

Who does what in post-harvest loss reduction?

The network of actors working on the reduction of post-harvest losses is complex and not easy to understand at first glance. This article attempts to give an orientation on who the actors are, how they are interconnected and what important aspects they are dealing with. No matter what kind of actor, all of them are eager to contribute to minimising food losses to keep harvest products in the value chain, both to strengthen food security and to reduce the waste of inputs and resources during production.

■ Multilateral organisations

At the level of multilateral organisations the following actors are aiming to reduce food losses. To start with, the **World Bank** (WB) strives to foster technology adoption and private sector involvement. The project AgResults (formerly known as the agricultural pull mechanism) tries to reach these goals through co-operation with e.g. the UK Department for International Development (DFID), the Canadian International Development Agency (CIDA) and the Bill and Melinda Gates Foundation. In addition to this, the study "Missing Food: The Case of Postharvest Grain Losses in Sub-Saharan Africa" (2011), in collaboration with the Natural Resources Institute (NRI) and the United Nations Food and Agriculture Organization (FAO), intends to close the knowledge gap, raise the profile of post-harvest losses (PHL) and provide policy recommendations.

The **International Fund for Agricultural Development** (IFAD) concentrates its activities on value chain analysis and financing projects.

In 2009, the **World Food Programme** (UN WFP) installed the four-year "purchase for progress" (P4P) project, which is a market incentive for smallholders. It includes purchase from local traders, rapid quality checks on the farms and trainings provided by the FAO and NGOs.

The plans and goals of the **African Development Bank** (AfDB) are summarised in the AfDB Programme for Post-Harvest Loss Reduction. It aims to reduce poverty and to push sustainable food security on the medium scale by reduction of physical losses, improved food availability and enhanced product quality. This is to be reached by investments in rural infrastructure that facilitate supply-chain efficiency as well as strengthening post-harvest

and agro-processing technologies. The **African Agribusiness and Agroindustries Development Initiative** (3ADI) takes up this approach and widens its goals in co-operation with other multilateral organisations to increase agribusiness and agroindustries. It therefore refers to investments being required for "skills and technologies needed for the post-production segments of agriculture value chains" as a pillar of its strategy.

The **Food and Agriculture Organization of the United Nations** (FAO) assists member countries in meeting their PHL-reduction goals. In building educational capacity and by providing good practice examples for farmers, improvement is being achieved at local level. Co-operation with other actors is manifold. Through co-ordination by the **Information Network on Post-harvest Operations** (INPhO) and the initiative of the Save Food Network (see page 11), governments and organisations can benefit from the FAO's competences.

The **African Union** has introduced the **Comprehensive Africa Agriculture Development Programme** (CAADP). This programme sets ambitious economic growth goals to generate wealth through agriculture-led development in African countries. PHL are addressed in the second of its four pillars. Storage, packaging and handling technologies are sought to turn the negative economic effects of food losses into additional resources becoming available on the market.

The **Global Donor Platform for Rural Development** is a forum of multilateral donors, international financing institutions, inter-governmental organisations and development agencies. Its workstream on PHL is a platform for professionals to exchange and explore the possibilities for donors to tackle PHL and food waste to reach aid efficiency.

■ National actors

As well as multilateral organisations, many different national actors have programmes to reduce PHL. Some of them will be mentioned in the following section as examples.

The **German Federal Ministry for Economic Cooperation and Development** (BMZ) has launched a ten-point programme on rural development announcing action to support and improve PH management, create public awareness and demonstrate the benefits of the reduction of food losses after harvest and along the food value chain. The **Deutsche Gesellschaft für Internationale Zusammenarbeit** (GIZ) is implementing the BMZ's policy by organising thematic workshops, elaborating concepts and carrying out several country studies on PHL. Furthermore, the reduction of food losses is addressed in projects on value chain development and other development projects that are carried out in partner countries.

The **German Federal Ministry of Food, Agriculture and Consumer Protection** (BMELV) campaigns to reduce food waste during retail and distribution and at consumer household level. Its agency, the **Federal Office for Agriculture and Food** (BLE), hosts the **African Postharvest Losses Information System** (APHLIS) network. The system connects local experts in eastern and southern Africa and has recently expanded to West African countries. It dates back to the overall objective to develop an information system capable of generating figures for quantitative assessments of PHL of cereal grains. It makes data on the annual losses of cereals available to individual countries and regions. Among other sources it is taking the results of the "Missing Food" study into account.

The **Swiss Agency for Development and Cooperation** (SDC) has been focusing on

capitalising 20 years of Central American post-harvest experience (“Postcosecha”). Based on documented impact in Central America, SDC’s post-harvest priority now is sub-Saharan Africa. Implementing the message of WB’s and FAO’s recent “Missing Food” report, SDC is presently following a strategy of “highlighting what works”, intending to show that post-harvest losses can and should also be avoided in sub-Saharan Africa, through a scaling-up of the best existing technical solutions. The objective is to eventually make it possible to co-ordinate all interested actors in a

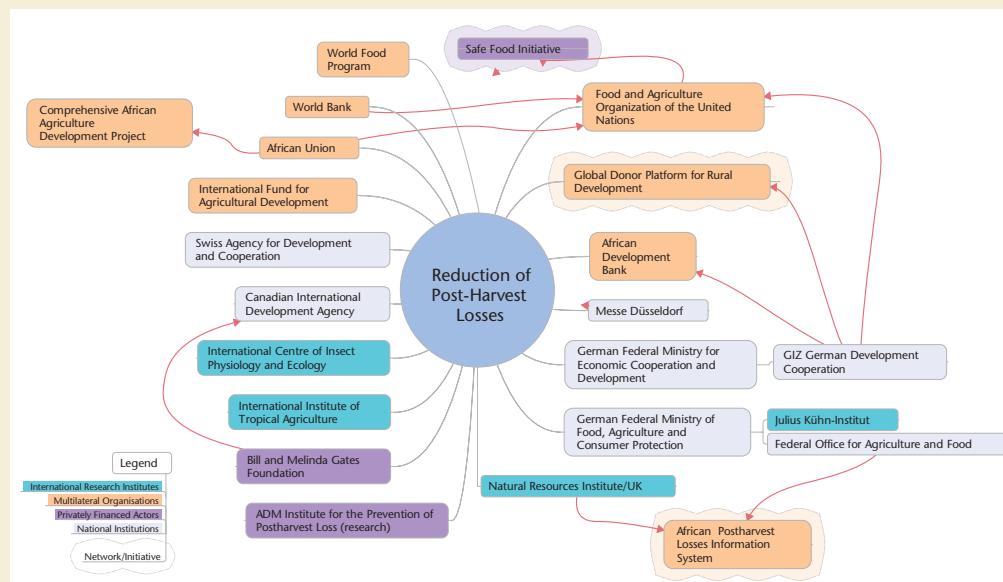
“Community of Practice” for organising knowledge sharing and the scaling-up of efforts for PHL reduction. SDC has started investing in several projects in sub-Saharan Africa, having so far earmarked 50 million Swiss francs for three programmes in more than ten countries for the next eight to ten years. The main partners so far are the International Maize and Wheat Improvement Center (CIMMYT), HELVETAS-Intercooperation, the FAO, the IFAD and the WFP.

■ Research activities

Both the public and private actors as well as the multilateral organisations depend on new input through research. Working in partnership with development agencies, the **Natural Resources Institute**, University of Greenwich, UK (NRI) contributes to pro-poor policy formulation and undertakes research and technical evaluations that underpin planning and investment decisions of its partners (see above: Missing Food study and APHLIS). NRI’s research focuses on food storage, food safety, food processing and the quality management of perishable produce. It sees itself as a leading authority in the field of root and tuber crops.

Among the research institutes, the **International Centre of Insect Physiology and Ecology** (ICIPE, Kenya) seeks to obtain

Some of the important actors and their actual cooperation from GIZ’s perspective



better evidence of PHL with data on which food is lost where, to help decision-makers and governments to optimise their policies and strategies for preventing losses.

The **International Institute of Tropical Agriculture** (IITA, Nigeria) does research for development and focuses on cowpea, soybean, banana/plantain, yam, cassava and maize crops. One example of its projects is the attempt to develop and evaluate strategies to reduce aflatoxin contamination of maize in Africa. The German **Julius Kühn-Institut** is currently examining storage and packaging improvement using nitrogen, carbon dioxide, high and low temperature treatment, plant substances as pesticides or attractants as well as the use of diatomaceous earth (Kieselgur) as a kind of natural pesticide (see also pages 26–29).

■ Private sector initiatives

Finally, to also introduce the private sector, one has to mention the recently founded **ADM Institute for the Prevention of Postharvest Loss**. It is a collaborative venture of the Archer Daniel Midlands (ADM) company and the University of Illinois at Urbana-Champaign intended as a response to concern over growing losses. The Institute’s vision is to “serve as an international information and technology hub for evaluating, creating and disseminating

economically viable technologies, practices and systems that reduce post-harvest loss in staple crops”.

Thanks to the volume of finance provided by the **Bill and Melinda Gates Foundation** (B&MGF), there are a diversity of projects on PHL. In co-operation with the World Food Logistics Organization the foundation seeks to improve knowledge on PHL in sub-Saharan Africa and South Asia. Furthermore, it has initialised the founding of the **Partnership for Aflatoxin Control in Africa** (PACA) that now serves as a basis to join efforts in this field of lost food. Last but not least, the private sector co-operation venture **Save Food Initiative** has been initiated by the FAO and **Messe Düsseldorf** (trade fair organisation). The four main goals are awareness raising, collaboration, policy, strategy and programme development. This initiative is therefore supporting private sector investment programmes in developing countries, has held connection meetings and has carried out two studies on food losses.

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