



Food Security in Disaster Risk Reduction (DRR)

Newsletter for DIPECHO / ECHO DRR Food Security Partners

Short-cycle crops to mitigate the risk of disaster by floods and cyclones

A common action to reduce the risk of disaster taken by the ECHO DRR Food Security projects in all three countries is the introduction of short cycled crop varieties for cereals including rice, maize sorghum and millet.

The short-cycle crop varieties have been improved through conventional crop breeding practices to give higher yields in a shorter space of time. The advantage is that this allows the beneficiary farmers to harvest earlier before the peak flood period, thereby minimising loss through cyclones and floods.

Another advantage of the short cycle crop varieties is that it is possible for farmers to produce additional crops within one year using lowlands that retain moisture after the rainy season, when other areas are dry.

Differences between Improved seeds and GMOs

It is important to note that the improved crop varieties used in these projects are not genetically modified organisms (GMOs). They have had their genetic make-up altered by conventional techniques such as selection and cross-breeding. *GMOs* on the other hand, are crops that have had their ge-

netic make-up altered by the addition of non-native genes through genetic engineering techniques, especially recombinant DNA techniques. Genes from another organism are harvested, inserted and expressed in the plant. The modification is usually to increase tolerance to stresses such as pests, herbicides, heat and water or to alter nutritional values.

A complete list of seeds used in the projects can be found on:

www.disasterriskreduction.net_southern_africa



Dr Yogendra Singh, of FAO Mozambique's DRM Unit shows the difference between traditional rice (left) and the short cycle rice variety (right) planted on January 29, 2011 in the Metapa Community Farmer Field School in Mogincual District, Mozambique. While the short cycle variety now heavy with grain, will be harvested in about two weeks, the traditional variety is months away from harvest. The earlier harvest of the short cycle variety will allow immediate replanting of the land with maize. *FAO REOSA, April 2011*



Flood and cyclone season closing with isolated cases of flooding in project areas

According to the assessment conducted by the Food Security & Livelihoods coordination cluster in **Madagascar**, Cyclone BINGIZA resulted in widespread flooding in the lowlands of the project areas in the south east. About 16% of the rice paddies were destroyed. Although the harvested rice was not affected, it only accounts for two months supply. The assessment recommended restarting the rice production for the current season and the off season starting in May/June and supporting short cycle maize and beans production to enable farmer to diversify their food and income sources.

In Salima District, central **Malawi** in March there was some small scale flooding in Kabumbu village where crops were affected. The constructed grain storage (under DIPHECO 1) withstood the flooding and stored maize was distributed to the affected members of the community. The current dry weather conditions in the project areas are favourable for drying of cereals, most of which are mature and ready for harvesting. During April there have been no reports of flooding in **Mozambique** and the agricultural season is generally looking good.

Income generation for sustainable interventions

The short-cycle seeds used in the ECHO DRR FS projects are limited to about three to five cycles of multiplication, after which new base seeds will have to be acquired. In an effort to increase the beneficiaries' ability to acquire future inputs, all the implementing partners have incorporated awareness raising as well as different income generation components into their activities. These include:

- cash-for-work through DRR aspects of the project, such as the riverbank reinforcement and reforestation activities
- production of counter season vegetable crops for consumption and sale
- sale of excess produce once seed storage for future planting for households and communities has been secured.



Dyke Construction, Chionjeza Malawi, *FAO REOSA, March 2011*

Riverbank enforcement

In Malawi's Salima District, COOPI, the implementing partner in the ECHO DRR FS project, is helping farmers prepare for flooding by the construction of dykes along the periphery of their maize crops. The objective of this activity is to facilitate excess water run-off from the crops to avoid water logging, and to collect water in the dykes for irrigation.

Similarly in the Nsanje District of Malawi, the implementing partner GOAL Malawi following a participatory vulnerability mapping assessment is assisting the Mbenje community to divert the river flow away from homes and crops. They are dredging the riverbed and increasing the height and reinforcing the riverbanks to avoid overflow. This is part of a cash-for-work programme to help generate income for the about 120 participants.



Riverbank reinforcement in Mbenje Malawi, *FAO REOSA, March 2011*

Mainstreaming gender in the DRR food security projects: What does it take?

Women play a vital role in ensuring household food security as food and income used by women is more likely to have a positive impact on family nutrition and child welfare.

50% of the 120 participants GOAL Malawi riverbank reinforcement project are women, identified by community/village leaders. Men mostly do the digging, while women carry the sand away from the river bed to the dyke. Elderly women are also engaged as child minders to enable mothers to work.

The rates of pay are calculated according to the country's labour laws and the number of workers and duration of contracts are calculated by GOAL's engineering coordinator in collaboration with the department of public works.

While there is consensus that DRR FS programmes should continue targeting women as the main beneficiaries, it is also recognized that income generation may entail extra work for them adding to their already high burden of domestic and care work.

In some cases while men are registered for the work, they send the wife or other family member to work on their behalf, and only come to collect the cash. To that effect, some women would prefer food for work over cash for work, as they would

have more control over its use.

In efforts to mainstream gender, men and women should be given equal opportunities to access work. In addition, women should have greater space to negotiate the kind of remuneration they receive for work done. Community sensitization on gender roles and responsibilities is crucial in addressing these issues.



81 year old Besi Boisi fetches drinking water and cares for children while their mothers work. She said that she would buy food with her pay. *FAO REOSA, March 2011*

Disaster preparedness: post-harvest storage

Constructing storage facilities

Effective storage is a central component in the ECHO FS/DRR intervention. All implementing partners are aiming to establish optimum cyclone and flood-proof storage structures and ways in which communities can better manage the stored seeds and crops.

In Malawi, COOPI is leading the way in constructing flood-proof storage in accordance with Department of Agriculture standards. These units, which are raised on a 1metre base made of concrete, sand and brick can store up to 5 MT of grain. COOPI trains the communities to construct the units, so that they are able to replicate them as needed and as funds become available.

In Mozambique OIKOS is promoting a 1 MT storage unit constructed mainly from locally available materials. Four units have been built at Farmer Field Schools to serve as models that the communities may adapt to suit their harvest size. The local government authority is considering promoting the model in other parts of Nampula province.

CARE and ICCO/FAS in Madagascar are assisting communities to build more of the storage units that were developed under the DIPHECO 1 as well as develop new improved models.



Top to Bottom: Model storage units in Mozambique, Malawi and Madagascar, *FAO, March 2011*

Promoting traditional post harvest treatment

While 'improved' storage is a key component to decreasing ECHO beneficiaries' vulnerability, traditional treatment of seed plays an important role in post harvest handling before storage.

In both Malawi and Mozambique, the Neem tree (*Azadirachta indica*, *Azadirachta indica*, *Antela azadirachta*, *Melia azadirachta*), a member of the mahogany (*Meliaceae*) family has a long-standing role in preserving seeds. It acts as a natural pesticide and fungicide.

Sacks used for storage are soaked in a mixture of neem leaves and water before packing the seeds. Crushed leaves are also sprinkled in the field to protect crops from termites.

For more information on the Storage Unit contact For the Neem Tree click here or visit www.fao.org and search for "Neem Tree"

Madagascar Updates

In the south east project areas rice transplanting and planting is underway following the flooding. About 10 000 kg of maize has been distributed to beneficiaries and 13 000 kg of beans are being distributed for planting in April and May.

349 farmers in the north east and south east project areas were this month trained in improved yam farming techniques, including disease control. The pest outbreak that followed the cyclone has largely been contained using natural insecticides.

Preparations are at an advanced stage for the agroforestry based farming training for farmers and ICCO/FAS project staff to be held at the end of April. FAO is providing agricultural inputs and equipment for the training.

A participatory evaluation workshop for FAO, ICCO/FAS and CARE Project and M&E officers was held at the end of March. The aim was to share experiences in project implementation and discuss best practices and lessons learned.

Malawi Updates

In March, FAO Malawi conducted a training on seed multiplication and storage principles and techniques for 25 extension workers and 5 GOAL Programme Officers in Nsanje District.

In order to ensure that good quality seed is passed on to second generation beneficiaries FAO Malawi in collaboration with seed specialists undertook a seed screening exercise in Nsanje and Chikhwawa district project sites from 12 to 16 April. The exercise included:

- Discussions with the lead farmers and extension workers on the importance of quality control in seed selection and handling
- Screening out gardens/fields that do not meet minimum standards of smallholder seed multiplication
- Advising farmers and extension workers on how to store and treat the selected seed

FAO Malawi conducted two field visits in March and April to project areas with REOSA and headquarters staff to understand implementing partners' needs in M&E, HIV and gender among other areas and the support FAO can offer.

Mozambique Updates

FAO has issued two tenders for procurement of a total of 39,390kg of dry season crops mainly vegetables (tomatoes, cabbage, lettuce, green pepper, eggplant, onions, covo and carrots) for distribution to the beneficiaries. FAO Mozambique conducted a field visit with the FAO REOSA M&E and Gender and HIV officer to assess project progress and support needs.

Participatory establishment of Training and Demonstration Units and construction of model grain storage units by OIKOS is in progress.

The baseline survey report has been finalized and will be shared with stakeholders this month.

Upcoming Meetings

Country project partners hold regular coordination meetings. Contact the Country ECHO FS Project Coordinators (FAO) for dates and details:

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About this Newsletter

This monthly newsletter aims to share information on activities, lessons learnt and information of interest to ECHO/DIPHECO project partners and stakeholders.

DRR FS Southern Africa Partners Website

This newsletter can be accessed on the partners website as well as more information on the projects. Visit:

www.disasterreduction.net/southern_africa

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