered for the production of a DVD themed **'Addressing Agricultural Challenges through local innovations'**. Documented innovations were got from;

- Simon Kamanya a fish farmer from Kamuli district who innovated simple and inexpensive ways of producing fish fries.
- John Musisi from Mityana district who innovated a treatment for the east coast fever among calves.
- Margaret Nabatanzi from Mityana district who processes amaranthus seed for food security
- Keith Rwamahe from Kabale district who innovated a concoction which he uses to manage the powdery mildew among his apples

The objectives for the DVD production are to showcase the relevance of innovations in Agricultural development and encourage replication of the innovations among farmers.

A few copies of the DVD are available •••

Adapting to Climate Change in Kasese district

By Rev. Canon Nason Baluku- Executive Director , New Eden Christian Foundation



A tree nursery set up by New Eden Christian Foundation in Kasese District

The challenge ahead of the farming community all over the world today is climate change! High levels of green house gasses in the atmosphere, particularly carbon-dioxide, are resulting in a stronger “green house effect” and thus global warming. As the climate becomes warmer, farmers of New Eden Christian Foundation in Kasese district are promoting crop varieties that tolerate heat and drought. Crops such as barley, cassava, millet and sorghum have been used by farmers in dry lands for many years and proved to be ideal. In addition, other crops are being improved and promoted through plant breeding. Examples include drought-tolerant maize, early maturing maize for areas with short rainy seasons and the drought-tolerant rice varieties, known as NERICA (New Rice for Africa). NERICA varieties combine the high productivity of Asian rice with the ability of African rice to cope with the harsh conditions.

Because of climate change, livestock farmers are under increased pressure to find adequate water and forage for their animals, while coping with increases in diseases. Conflicts between pastoralists and crop growers are on the increase as available resources decrease. New Eden Christian Foundation encourages farmers with livestock to select and promote drought tolerant grass and legume species such as cratylia, a leguminous shrub that improves animal nutrition. Farmers are also encouraged to reduce livestock density, change the mix of browsers and grazers and restore degraded areas.

New Eden Christian Foundation, with the support from NORAD through WWF-Uganda under the Rwenzori Mountains Conservation and Environment Management Project (RMCEMP) is supporting communities living on the

slopes of the Rwenzori Mountains to conserve biodiversity and water catchments values of the Rwenzori Mountains ecosystems. The Rwenzori Mountains are a world heritage site of global diversity significance. Their afro-alpine ecosystem is substantially different from other Eastern African mountains. The mountains offer natural habitats for endangered species such as the chimpanzee, elephant, L’hoest’s monkeys and Rwenzori black fronted duiker. They are a home to endemic mammalian species in addition to many plant species. Rwenzori mountains are an important water tower and the principle catchments for the economically important lakes



Mr & Mrs Alfred Wamale show off their goats while at their farm in Kasese District

Edward, George, Albert and the Nile River basin. These fresh water bodies contribute enormously to the livelihood of people in Uganda, Democratic Republic of Congo, Sudan and Egypt.

The Rwenzori Mountains are part of the Albertine Rift and a big part of it is covered by Rwenzori Mountains National Park in Western Uganda. The Park falls diverse threats, deforestation and illegal pit saving due to high demand for timber, human and wild-life conflict, a high population growth rate around the park, poaching for bush meat, landslides and soil erosion due to cleaning of vegetation on mountain slopes, reduced water quality and quantity and recession of the mountain glaciers.

In an effort to protect the environment and improve small-scale farmers’ livelihoods, New eden established a tree nursery and avails seedlings to the communities living on the slopes of the Rwenzori mountains. The tree and fruit nursery has a capacity to produce over 50,000 seedlings per season. Provision of the seedlings to the farmers living on the slopes of the Rwenzori mountains has contributed to environmental conservation. ●●●

Gender Mainstreaming in Agriculture- IRDI's Experience

By Hellen Gakwaya



Nalongo Namalwa facilitating a farmers' exchange visit in Lugungule village

To be able to alleviate rural poverty, promote household food security and increase productivity in the agricultural sector, a concerted effort is needed to gain accurate understanding of the situations and roles of women and men in agriculture in a given community. Integrated Rural Development Initiative (IRDI) carries out consultations and uses participatory rural appraisal (PRA) Tools to identify different needs for different categories of people as discussed below.

Planning

Gender analysis: Since household roles and responsibilities are shared differently between men and women, a gender analysis involving various stakeholders is conducted during participatory rural appraisal workshops. The gender analytical tools are used to analyse the gender issues in the area. The three groups which participate include: women, men and youths

Resource Analysis: The objective of the analysis is to identify the resources that can be used as a basis to promote the economic and social development of the beneficiaries

Stakeholder analysis: Is conducted during participatory rural appraisal workshops. Among the stakeholders, men, women and youth peasants with very low incomes and producing for subsistence form the target beneficiaries.

Implementation

Training of participants: To ensure gender equity the trainings are designed in such a way that equal numbers of participants (female and male) are selected. To enable active participation and clear message delivery, the men and women reverse roles during role plays and share responsibility as well.

In the agricultural demonstration training sites, sessions and locally available materials that are gender friendly are used to ensure that both men and women benefit from the training.

Monitoring: a monitoring framework is developed to capture gender disaggregate data during implementation.

Report writing: Use gender disaggregated data

Equity in resource allocation and utilisation of benefits

Issues on gender equality, human rights and participatory decision making are of a prime consideration for equity to

be realised. Dialogue at family level is promoted through psychosocial counselling and continuous sensitization by the Community Owned Resource Persons (CORPs) during the course of project implementation. This enhances involvement of all in family affairs. IRDI encourages joint decision making concerning resource utilisation and benefit sharing in a family with boys and girls being accorded equal chances.

Gender Groups: including men, women and youth peasants with very low income levels; female and child headed households; HIV infected and affected households, the elderly, widows and people with disability.

Gender Policy: IRDI's gender policy aims at mainstreaming gender issues in all its programme activities. The policy puts emphasis on ensuring equal opportunities for men, women and children; the effective participation of men and women in the planning and implementation of development programmes; and ensuring that men, women and children benefit from these programmes.

Districts of operation: Wakiso, Rakai and Kamuli

Challenges

- Rural communities who practice subsistence agriculture are poor and uneducated making it a challenge to change their attitudes. In most cases, women are the least educated and tend to suffer more from lack of information.
- Very few women own/control productive resources such as land, technical services, market outlets and information. This coupled with long-term low socio-economic status, renders them generally unable to take key decisions over the use of resources and benefits accruing from farm production.
- Women in poor households face serious time constraints due to livelihood activities and childcare responsibilities. Because of the multiple roles of women, they at times fail to turn up when invited for the trainings.
- Marketing of agricultural produce continues to be dominated by men due to cultural norms. The few women who take part in this activity are denied opportunity to control income from the sale of the produce.
- Many women become victims of gender based violence once they earn income from sale of produce. The earnings are eroded by men's indulgences in social hazards, especially uncontrolled drinking.

Future Plans

- Empower women to participate actively in marketing of farm produce.
- Gender sensitisation for couples to promote dialogues at family level. This will enhance involvement of all (men, women, boys and girls) in family affairs and joint decision making concerning resource utilisation and benefit sharing in a family. • • •

HIV/AIDS Mainstreaming In Agriculture: Caritas Kampala's Experience

By Harriet Nakasi

HIV/AIDS is still a major concern in the developing world where economies are highly dependent on agriculture as a major income earner and a source of livelihood for over 70% of households. Development organizations that are endeavoring to address food security and increased incomes still face a challenge of loss of labor due to illness and death as well as increased workload to the remaining household members. Countries worldwide have come up with various strategies in response to HIV/AIDS mainstreaming in agriculture including manuals, policies and documentaries as tools for sensitization, education, mitigation and coping mechanism.



Staff members of PELUM Uganda Country Desk reviewing the HIV/AIDS workplace policy

Sustainable Agriculture Program (Caritas Kampala) has been involved in HIV/AIDS mainstreaming in agriculture since 2005. Initially SAP created a leveled ground for the entire staff of Caritas Kampala by organizing a series of HIV/AIDS mainstreaming training to enable them understand the concept better and facilitate its mainstreaming in the work place. This was followed by sensitization of community trainers and leaders on gender mainstreaming, which is now being practiced among groups at the grassroots. Caritas Kampala's HIV/AIDS program focuses on;

1. Identifying beneficiaries affected and infected by HIV/AIDSs
2. Analysing the effects of chronic illnesses and deaths on Caritas Kampala's activities among beneficiaries
3. Establishing strategic partnerships with health centres and other development partners to address other related issues
4. Developing appropriate responses to mitigate HIV/AIDSs effects on farming households and rural communities. responses include;
 - Construction of water tanks to increase access to clean and safe water
 - Focusing on labor saving technologies
 - Addressing nutritional requirements through integrated and diversified farming

- Home improvement and sanitation
- Agroforestry and energy saving technologies
- Diversification of income sources to include value addition and non-farm income generating activities such as crafts making.
- Documentation of indigenous knowledge on medicinal plants
- Indigenous seed selection, multiplication and storage

It is therefore important for development organizations and individual communities to adopt strategies that are community friendly to facilitate mainstreaming HIV/AIDSs in their social setting and day today work. Together we can assist the infected and affected live a longer and better life.

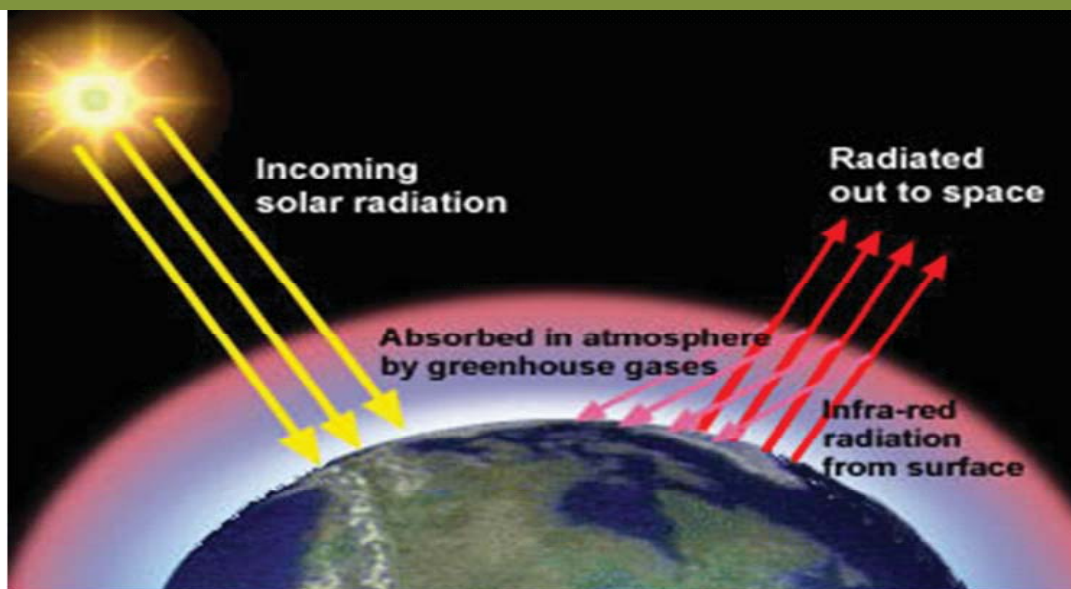
Below is an extract from the study about "promising responses to HIV/DIAs in the fields of agriculture self help and social protection" (Misereor, 2009) as a contribution to the elucidation of the role of agriculture and rural development in addressing HIV/AIDSs;

Prevention	<ul style="list-style-type: none"> • Make agricultural production a viable source of living to reduce poverty and food insecurity and thereby vulnerability to HIV infection. • Through poverty and food insecurity, people are forced to develop survival strategies that make them more vulnerable to HIV infection, e.g. migration for work, practicing 'survival sex' • Address the disadvantaged legal, socio-economic & cultural situation of women by e.g. improving the access to and control over productive resources, increasing decision making power • Strategic partnerships with the health and educational sector to disseminate awareness on HIV/AIDS and to promote behavior change
Care	<ul style="list-style-type: none"> • Improve nutrition for PLHIV and promote the use of appropriate medicinal plants • Reduce domestic workload • Improve the access to water and sanitation, referral to health care providers.
Mitigation	<ul style="list-style-type: none"> • Adjust agricultural programs to the context of HIV and AIDS to secure livelihoods to better cope with the effects of HIV and AIDS like considering labor shortages, non farm income generating activities, changing household structures • Increase participation of all family members in agricultural activities especially the younger generation • Secure land and property rights for widows and orphans

FAQs about Climate Change

Q: What is climate change?

A: Climate change is a long-term shift in the climate of a specific location, region or planet. The shift is measured by changes in features associated with average weather, such as temperature, wind patterns and precipitation. What most people don't know is that a change in the variability of climate is also considered climate change, even if average weather conditions remain the same.



Q: How does climate change occur?

A: Climate change occurs when the climate is altered between two different periods of time. This usually occurs when something changes the total amount of the sun's energy absorbed by the earth's atmosphere and surface. It also happens when something changes the amount of heat energy from the earth's surface and atmosphere that escapes to space over an extended period of time.

Such changes can involve both changes in average weather conditions and changes in how much the weather varies around these averages. The changes can be caused by natural processes like volcanic eruptions, variations in the sun's intensity, or very slow changes in ocean circulation or land surfaces which occur on time scales of decades, centuries or longer. But humans also cause climates to change by releasing greenhouse gases and aerosols into the atmosphere, by changing land surfaces, and by depleting the stratospheric ozone layer.

Q: What is the Greenhouse Effect?

A: A natural system known as the "greenhouse effect" regulates temperature on Earth.

Our atmosphere traps the sun's heat near earth's surface, primarily through heat-trapping properties of certain "greenhouse gases". Earth is heated by sunlight. Most of the sun's energy passes through the atmosphere, to warm the earth's surface, oceans and atmosphere. However, in order to keep the atmosphere's energy in balance, the warmed earth also emits heat energy back to space as infrared radiation.

As this energy radiates upward, most is absorbed by clouds and molecules of greenhouse gases in the lower

atmosphere. These re-radiate the energy in all directions, some back towards the surface and some upward, where other molecules higher up can absorb the energy again. This process of absorption and re-emission is repeated until, finally, the energy does escape from the atmosphere to space. However, because much of the energy has been recycled downward, surface temperatures become much warmer than if the greenhouse gases were absent from the atmosphere. This natural process is known as the greenhouse effect. Without greenhouse gases, Earth's average temperature would be -19°C instead of $+14^{\circ}\text{C}$, or 33°C colder. A few centuries ago, the concentrations of greenhouse gases began to increase due to the increasing demand for energy caused by industrialization and rising populations, and due to changing land use and human settlement patterns.

Q: What are the greenhouse gases?

A:

1. **Water vapour** is the most common greenhouse gas.
2. **Carbon Dioxide** is the most significant greenhouse gas released by human activities, mostly through the burning of fossil fuels. It is the main contributor to climate change.
3. **Methane** is produced when vegetation is burned, digested or rotted with no oxygen present. Garbage dumps, rice paddies, and grazing cows and other livestock release lots of methane.
4. **Nitrous oxide** can be found naturally in the environment but human activities are increasing the amounts. Nitrous oxide is released when chemical fertilizers and manure are used in agriculture.
5. **Halocarbons** are a family of chemicals that include CFCs (which also damage the ozone layer), and other human-made chemicals that contain chlorine and fluorine.

About PELUM Uganda

Since 1995, PELUM Uganda has been working to improve the livelihoods of small-scale farmers and the sustainability of rural communities through the fostering of ecological land use management.

PELUM Uganda shares skills and knowledge about good practices and techniques through a broad network of likeminded organisations including member organisations; undertakes research and demonstration projects; and advocates for policies that better support small-scale farmers. The network also facilitates experimental learning through exposure and exchange visits, topical dialogue and debate at national and regional level.

Next Issue

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Under The Theme:

Integrating land rights in agriculture for sustainable production

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