



# UN – PROJECT

REDUCING POST-HARVEST  
FOOD LOSSES: THE JOINT  
PIONEER PROJECT OF IFAD,  
WFP AND FAO

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# REDUCING POST-HARVEST FOOD LOSSES: THE JOINT PIONEER PROJECT OF IFAD, WFP AND FAO

Noodles

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In 1974, the United Nation (UN) identified food losses, those occurring before consumption level regardless of the cause, as a priority to promote development, economic growth and increase food and nutrition security. A year later, in 1975, the UN General Assembly imposed a resolution to reduce post-harvest food losses by 50% in ten years and asked competent international organizations to cooperate financially and technically in the effort to achieve this objective. Nevertheless, little attention, economic investments and research have been devoted to this cause until today. Post-harvest food losses are still endemic in less developed and low income countries. Around 150 million tons (15% of the internal production) of cereal crops are being lost every year. According to FAO, this is six times the amount of grains needed to feed the entire Third World's population (Gustavsson et al., 2011).

A pioneer project was launched in December 2013, through the joint efforts of the Rome-Based UN Agencies (RBA):FAO, IFAD and WFP (2015).The project, named the "Global Community of Practice (CoP) on Food Losses Reduction" and funded by the Swiss Agency for Development Cooperation, aimed to improve food security and income generation opportunities among small-holders in food deficit areas. In particular, it was focused on grains and pulses losses, which represent the greatest source of nourishment for the majority of the world's population. The pilot phase will end in 2017 and a follow-up project is envisaged. Although food losses are endemic in all the developing countries, the African territory is the most affected, with the equivalent of \$4 billion of grain being lost every year and the potential to feed at least 48 million people (The World Bank, 2011). For this reason, the RBA's project chose three African countries to test the project's efficiency. The chosen were Burkina Faso, The Democratic Republic of the Congo (DRC) and Uganda. The objectives of the project were to identify the critical point for food losses and test the best solutions and interventions, adapted for each specific environment. The end goal was to make the most efficient use of local resources, with the least possible expenses.

In Africa, technical limitations in the agricultural processes are the main cause of food losses. Indeed, the lack of adequate storage infrastructure reduces the ability to protect the products from heat and humidity and thus causes the natural defending systems of the products to be significantly diminished and easy to be attacked and contaminated by bacteria, fungus, and insect's pests. The *Prostephanus truncatus*, commonly referred to as the larger grain borer, causes serious weight loss is stored maize and dried cassava. In Zambia, 96% of maize –which represent 68% of the population's calories intake- was found contaminated by two type of mycotoxins: fumonisin, which can cause serious intoxications - and aflatoxin, which are carcinogenic and can inhibit growth in children and animals. Moreover, 98% of the population's blood samples were found to be contaminated by parasites

and to exceed the aflatoxin tolerable upper intake level imposed by law in both the EU and the USA. This result was mainly attributed to consumption of moldy grains (Kongolongo et al., 2009).

An additional concern is the diminished nutritional value of the food product, due to inadequate storage and transportation facilities. When conserved in poor environmental conditions nutrients like thiamin, carotene, and some amino acids such a lysine can be significantly reduced, up to 40% (Worldwatch Institute, 2011). Over 100.000 tons of mangos could be saved if only the farmers where equipped with greenhouse solar dryers, which would only require solar energy and manpower. This could furthermore contribute to reduce the risk of child vitamin-A deficiency, strongly affected by post-harvest food losses. This technique would in fact maintain the vitamin A content active up to 6 months of storage (Rankins, Sathe, and Spicer, 2008).

However, Africa also lacks the basic supporting infrastructure. Investments in storage and conservation facilities could be more effective if road, electricity, communication network, and fuel supply were also efficient. This would in fact promote national, regional and sub-regional trade, therefore reducing the overall expenses on the imported products. As less investment is directed towards imported supplies, more resources could be invested on health, education, and other household's benefits.

Experts estimated that post-harvest food losses could be substantially reduced through adequate education. In Africa, there is still no need to build innovative systems or buy expensive machineries, preservatives or pesticides. Farmer's education should be a priority. By teaching the farmer show to use the simplest conservation techniques and make a more efficient use of the local and natural resources, food security could be increased while at the same time promoting the development of local economy. For example, the bark and roots of the *Securidacalongepedunculata*, a naturally growing tree in Africa, have been proved able to kill 100% of the adult insects attacking grains deposits. If only farmers were aware and adequately trained, this could be a very effective natural alternative to the expensive and low-quality chemical pesticides, most of the time difficult to source in remote rural area (Jayasekara et al., 2005).

One of the RBA's pilot project innovation lies in the creation of an online platform – called the Global Community of Practice (CoP) - that aim to facilitate stakeholder's interaction and knowledge sharing via online lessons on food losses, moderated discussion forum and link to database and libraries. Through high visibility and communication, this online knowledge platform aims to become a global reference point on

promotion and facilitation of the development of post-harvest management and food losses reduction (FAO,2016).Another strength of the project is the regulatory frameworks–policy, standards, norms–aimed to reduce food losses, at both a regional and national level.

In conclusion, this pioneer project could have a major impact on the livelihoods of millions of smallholder farmers in the developing world. This could positively affect not only the population’s health and condition of life but the country’s economic development overall. Eventually, this would create the right conditions for a continued growth to occur. IFAD, WFP and FAO hope that the mobilization of their individual strength will eventually stimulate the country’s government to take further actions. Moreover, in case of positive outcomes, the “Global

Community of Practice (CoP) on Food Losses

Reduction” could act as a model for future projects. In light of the projected population’s exponential growth, the need for a surplus of food products will soon be inevitable. This will however result in increased need for water, land and energy, which will inevitably lead to an increased exploitation of the already limited and non-renewable hearth’s resources. Reducing post-harvest food losses is today of paramount importance to increase food security and reduce malnutrition. This will furthermore contribute to reduce the risk of environmental degradation and prevent the risk of an irreversible climate change (HLPE, 2014).