





AU-FAO PHL REGIONAL WORKSHOP REPORT

FAO PROJECT GCP/RAF/503/RRF

Support to African Union in the development of policies and strategies for Country-specific plans to reduce post-harvest losses"

Southern Sun Mayfair Hotel, Nairobi Kenya. 24 to 25 July 2018



AU-FAO PHL REGIONAL WORKSHOP REPORT

KEY DATA

Name of Project:	Support to African Union in the development of policies and strategies for country-specific plans to reduce post-harvest food losses
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Report Prepared and Submitted by

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This report has been prepared following a regional workshop supported by the Rockefeller Foundation.

The content of this report is the sole responsibility of Cephas Taruvinga and can in no way be taken to reflect the views of the Rockefeller Foundation and the African Union

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The Regional workshop was organized jointly by the African Union Commission DREA division and FAO and it was funded by the Rockefeller Foundation.

The workshop was officially opened by the Hon Mwangi Kiunjuri, The Cabinet Secretary, Ministry of Agriculture, Livestock, Fisheries and Irrigation, with welcoming remarks from the FAO SRC-SFE & Representative to the AU, Dr David Phiri, and Associate Director of the Rockefeller Foundation Africa Regional Office, Ms Betty Kibaara and AUC Head of the Food Security Division, Dr Janet Edeme. The workshop was facilitated Mr. Douglas Ouma and Dr Janet Edeme chaired the workshop.

The Technical Adviser, Cephas Taruvinga gratefully acknowledges the support and guidance of many but particularly, Stephanie Gallatova, Moussa Djagoudi, Joseph Mpagalile, Komla Bissi and Ms Olivia Kajanda.

The author takes full responsibility for errors and any omissions in this document.

ABBREVIATIONS AND ACRONYMS

BR Biennial Review CAADP Comprehensive Africa's Agricultural Development Programme CSO Civil Society Organization FAO Food and Agricultural Organization of the United Nations FARNPAN Food Agriculture and Natural Resources Policy Analysis Network FLAM Food Loss Analysis Methodology GAP Good Agricultural Practice GFLI Global Food Loss Index IFAD International Fund for Agricultural Development IFPRI International Food Policy Research Institute IGAD The Intergovernmental Authority for Development LoA Letter of Agreement MCC Milk Collection Center M&E Monitoring and Evaluation MoL Ministry of Lands NEPAD New Partnership For Africa's Development NGO Non-governmental organization NPCA NEPAD Planning and Coordination Agency NSA Non State Actors PHL Post-Harvest Loss PHM Post-Harvest Management REC Regional Economic Community RF Rockefeller Foundation SADC Southern Africa Development Community SDG Sustainable Development Goal SO Strategic Objective TWG Technical Working Group	AUC	African Union Commission
CSO Civil Society Organization FAO Food and Agricultural Organization of the United Nations FARNPAN Food Agriculture and Natural Resources Policy Analysis Network FLAM Food Loss Analysis Methodology GAP Good Agricultural Practice GFLI Global Food Loss Index IFAD International Fund for Agricultural Development IFPRI International Food Policy Research Institute IGAD The Intergovernmental Authority for Development LoA Letter of Agreement MCC Milk Collection Center M&E Monitoring and Evaluation MoL Ministry of Lands NEPAD New Partnership For Africa's Development NGO Non-governmental organization NPCA NEPAD Planning and Coordination Agency NSA Non State Actors PHL Post-Harvest Loss PHM Post-Harvest Management REC Regional Economic Community RF Rockefeller Foundation SADC Southern Africa Development Community SDG Sustainable Development Goal SO Strategic Objective	BR	Biennial Review
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FLAM Food Loss Analysis Methodology GAP Good Agricultural Practice GFLI Global Food Loss Index IFAD International Fund for Agricultural Development IFPRI International Food Policy Research Institute IGAD The Intergovernmental Authority for Development LoA Letter of Agreement MCC Milk Collection Center M&E Monitoring and Evaluation MoL Ministry of Lands NEPAD New Partnership For Africa's Development NGO Non-governmental organization NPCA NEPAD Planning and Coordination Agency NSA Non State Actors PHL Post-Harvest Loss PHM Post-Harvest Management REC Regional Economic Community RF Rockefeller Foundation SADC Southern Africa Development Community SDG Sustainable Development Goal SO Strategic Objective	FAO	Food and Agricultural Organization of the United Nations
GAP Good Agricultural Practice GFLI Global Food Loss Index IFAD International Fund for Agricultural Development IFPRI International Food Policy Research Institute IGAD The Intergovernmental Authority for Development LoA Letter of Agreement MCC Milk Collection Center M&E Monitoring and Evaluation MoL Ministry of Lands NEPAD New Partnership For Africa's Development NGO Non-governmental organization NPCA NEPAD Planning and Coordination Agency NSA Non State Actors PHL Post-Harvest Loss PHM Post-Harvest Management REC Regional Economic Community RF Rockefeller Foundation SADC Southern Africa Development Community SDG Sustainable Development Goal SO Strategic Objective	FARNPAN	Food Agriculture and Natural Resources Policy Analysis Network
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IGAD The Intergovernmental Authority for Development LoA Letter of Agreement MCC Milk Collection Center M&E Monitoring and Evaluation MoL Ministry of Lands NEPAD New Partnership For Africa's Development NGO Non-governmental organization NPCA NEPAD Planning and Coordination Agency NSA Non State Actors PHL Post-Harvest Loss PHM Post-Harvest Management REC Regional Economic Community RF Rockefeller Foundation SADC Southern Africa Development Community SDG Sustainable Development Goal SO Strategic Objective	IFAD	International Fund for Agricultural Development
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M&E Monitoring and Evaluation MoL Ministry of Lands NEPAD New Partnership For Africa's Development NGO Non-governmental organization NPCA NEPAD Planning and Coordination Agency NSA Non State Actors PHL Post-Harvest Loss PHM Post-Harvest Management REC Regional Economic Community RF Rockefeller Foundation SADC Southern Africa Development Community SDG Sustainable Development Goal SO Strategic Objective	LoA	Letter of Agreement
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NPCA NEPAD Planning and Coordination Agency NSA Non State Actors PHL Post-Harvest Loss PHM Post-Harvest Management REC Regional Economic Community RF Rockefeller Foundation SADC Southern Africa Development Community SDG Sustainable Development Goal SO Strategic Objective	NEPAD	New Partnership For Africa's Development
NSA Non State Actors PHL Post-Harvest Loss PHM Post-Harvest Management REC Regional Economic Community RF Rockefeller Foundation SADC Southern Africa Development Community SDG Sustainable Development Goal SO Strategic Objective	NGO	Non-governmental organization
PHL Post-Harvest Loss PHM Post-Harvest Management REC Regional Economic Community RF Rockefeller Foundation SADC Southern Africa Development Community SDG Sustainable Development Goal SO Strategic Objective	NPCA	NEPAD Planning and Coordination Agency
PHM Post-Harvest Management REC Regional Economic Community RF Rockefeller Foundation SADC Southern Africa Development Community SDG Sustainable Development Goal SO Strategic Objective	NSA	Non State Actors
REC Regional Economic Community RF Rockefeller Foundation SADC Southern Africa Development Community SDG Sustainable Development Goal SO Strategic Objective	PHL	Post-Harvest Loss
RF Rockefeller Foundation SADC Southern Africa Development Community SDG Sustainable Development Goal SO Strategic Objective	PHM	Post-Harvest Management
SADC Southern Africa Development Community SDG Sustainable Development Goal SO Strategic Objective	REC	Regional Economic Community
SDG Sustainable Development Goal SO Strategic Objective	RF	Rockefeller Foundation
SO Strategic Objective	SADC	Southern Africa Development Community
,	SDG	Sustainable Development Goal
TWG Technical Working Group	SO	Strategic Objective
	TWG	Technical Working Group

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EXECUTIVE SUMMARY

This document is a report on the proceedings of the AU-FAO PHL Regional Workshop held on 24 to 25 July in Nairobi, Kenya at the Mayfair Southern Sun Hotel. The workshop is a key activity of the AU-FAO PHL project. The project was developed through a tripartite arrangement between Rockefeller Foundation, FAO and the African Union. The Rockefeller Foundation provided funding for the project, FAO is the technical partner and AU and its member states are the beneficiaries.

The two-day regional workshop was held under the theme: Supporting the African Union in the development of policies and strategies for Country-specific plans to reduce post-harvest losses. The workshop brought together about 70 PHL experts and actors from the academia, civil society, research, technical development agencies and the media. The participants came from Nigeria, South Africa, Ethiopia Netherlands, Zambia, Tanzania, Zimbabwe, Kenya, Italy and Djibouti.

The direct beneficiaries of the project are the African Union Commission and four countries which include Zambia, Tanzania, Zimbabwe, Kenya, The objectives of the workshop were: to validate project results and findings, disseminate information on lessons learnt, good practices and knowledge material, identify inputs for inclusion into future project activities and agree on the way forward on the envisioned Phase 2 project.

The project had a two tier approach to its implementation – that is separate activities were implemented at the AU-level and at the country level. Each level had its own work plan and implementation arrangements. The AUC level activities are: mapping of PHL activities on the continent; developing of post-harvest national investment guidelines/checklist; developing an M&E framework to track achievement to achieve 2025 PHL goal; developing a continental PHL strategy; providing technical support to African Union and its member states.

Activities at country-level included: forming a national post-harvest technical working group; conducting a loss assessment study; developing a national Post-Harvest strategy; developing country level Post-Harvest loss indicators; train stakeholders on food loss assessment; incorporating food loss assessment into tertiary training; establishing a PHL website, developing Post-Harvest policy briefs, convening a national workshop to validate project results and findings. After presentations of the results and findings of these key deliverables, the country teams were asked to update their documents based on suggestions and recommendations from the workshop.

One of the key deliverables is of the project is the establishment of PH technical working groups. The presentations on this highlighted the critical role and the composition of the Technical working Group. The TWG is mandated to coordinate and oversee all issues related to achieving the country's food loss goals. The terms of reference of the TWG were presented and it is expected that all AU member states will adopt the codes to suit their circumstances.

The issues of data accuracy and harmonization was also discussed. There is need to involve the country's bureau of statistics in developing the tools and systems to collect and manage PHL data. It was agreed that the AU should involve FAO when reviewing its M&E system to

ensure data harmonization and the incorporation of the new global food loss index (GFLI) which is being developed by FAO.

Partner experiences in implementing PHL and Food Loss projects were shared by FARNPAN a developmental NGO based in South Africa and Wageningen University from the Netherlands. Based on their presentation, it was clear that the AU-FAO PHL initiative can benefit from establishing partnerships especially from the available global expertise and the coordinated efforts.

In his presentation on Perspectives from the Post-Harvest Loss community, Professors Linus Opara from the Southern African Research made an interesting presentation which touched on the need to engage the private sector and how they can exploit the available PHL opportunities. For instance, he said that over \$90 million worth of milk is lost each year in Eastern Africa and the Near East (FAO, 2005). For every 100 litres of milk produced, up to 5 jobs can be created in related industries like processing and transport if efforts are made to reduce the milk losses.

Engaging the private sector requires their participation in the planning process. This requires mapping the actors, and defining their roles. There is need to make a business case for investment in postharvest loss reduction to attract private players. Specifically looking at the minimum/acceptable loss for specific points/value chains. This involves undertaking cost-benefit analysis and impact studies. In conclusion he averred that Africa needs a transformed agriculture that can demand and pay for improved (postharvest) services, technologies and human resource.

The workshop deliberations produced key conclusions and observations these include:

- awareness creation which is essential because only 5 (9%) countries out of 49 managed to report PHL during the AU January 2018 biennium review. Also assessment methodologies and tools should be deployed so that accurate data and indicators are provided.
- Private sector engagement was noted to be low on the continent and thus a strong business cases should be developed to turn the current challenges in post-harvest management into business opportunities.
- Drawing from the lessons learnt in organizing the first African Congress on Post-Harvest Loss, it was recommended that a steering committee with clear terms of reference should be established. The committee will be responsible for convening and organizing the follow up congress. The committee should be institutionalized within the AU to sustain the momentum of post-Harvest management on the continent.
- FAO should be seconded to the African Union biennial review task force to provide the expertise required when reviewing the African agriculture score card which has PHL as a target under the Malabo goals.

Rockefeller Foundation in appreciation of the success and achievements of Phase 1 offered \$50 000 to consolidate the achievements of the post-harvest project and develop a successor program to implement the newly developed AU Postharvest Strategy.

QUOTABLE QUOTES

"Wasting less means feeding more" Dr. Janet Edeme

"If PHL is managed, we will make Africa food secure" Dr Richard Lesiyampe, Principal Secretary, Crop production and Development

"Let's make PHL the chicken pox of Africa by 2050" Olivia Karanja, Rockefeller Foundation

"Can Africa feed itself? Yes, it is possible, it is up to collective effort with different levels of responsibility" Prof Linus Opara, Distinguished Professor,

"What is being presented here on PHL is beyond expectation. What do you need us to do to sustain this momentum?" Betty Kabara Associate Director Rockefeller Foundation

"Something is wrong with the slogan Africa is rising if we don't see the opportunities in postharvest management" Prof Linus Opara, Distinguished Professor,

"The fact that so much food goes to waste is not only a global problem but a problem within Africa which need concerted effort to address" Piers Simpkin FAO Senior Coordinator

MEDIA COVERAGE OF THE WORKSHOP

- 1. Please follow this link to watch the Regional workshop video https://www.dropbox.com/s/2ne8uwwyd2rzuyd/FINAL%20FINAL%20PHL%20VIDEO.mp4?dl=0
 - 2. KTN News

https://www.youtube.com/watch?v=SjRGhfmZtd8

3. Relief Web

https://reliefweb.int/report/world/improving-food-security-africa-through-enhanced-partnerships-and-post-harvest

4. FAO Website

http://www.fao.org/africa/news/detail-news/en/c/1147529/

BACKGROUND TO THE WORKSHOP

Since June 2016, FAO in collaboration with the African Union through support from the Rockefeller Foundation has been implementing the project- *Support to African Union in the development of policies and strategies for country-specific plans to reduce post-harvest losses.* The main objectives of the project is to support the African Union and its member states achieve the Malabo and SDG goals which have the following targets:

- Malabo Commitment 3:b To halve the current levels of Post-Harvest Losses, by the year 2025
- SDG12:3 By 2030, halve per capita global food waste at the retail and consumer levels and reduce food losses along production and supply chains, including postharvest losses.

The project is contributing towards achieving the food loss reduction goals through the following key results areas:

- 1. Stronger coordination of food loss reduction initiatives on the continent and improved alignment to the Malabo Roadmap.
- 2. Improved capacity of AU Member States in the design and implementation of food loss reduction policies, strategies, and programmes.
- Lesson learning and dissemination of good practices and success stories on the continent.

To achieve these outcomes the Food and Agriculture Organization of the United Nation, the Rockefeller foundation and the African Union Commission launched a project to support the African union and its member states in the development of policies and strategies for country specific plans to reduce post-harvest losses. In this tripartite partnership, the Rockefeller foundation provided the financial resources, while FAO have been providing technical support and the AUC and its member states are the beneficiaries.

The implementation of the project was both at the AUC and at country level. At the AU level it aimed at reinforcing the coordination of food loss reduction initiatives and improve alignment to the Malabo roadmap.

The following activities were implemented at the AU level

- Mapping of PHL activities in the continent
- Developing of Post-Harvest National Investment guidelines/checklist
- Developing an M&E framework to track achievement of 2025 PHL goal
- Developing a continental PHL strategy
- Provision of PHM technical support to African Union member states

At country level, four countries were selected to pilot the implementation of project activities. The four countries are Kenya, Zimbabwe, Zambia and Tanzania. Each country has been implementing the following activities:

- Formation of a national post-harvest technical working group.
- Undertake a Food Loss Assessment study on one priority commodity.
- Develop a national Post-Harvest strategy that will enable the country achieve its food loss reduction goals.
- Develop food loss reduction indicators for five priority commodities.

- Train stakeholders on Post-Harvest loss assessment
- Incorporate Post-Harvest loss assessment training into tertiary training
- Develop Post-Harvest Management websites
- Develop Post-Harvest policy briefs
- Convene national workshops to validate project outputs and share findings

Objectives of the regional workshop

The regional workshop was convened to achieve the following four objectives:

- a. To discuss and validate project results and findings,
- b. Disseminate information on lessons learnt, good practices and knowledge material
- c. Identify inputs for inclusion into future project activities and sustainability plans.
- d. Agree on the way forward on Phase 2 of the project

Participants

About 70 participants (Annex 1) attended the workshop. The participants came from nine countries and represented 23 organisations. The participants work in the post-harvest field as researchers, trainers and regional economic community representatives, policy experts, economists. project managers, M&E specialist, academia, NGOs. agricultural commissioners, media personnel and development partners. The majority of the participants came from the pilot countries and were involved with the project as consultants, project staff, CAADP coordinators and PH technical working group members. Based on the participants' profiles, it showed that they represented diverse interests on post-harvest management matters thus bringing in vital expertise and experience that is essential in validating the project results and findings.

Workshop approach and methodology

The workshop was organized as a two day event divided into sessions (Annex 2). The sessions were structured such that the presentations were linked to each other. This structure informed discussions of the next session or theme.

The sessions were structured along the following themes

- Official opening
- Project work plans and achievements
- Loss assessments
- PHL M&E
- PHL Strategies
- Phase 2 plans
- Next steps and key messages

The facilitation was very participatory and diverse this entailed presentations, plenary discussions, key note speeches, questions and answers sessions, and press conference sessions.

WELCOME REMARKS

The Senior Programme Coordinator FAO Kenya Mr. Piers Simpkin, standing in for the FAO Sub Regional Coordinator (SRC) and Representative to the African Union (Dr David Phiri) welcomed everyone to the AU-FAO Regional Workshop. He acknowledged the Cabinet Secretary, Ministry of Agriculture, Commissioners of Agriculture from Nigeria, post-harvest experts, partners, FOA staff and the media. He advised the audience that FAO was designated the custodian agency for target SDG12.3 which embraces the Malabo 2025 PHL target. He said to support the AU and its member states to achieve these targets a tripartite partnership between FAO, AU and the Rockefeller Foundation was formed and developed the project:

Support to the African Union in the development of policies and strategies for country-specific plans to reduce post-harvest food losses. He acknowledged Rockefeller Foundation who provided financial support while FAO provide the technical support and AUC and its member states were the beneficiaries.

The SRC highlighted that the main purpose of the regional workshop was to validate results and findings developed by project countries and the African Union and see how other African countries can adopt them to achieve their PHL goals. He highlighted the achievements of the to date which include developing PH management capacity at African Union, putting in place M&E systems, establishing national PH Technical working groups, incorporating the FAO food loss assessment methodology into tertiary training and developing PHL strategies for the AUC and pilot countries. He hope that other countries will adopt these systems to achieve their PHL targets.

The Associate Director Rockefeller Foundation Ms Betty Kabaara in her welcome remarks advised that the Rockefeller Foundation has a long history in investing in agriculture on the African continent - from the Green Revolution in Asia to the Green Revolution in Africa. She noted that the focus of agricultural growth has been on productivity and expansion of farmland, with little attention paid to food that is either lost or wasted along value chains. It is against this background that the Rockefeller Foundation made investments to reduce food loss through the YieldWise initiative. The goal of YieldWise Initiative is to reduce food losses by at least 50% in representative value chains (maize - Tanzania, Mango and Cassava and Tomato in Nigeria) with the aim of improving the millions of rural lives.

To accomplish the goal of reducing food losses goal, the Rockefeller Foundation has identified an innovative approach that integrates four components to prioritize food loss reduction in the value chain: (1) aggregation and smallholder farmer capacity development, (2) market linkages, (3) adoption on loss-reducing technologies or practices, and (4) financial interventions.

She also stated that, enabling policies have the ability to scale up successes in reducing PHL along value chains. It is against this background that the Rockefeller Foundation supported FAO to provide technical assistance to the African Union in the development of policies and strategies for country-specific plans to reduce post-harvest loss.

The AUC Head of Rural Economy Division Dr. Janet Edeme who advised the workshop that she brought greetings from H.E. Amb. Josefa Sacko, the AUC Commissioner of Rural Economy and Agriculture. Amb Josef Sacko has taken a keen interest in the progress of the AU-FAO Project and is keenly awaiting its outcome as she has been nominated as one of the 12.3 Champions. The Champions 12.3 is a coalition of executives from governments, businesses, international organizations, research institutions, farmer groups, and civil society dedicated to inspiring ambition, mobilizing action, and accelerating progress toward achieving SDG Target 12.3 by 2030..

She reminded the audience that through the call for action of the Malabo Declaration, the African Union Commission (AUC) through the Department of Rural Economy and Agriculture (DREA) were mandated to operationalise the Malabo Declaration. Furthermore, the AUC was mandated to conduct on a biennial basis, beginning from year 2017, an Agricultural Review Process and report on progress to the African Union Assembly starting with the January 2018 Ordinary Session.

Among the many targets that the AUC was mandated to report on in the Agricultural Review Process is the target to halve the current levels of Post-Harvest Losses by the year 2025. Touching on the Biennial Report on Malabo Declaration commitments on the post-harvest losses, she indicated that only five countries on the continent manage to collect PHL data and report at the biennium review event held in January 2018. The countries are Malawi, Mauritania, Rwanda, Togo and Uganda. This indicates that only 9% of the countries demonstrated explicit efforts and reporting on postharvest losses in their countries. Worrisomely only 76% of the continent (42 Member States) did not report on the indicator.

Whilst not reporting on this indicator does not mean that there are no post-harvest losses in those countries, the lack of data on the indicator seems to indicate a major challenge with post-harvest loss management including monitoring and reporting in the majority of the African Union Member States.

Opening remarks

In his opening remarks the Principal Secretary in Kenya's Ministry of Agriculture, Livestock and Fisheries, Mr Richard Lesiyampe said he highly appreciates the collaboration between FAO and Rockefeller Foundation in developing the project to support the African Union and its member states to reduce post-harvest losses to improve food security and achieve their food loss reduction targets.

With respect to Kenya he said, "As a country we are very grateful to be among the four countries where project activities have been piloted The project has assisted us to come

up with targeted interventions for post-harvest loss reduction which will contribute to the realization of 100% food and nutrition security for all Kenyans" Mr Lesiyampe appealed to other partners to come on board and take the project forward expanding it to all AU member states.

Declaring the workshop open he welcomed everybody to enjoy the Kenyan hospitality and engage in fruitful discussions during the workshop.

SUMMARY OF PROCEEDINGS RESULTS AND OUTCOMES

INTRODUCTIONS

The Workshop facilitator Douglas Ouma presided over introductions. All participant s were asked to identify themselves stating their organisation and country of origin.

The project technical adviser outlined the background and objectives of the workshop. Among other project activities and outputs, the holding of the workshop is an activity and output of the AU-FAO PHL Project. The convening of the workshop is a culmination of 18 months of implementing project activities.

BACKGROUND TO THE PROJECT

Moussa Djagoudi the Regional Coordinator and Agribusiness Officer made a presentation on behalf of Stephanie Galatova the project Lead Technical Officer on the background to the project.

In his presentation he stated that the project was a response to high post-harvest losses which hamper the transformation of Africa's agricultural sector. The high PH losses are compounded by the lack of accurate estimates of the magnitude of losses. He highlighted that the impetus to reduce PHL gained further momentum with the adoption of the Malabo and SDG 12.3 post-harvest loss reduction targets. The rapid evolution of the global agrifood systems has necessitated the need for new strategies and approaches to reduce food losses. Ideally interventions need to focus on systematic improvements to the efficiency and sustainability of entire supply chains, with clear roles for public and private sectors.

The AU-FAO Project was developed in response to the PHL problem. The project has a two tier approach to addressing the PHL on the continent. The approach involves building PHL capacity at the African Union level to empower it to take ownership of the continent's food loss reduction agenda. The second level involves working at country level with selected countries to build the capacity of national stakeholders and institutions to intervene and monitor progress to achieve the Malabo and SDG PHL targets

GLOBAL PERSPECTIVE ON FAO EFFORTS TO REDUCE PHL

The ESN Project Manager Ms Mireille Totobesola, made a presentation on behalf of the Senior Enterprise Development Officer, Ms Rosa Rolle. The presentation was titled - The global perspective on ongoing efforts to reduce food losses and how this has influenced African PHL efforts. The presentation as the title says gave an overview of the nexus of food losses and waste and FAO efforts in addressing this "new" global problem.

FAO efforts to reduce food losses and waste have been ongoing and gained momentum in the last five years. Global and regional goals and frameworks are crucial for ensuring

sustainable and concerted actions in resource mobilization and PHL loss reduction. Such efforts have impacts at scale at country level

In Sub Saharan Africa, food loss analyses (FLA) by FAO focused on grain supply chains because of high level of demand from countries in this region. There is a need to also address PHL in nutritious and perishable foods (including fruits and vegetables, fish, dairy).

The following table depicts PHL studies carried by FAO globally in recent years.

	Cereal	Dairy	Fish	Fruit	Legumes	Oilseed	Tubers	Bananas	Total
Latin America/Caribbean	0	0	0	6	0	0	3	0	9
N Africa, West & Cent Asia	0	0	0	0	0	0	0	0	0
South Asia	3	1	0	2	1	0	0	0	7
Sub-Saharan Africa	21	2	2	4	5	1	3	2	40
Commodity	24	3	2	12	6	1	6	2	56

Globally 40 out of 56 PHL studies were carried out in SSA. Of these studies critical loss points were identified in 21 cereal studies. Although this shows the importance of cereal in reducing losses it also highlights the need to pay attention to other sectors.

In cereals, losses at different levels need to be addressed, however on-farm storage continues to be a major problem. The importance of harvest timing, operations and tools has had little attention, despite the impact of these factors on quality and losses up stream.

FAO's work domains in addressing food losses and waste has been on methods, survey tools, measurement and data analysis and capacity development. On knowledge product development there is a great deal of information on the impact of FLW on food security, nutrition, gender, environment investment and policy development.

FAO has also done some work on partnerships and collaboration. Under this domain more than 900 partners have been registered. The partners fall in the categories of public, private, development sector, civil society and academia and research institutions.

In the awareness and advocacy domain, activities carried out by FAO include convening and participating at congresses, making technical presentations, awareness-raising campaigns and establishing national save food networks. On knowledge sharing there is the Global Community of Practice on Food Loss, the FAO/IFPRI G20 Technical Platform on Food Loss and waste and the Save Food e-Newsletter

AFRICAN UNION PROJECT WORK PLAN AND ACHIEVEMENTS

The Technical Adviser made a presentation on the African Union Work plan and the project achievements. The table below shows the work plan activities and what was achieved.

Table 1 (AUC Work plan and achievements)

Work plan Activity	Achievements
Mapping of existing PHL initiatives on the continent	This was completed see the table below for the analysis of the results.

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Convene regular meetings and interactions with key partners engaged in food loss reduction initiatives to align their objectives with Malabo declaration and Yieldwise goals	The project participated 10 key meetings all of which featured food loss reduction as the main theme.
Develop guidelines/checklist for mainstreaming PHL into the National Agriculture Investment Plan (NAIP) review process	The checklist detailing the possible PHL policies and strategies was completed
Support selected countries to mainstream sustainable PHL strategies into their NAIPs.	Four countries supported in developing their Strategies (Zimbabwe, Zambia, Kenya and Tanzania) The countries developed their PHL Strategies. What is left is to ensure the countries take ownership of the strategies
Develop a continental PHL strategy and programme including a mechanism to coordinate and monitor PHL initiatives on the continent	The Continental PHL strategy was developed (See section for detailed information)
Provide PHL technical support and training to target countries based on their work plans	Technical support was provided to Kenya, Tanzania, Zambia and Zimbabwe
Contribute to the APHLIS (African Post-Harvest Losses Information System) portal and raise awareness of the portal	This was achieved through the appointment of the Technical Adviser as an APHLIS committee member. The TA has participated at 3 APHLIS meetings and APHLIS focal persons attend PHL training
Disseminate study findings, good practices, lessons learnt, and success stories & lead the organization of a regional forum to share the same.	Study findings and results have been documented and presented at national and regional workshops and these are available to countries and entities for use or adoption

Regarding the activity on mapping of ongoing PHL activities with the specific objective of aligning food loss reduction efforts on the continent, the results were categorised according to the type of activity or interventions. The analysis in the table below shows where PHL activities are concentrated and lacking.

Table 2 Analysis of PHL Mapping schedule

P-Activity	# Countries	%	Countries
Policy	4	8%	Ethiopia, Zimbabwe, Tanzania, and Zambia
Value chain development	3	6%	Botswana, Burkina Faso & Benin
Technology & practices	22	44%	Angola, Botswana, Burkina Faso, DRC, Egypt, Ethiopia, Ghana, Ivory Coast, Kenya, Malawi, Namibia, Rwanda, Uganda
Training and extension	8	16%	Angola, Cameron, DRC, Madagascar, Swaziland, Tunisia, Zambia
Research	14	28%	Burkina Faso, Cameron, Egypt, Ethiopia, Ivory Coast, Kenya, Morocco, Rwanda, Uganda & Zimbabwe, Tanzania & Zambia
Infrastructure	1	2%	Tanzania
Communication	0	0	

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Value Chain	0
Sovernance	
otal	50

Based on the results of the analysis According to the analysis 44% of activities are on technology and practice, 14% on research very little on governance, communication, infrastructure, policy and value chain development. Although there could be going activities in these areas but they do not include food loss reduction as a key objective. This clearly requires the inclusion of the PH loss reduction objective in all agricultural programs because we cannot produce without an effort to reduce food losses. The AU-FAO Project sees the mainstreaming (as done with gender) of PHL reduction efforts in every agricultural initiative as a future strategy if significant food loss reduction is to be achieved across the board to achieve global food loss reduction goals

AFRICAN UNION 2018 PHL REPORT – THE SCORE CARD

A presentation on Reporting on AUC CAADP Malabo declaration was made by the AUC CAADP M&E Adviser Mr Anselme Vodounhessi. The main purposes of this presentation was to show the importance of the project in supporting countries in reducing losses and reporting their achievements. His presentation touched on the CAADP process and the Malabo key commitments and he zeroed on the PHL reporting specifically the biennium review (BR) held in January 2018 and on how AU member states reported on their progress in reducing PH losses.

The table below shows how countries reported during the AU January 2018 biennium review.

Table 3 – How countries report on PHL reduction in January 2018

No.	Countries <u>On Track</u> in Post-Harvest Losses Indicator	Countries <u>Not or</u> Loss	Countries that <u>did not</u> <u>report</u> on Post-Harvest Losses Indicator	
1	Malawi	Angola	Benin	Algeria (no data)
2	Mauritania	Botswana	Burundi	Comoros (no data)
3	Rwanda	Burkina Faso	Cameroon	Eretria
4	Togo	Cabo Verde	Central African Republic	Guinea-Bissau (no data)
5	Uganda	Chad	Congo	Libya (no data)
6		Cote d'Ivoire	DR Congo	Rep A Saharawi (no data)
7		Djibouti	Egypt	Somalia (no data)
8		Equatorial Guinea	Ethiopia	South Sudan (no data)
9		Gabon	Gambia	
10		Ghana	Guinea	
11		Kenya	Lesotho	
12		Liberia	Madagascar	
13		Mali	Mauritius	
14		Morocco	Mozambique	
15		Namibia	Niger	
16		Nigeria	Sao tome & Principe	
17		Senegal	Seychelles	
18		Sierra Leone	South Africa	
19		Sudan	Swaziland	
20		Tanzania	Tunisia	
21		Zambia	Zimbabwe	
Grand Total	5 (9%)	2	8 (15%)	

Assembly – by Department of Rural Economy and Agriculture (DREA) of the African Union,

An analysis of the table shows that out of 47 countries who reported during the 2018 biennium review only 5 countries reported to be on track to achieve the Malabo PHL target. Of the 42 that managed to report 8 of the countries failed to produce any PHL data.

The reasons cited for failing to report and not being on track include lack of data, lack of PHL capacity, lack of M&E PHL systems and lack of awareness of the need to achieve the Malabo and SDG12.3 food loss goals.

These challenges highlight the importance of the AU-FAO PHL Project in supporting countries to achieve their food loss goals. The importance of Phase 2 of the project is evident. Phase 2 is envisioned to deepen and expand its coverage to more AU member states.

PROJECT COUNTRIES' WORK PLAN ACTIVITIES AND ACHIEVEMENTS

The four pilot countries made presentation on their work plans and the level of achievement of the deliverables The project pilot countries that presented work plan achievements Zambia, Zimbabwe, Kenya and Tanzania. The table below shows country work plan activities and achievements.

Table 4: Country work plan achievements

Work plan activity	Zimbabwe	Zambia	Kenya	Tanzania
Loss assessment study	Milk	Tomato	Maize done	Tomato
-		done		done
Train stakeholders on FAO food loss methodology	45 trained	25 trained	28 trained	23 trained
PHL Strategy to achieve2025 PHL Goal	Completed	Completed	Completed	Completed
Policy briefs	Final Draft	Final Draft	N/A	Final draft
Constitute TWG	Constituted	Constituted	In progress	Constituted
Develop indicators for 5 crop indicators	Done	Done	Done	Done
Incorporate PHL assessment into tertiary training	Done	Done	Incomplete	Done
News reports on PH activities	2 new article	2 news	2 news	Inews
·		articles	articles	article
Web site on post-harvest management	In progress	N/A	N/A	N/A
Workshop to validate policies and strategies	Done	Done	Done	Done
Participate at regional forum	Participated	Participate	Participated	Participated

The countries by the time of the regional workshops had completed 90% of their deliverables.

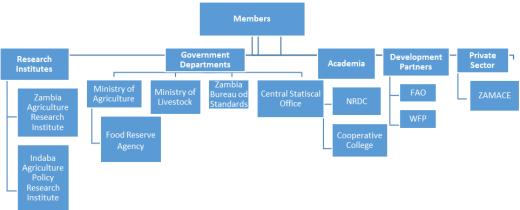
What is worth mentioning is the incorporation of the FAO Loss assessment methodology into agricultural tertiary training. In Tanzania, Zimbabwe and Zambia 5 local universities and agricultural colleges confirmed the completion of this process which will see a critical mass of agricultural graduates equipped with skills to undertake PH loss assessments and develop solutions to reduce food losses. The next stage is to develop the capacity of lecturers and colleges to train and use the FAO methodology.

With regards to putting in place a PHM Technical Working Group, all the four countries had established a PHL TWG although the Kenya TWG was not strong and active enough. The Zambia Chairlady of the TWG Dr. Rhoda Mukuka presented the generic mandates for a PH national TWG. The TWG is anchored on 8 core interventions pillars, i.e. Technology promotion and awareness creation, Capacity Building, Market-related infrastructure, Value-Chain Activities, Communication, Research, Access to Financial Services, Governance & Policy.

All AU member states are expected to adopted these codes and modify them to suit their circumstances and mandates. In general the TORs are designed to address the following matters: provide strategic leadership on PHM issues; coordinate and direct the implementation of the Post-Harvest Management strategy; coordinate the M&E system; carry out advocacy for PHL investments in training; development of PHM policy, oversee PHL financial commitments; champion for change of laws, policies and practices that facilitates the realization of the Malabo and SDG food loss reduction goals.

According to the presentation, Zambia's TWG is structured according to the diagram below.

Zambia TWG Structure



LOSS ASSESSMENT STUDIES - KEY FINDINGS AND SOLUTIONS

The loss assessment studies use the designed FAO loss assessment methodology. The methodology enables one to obtain a clear understanding of the weak points in a food chain and to estimate the level of losses and finally to identify interventions to reduce the losses. The three project countries presented results and findings of their loss assessment studies.

Zimbabwe presented results and findings of its Milk Loss Assessment study was carried out in the dairy supply chain. Two sites were investigated namely Nharira and Marirangwe. The study identified the critical loss points as milking (4%), transportation (3%) and processing (7%). The direct causes were identified as:

- milking spillage, low yield due to cow discomfort and mastitis contamination
- transportation spillage
- · milking collection centers lack of cooling facilities, unhygienic practices

The indirect causes were identified as poor agricultural practise, lack of access to adequate feeds, poor infrastructure and lack of training.

Zambia presented its results and findings of the loss assessment study on tomato value chain. The study identified harvesting (3%) and transportation (3%) as the critical loss points. The causes of losses were identified as harvesting at the very end of its maturity stage (red), tomatoes exposed to direct sunlight for prolonged periods, poor packaging during transportation, tomatoes stored in poor environments and poor road infrastructure.

Kenya presented results and findings of its maize loss assessment study on the maize value chain. The study identified harvesting (4%), drying (3%) and storage (5%) as the critical loss points. The direct causes of losses identified were poor harvesting methods, lack of drying facilities and poor storage facilities. Indirect causes of loss were identified

limited knowledge on aflatoxin, inadequate labour, preference for traditional storage methods lack of access to modern methods of storage.

Tanzania presented results and findings of its tomato study. The study identified harvesting (13%), transportation (7%) and wholesale (5%). Overall Quantitative losses in the supply chain are 32% and qualitative losses of the produce that goes through to the final stage of the supply chain (consumption) were 25.9%, leading to overall reduced market value of about 29.5%. The causes of losses were identified as poor agricultural practices, poor infrastructure unfair marketing systems. The indirect causes were identified as low investment in post-harvest systems, high cost of PH technologies and climate change.

THE AU PH M & E FRAMEWORK

The M&E framework was presented by the M&E Consultant Mr George Chiduwa. The M&E framework is generic making it possible for most countries to adopt it for their M&E system. The PHL Management M&E framework is designed to provide guidance to countries on how to monitor the outcomes of PHL reduction plans, interventions, strategies and policies to achieve their PHL goals. It provides decision makers with information necessary to achieve desired PHL outcomes by guiding the documentation of actors/ stakeholders, policies, strategies and plans, interventions and actions as well as successes and limiting factors contributing to reduction of PHL.

All AU member states are expected to use the framework taking into account each country's PHL indicators and food loss reduction goals. After the presentation, the frame work was well received by the workshop participants.

PROJECT COUNTRIES' PHL INDICATORS

The Malabo biennium review process requires each member state to report on its progress in reducing PH losses. Although countries are expected to focus on all crops, the reporting should focus on five priority crops. This makes the gathering of data and reporting easier and applicable to all countries. In this regard, the project supported the development of indicators for five key crops in the pilot countries.

Zimbabwe's five priority crops which indicators have been developed are maize, sorghum, tomatoes, milk and bananas. Zambia's five priority crops whose indicators have been developed are maize, tomatoes, milk, cassava and beans. Tanzania's five priority crops are paddy, sorghum, beans, cassava and tomatoes and Kenya's five priority crops are maize, rice, meat, milk and fish.

As the tracking tables for each country show the indicators focused on harvesting, storage, transportation, processing, packaging and selling. The CAADP biennium review process considers these stages to be the critical loss points and all crops should have indicators at these stages.

THE GLOBAL FOOD LOSS INDEX

The Senior FAO Statistician Ms Carola Fabi made a presentation on the Global Food Loss Index and how it can be incorporated into the Malabo M&E framework. According to Carola, two indicators - 12.3.1 and 12.3.2 - have been proposed to track achievements towards Target 12.3. The first one focuses on the reduction of losses along the food production and supply chains (supply oriented) and the second one, led by UNEP, focuses on 'halving per capita global food waste at the retail and consumer level' (demand oriented).

Indicator 12.3.1 - Global Food Loss Index - is a statistical indicator measuring food losses from farm up and excluding the retail level. The indicator's methodology and data collection mechanism have already been developed and tested.

Indicator 12.3.1 - Food Loss Index (FLI) and the aggregate Global Food Loss Index (GFLI) is a simple index with base 100 that measures changes over time in the structural losses along the supply chain. The index is based on a Food Loss Percentage (FLP) which can also be aggregated into a Global Food Loss Percentage (GFLP) and which measures the level of losses and which can be used to compare countries' situations

Commenting on the AU PHL M&E framework the expert statistician said the six stages (harvesting, storage, transport, processing, packaging and selling) which the Malabo PHL M&E focuses on are not all critical for all commodities. For example transport losses are not critical for cereals. She also said there should be clarity on the indicators: should they track the agents (farmers, traders, etc.) or the activity (storage is on-farm and off-farm). We could also add: should they track the process. She also said, there is also need for clarity on what are the boundaries of Sales? Do they include retail? How are harvest losses incorporated into production figures? (many countries collect production data net of harvest losses)

In conclusion Carola said detailed Food Loss Percentages and the Food Loss Index for SDG monitoring are equivalent to the M&E outcome indicators. Also countries must go beyond the product loss assessment to build the evidence base at national level. If small holders are the focus, the best approach is the sample survey – piggy-back on the annual agricultural surveys. A mix of sample surveys, experimental design and modelling can be used to evaluate the long-term changes produced by the interventions. Integration of postharvest loss surveys in the national statistics systems will increase the sustainability

For next steps she suggests focusing on transfer of knowledge to regional and national partners on the recommended methods, as well as on SDG 12.3 reporting and monitoring (seminars and information/e-learning course). Supporting countries in the implementation of the GFLI Guidelines and strengthening the data-driven components of other FAO or international partner's projects. To achieve this participants recommended the inclusion of FAO experts when reviewing the AU CAADP M&E system.

PROJECT COUNTRIES' PHL STRATEGIES

The development of the PHL Strategies will enable countries to put in place concrete plans to achieve their Malabo and SDG12.3 food losses reduction goals. In essence the national PHL strategies under the RF YieldWise framework are the sustainability plans that should ensure the continued execution on the PHL efforts initiated by the AU, FAO & RF tripartite arrangements which conceived and has been implementing the AU-FAO PHL Project.

Although there are broader and common goals for developing and implementing the PHL strategies, each country has anchored the strategy to its visions and programs.

Kenya as the host country was the first to make a presentation of its strategy. The presentation was made by Dr Andrew Edewa the PHL strategy consultant.

The overall objective of the Kenya's Post-harvest Loss Reduction Strategy is to effectively guide and coordinate post-harvest loss reduction initiatives at the County and National Levels for key food supply chains in Kenya.

The specific objectives of Kenya's PHL strategy are:

- Effectively implement post-harvest loss reduction policies and strategies in Kenya
- Strengthen institutional capacity to implement PHL reduction interventions at national and county levels
- Implement good practices and technologies to reduce quantitative and qualitative post-harvest losses in Kenya's Food supply Chains
- Strengthen linkages between food supply chains and post-harvest reduction services in Kenya
- Mainstream cross-cutting issues of significance to postharvest loss reduction including gender, youth, environmental factors and agricultural information management in postharvest reduction initiatives

The following were presented as the Strategic focus areas

- Effective Implementation of PH Policies
- Subsector PHL Assessments
- Review & Implementation of PH Policies & Strategies
- PHL reduction programmes
- PHM Investment Plans
- Public-private platforms for PHL reduction

Concern was raised due to lack of clarity on the strategic focus areas with regards to polices, strategies and program. These are broad term which do not indicate the nature and type on policies, strategies and programs. Next steps in the strategy implementation

Kenya's strategy will be implemented at national level with oversight from the PH Technical Working Group under clear terms of reference.

Zambia's PHL strategy was presented by Mr. Chewe Nkonde the principal consultant from the University of Zambia. The strategy's vision is "An efficient agricultural sector landscape that assures reduced post-harvest losses, food and nutrition security and provides a pathway to ending hunger by 2025."

Zambia's strategic objectives include:

- Develop best practices for PHL reduction at all critical loss points
- Improve farmers' access to extension services on best practices for PHL reduction
- Improve infrastructure (storage and transport related) for PHL reduction
- Increase utilization of PHM technologies across the value chain
- Enhance value addition (processing) to reduce PHLs
- Improve access and utilization of better packaging for reduced PHLs
- · Enhance provision and dissemination of market information to reduce PHLs
- Enhance regular monitoring of PHLs at all critical loss points

The following were presented as the key intervention areas

- Technology promotion and awareness creation
- Capacity building
- Market related infrastructure
- Value chain activities
- Communication
- Research
- Access to financial services
- Governance and policy

For next steps, Zambia will develop policy briefs and an action plan for to implement their strategy.

Zimbabwe's PHL strategy was presented by Mr.Tafireyi Chamboko the consultant who developed the strategy. Zimbabwe's strategy focuses on maize, bananas, sorghum, tomatoes and milk - the five CAADP priority crops.

The following are the strategic objectives for their PHL Strategy:

- Create conducive policy environment
- Institute a mechanism to coordinate postharvest loss management
- Raise awareness on postharvest losses
- Implement agricultural systems that support loss reduction
- · Facilitate research and development on postharvest management

- Facilitate investments in technology, mechanization and practices
- · Improve postharvest extension and training
- Improve marketing infrastructure
- Mainstream gender and the youth in postharvest activities
- Promote postharvest management processes that take into account the impact on the environment and climate change

Zimbabwe went further and developed an implementation plan, however this will need to be approved and adopted by the government.

The strategy for Tanzania was presented by Clepin Josepha, the chairman of Tanzania's TWG. Tanzania was not originally a project country but was included at a later after a cereal storage scoping mission report recommended Tanzania to be provided with technical support to address grain losses.

The scoping mission to Tanzania was carried out after a government request for support in reduce increased grain losses along cereal value chains. Among activities recommended for support was the development of a National Post Harvest Strategy. Tanzania had already put together a strategy document, however after a reviews major changes were recommended.

- Tanzania's strategy has the following objectives
- To facilitate awareness of good handling practices
- To promote (4A's) availability, accessability, affordably, and adoption of technologies
- To facilitate agricultural marketing systems and infrastructures.
- To promote research and innovations and appropriate technologies.
- To review and formulate guidelines and regulations to enhance standards and practices.
- To strengthen coordination, partnerships, and stakeholders' participation to enhance strategic interventions.
- To strengthen post-harvest management systems to adapt and mitigate the effects of climate change.
- To Address inadequacy in financing Post-harvest Management

Since it is the government of Tanzania who approached FAO for support, it is hoped that the Government will be more amenable to adopt and implement the strategy.

AFRICAN UNION CONTINENTAL PHL STRATEGY

The presentation on the AU strategy was made by Martin Muchero the principal consultant who developed the strategy. The AU PHL Strategy will be implemented by the AUC DREA division. The objective of the AU PHL Strategy is to support the AU member states through RECs to achieve their PHL targets within the context of the Malabo 2025 PHL and SDG 12.3 goals. The AU PHL Strategy was conceived after realising that there is need for an integrated approach to address causes of post-harvest losses by bringing together all possible forms of approaches and actors across the entire agricultural value chain system. Thus strategy was designed as a tool to support, guide and monitor member states to achieve their food loss reduction targets.

The guiding principles used in developing the AU PHL strategy are subsidiarity, additionality, complementarity and proportionality. These terms are explained in the Strategy Document.

To achieve sustainability the strategy should be anchored on environmentally friendly processes, include progressive national and regional policies and circumstances and leverage on potential public and private resources.

The specific objectives of the AU PHL Strategy are the following:

- Facilitate the development and effective implementation of regional and national strategies.
- Facilitate and create awareness of the impact, economic value and effect on food security of post-harvest losses
- Facilitate the effective coordination of post-harvest loss reduction initiatives.
- Support the creation, generation and dissemination of knowledge and bestpractices in post-harvest management.
- Facilitate the development of skills and capacities in post-harvest loss management
- Promote technological advancements, value addition and preservation through improved agri-business and agro-processing environment.
- Support the development of improved markets and market infrastructure
- Support the development of private sector involvement and investment in postharvest systems.
- Support sound practices in macro-economic governance that encourage investment in post-harvest systems
- Promote the use of smart, environmentally friendly, labour saving and gender sensitive technologies in PHLM.

For purposes of implementing the strategy, the nine specific objectives will be clustered into four strategic focus areas which will form the pillars of the African Union Post-Harvest Loss Management Strategy. These are:

- Policy, Awareness and Institutional Capacity
- Knowledge Management, Data, Skills and Human Development

- Technology, Markets and Infrastructure
- Finance and Investment

PHL VOICES FROM PHL PARTNERS

Two PHL partners FARNPAN and Wageningen University shared their work and experiences on PHL activities.

FARNPAN represented by Mr Talentus Mthunzi made a presentation on their activities. Through support from the Swiss Development Cooperation FARNPAN implemented the project "Advocating for PHM Policies in Benin and Mozambique" The first phase of the project ran from 2013 to 2017 and the second phase from 2017 is expected to run until 2020.

The objective of the FARNPAN project are:

- Improved handling and storage options within the grains and pulses value chains are benefitting smallholder farmers in pilot countries.
- Good practice options for reducing postharvest losses are compiled, disseminated and scaled up.
- Appropriate regulatory frameworks on reducing post-harvest losses in food supply chains are introduced and implemented at national and regional levels and financing is

The project has influenced policy in the implementing countries. One of the major outcome in Benin is that Post Harvest Management has been included in the formulation and implementation of policies and work-plans of the Ministry of Agriculture, Livestock and Fisheries (MAEP). The Agricultural policy five year strategy has an explicit target on Post-harvest management which is to half the current levels of post-harvest losses by 2025

In Mozambique the FANRPAN Node hosting Institutions is Eduardo Mondlane University (UEM. The node has convinced the government to establish a Post-Harvest Management working group which has been involved in the development of the national agriculture frameworks such as:

- The National Agriculture Investment Plan (PNISA),
- The Operational Plan for Agrarian Development (PODA),
- The Operational Plan for Food Production (POPA), and
- The Operational Plan for Agricultural Commercialization (POCA)

The project has caught the attention of the government and thus through the Ministry of Agriculture, it has requested FANRPAN to assist the country in the development of a national PHM strategy. It has a fixed target of reducing postharvest losses from 24% to 12%" in the PODA (2015-2019.

The Wageningen University was represented by our committed PHL partner and expert Ms Jennie Vandermheen who made a presentation on the University's research work on PH. They have a multidisciplinary approach which brings together scientific and social disciplines to manage Food Loss.

The multi-disciplinary stakeholder is composed of the Dutch government ministries, the provinces administration, municipalities, the European Union and at international level China and Chile are partners. The Wageningen University has brought its expertise to the European Union through the cities action project. The project has encouraged European cities to carry out food donations to prevent wastage. The city of Milan and other European cities have successfully implemented this project with the support from the University.

Unlike in most case studies in the pilot African countries where private sector engagement is hazy and inconsistent, Wageningen University and Research have successfully engaged the private sector in their food waste reduction initiatives. This was achieved through building strong business cases which are attractive to the business community. A key lesson to learn is how the University has created alliances with key players in both the private and public sector.

ALL AFRICA POST HARVEST CONGRESS

Dr Jane Ambuka the Chairlady for the 1st Post harvest congress made a presentation on the congress and on how the AU can take over the management and promotion of this important event. Her presentation focused on how the last congress was organised, program, funding, and plans for the future. In conclusion the following issues were addressed.

- The AUC should take over the management and promotion of the 2nd Post harvest congress.
- There is seed money from Rockefeller Foundation which can be used to initiate plans for 2nd All Africa PH Congress and Exhibition
- The outgoing Local Organizing Committee (LOC) need to be replaced and include international partners
- The next congress should be planned on Date, Venue, Theme & Subthemes
- Proposed for Pre-conference workshop during RUFORUM Biennial Conference in Nairobi, 22-26th October, 2018?
- More buy-in from diverse stakeholders across the continent who will be attending RUFORUM Biennial.
- Dr Ambuka will lead the preparations and processes to appoint the Committee.

REFLECTIONS FROM ROCKEFELLER FOUNDATION

Ms Olivia Kajanda the Rockefeller Foundation Program Manager reflecting on the proceedings and the achievements of the project said "Phase 1 has been a lot of

planning and a lot of research and Phase 2 should be more on implementation and action on the ground and Governments coming in saying here is the budget and here are the post-harvest losses" She would like to see Ministers of Agriculture and Finance involved in this discussion but they are not present yet. She wants to see more tangible work on the ground; phase one was about the software and Phase 2 should on implementation"

Rockefeller Foundation in appreciation of the success and achievements the project made phase one offered \$50 000 to support the development of phase 2. The African Union and FAO appreciates this gesture which will be put into good use.

A PERSPECTIVE FROM THE PH COMMUNITY

The presentation on the perspective from the PH community was made by Professor Umezuruike Linus Opara. Professort Opara is the Research Chair in Post-Harvest Technology, at Stellenboch University. He gave a twofold presentation of forging forward as a post-harvest community. First he gave a context analysis of the progress that has been made in post-harvest management in the last decade. He pointed out that Africa as a continent lags behind in contributions on post-harvest knowledge. Secondly there is need to step up and feed the knowledge community with practical knowledge on post-harvest loss management.

He said Africa has huge opportunities for private sector's involvement and this can only happen through building strong business cases to attract investment and collaboration with the private sector. The best way to mobilise resources for post-harvest management is to link the current global challenges to the Post harvests Loss. He gave an example of a Food loss project in the Sultanate of Oman. When he first made the request for funding for his research the concept of post-harvest was not appealing to the authorities as they considered it irrelevant given the fact that they imported most of their food. However, when he framed the project as post export food loss it became more relevant to their concerns. He emphasised that post-harvest loss export must develop business cases that are convincing.

The following fundamental questions should be answered while developing the business cases

- What are the incentives?
- What is the minimum/acceptable loss for specific points/value chains?
- What is cost-benefit analysis?

Diversification in post-harvest management interventions can be a major driver for employment creation he added. FAO data showed that for every 100 liters of milk produced 5 jobs can be created in related industries like processing and transport.

He pointed out five pillars of Post-Harvest which should guide the Africa's community into the future

- Human capacity develop and reinforce the human technical capacity in Postharvest loss and food waste reduction.
- Postharvest Infrastructure Develop state-of-the-art laboratories for Post-Harvest innovations e.g., ICT, cold/chains, markets, emerging technologies (drones, sensors, Apps)
- Economy-wide Infrastructure Governments are duty bound to develop infrastructure in communication, transport, energy and other economic sectors to bolster PH reduction interventions
- Strong Institutions research institutions should be capacity built through policy interventions and partnerships. In the long term this will ensure quality, creativity are upheld in developing solutions for post-harvest reduction.
- Visibility and Advocacy
 – Awareness creation is critical for visibility of progress made so far. Remaining connected to the rest of the world and being visible is fundamental in sustaining the momentum. Advocacy can be done through the AU systems.

Highlighting the importance of the private sector he said in closing "you cannot shave may hair in my absence" That is, the private sector has to be present and involved if it is to benefit from PHL reduction initiatives.

PREPARATION FOR PHASE 2

On the final day three break away groups were developed to come up activities envisioned for the next phase. The groups were formed based on the intervention level: country level, REC level and AUC commission. The following table indicates the suggested activities.

Table 4 - Phase 2 suggested activities

Activity	Zambia	Kenya	Zimba	Tanza	AUC	RECS
Adopt & implement PHL Strategy	✓	✓	✓	✓	✓	✓
Loss assessment studies for the 5	✓		✓	✓		
crops						
Post-Harvest Survey	✓			✓		
Capacity Building on PHM	✓	✓		✓		
Private sector investment PH tech	✓		✓	✓		✓
PHL issues into national surveys	✓					✓
Private sector engagement in PHL			✓			✓
Raise awareness on PHL issues			✓	✓		
Malabo & SDG12 M&E			✓	✓	✓	✓
Value infrastructure			✓			
PHL Website			✓	✓		
Constitute TWG		✓				
National PHL workshop		✓				

Knowledge development and sharing			✓	✓
Awareness on PHL			✓	✓
Promote technology			✓	✓
Finance and investment			✓	✓

The countries' activities will focus on expanding current activities to other countries and strengthening on going initiatives. RECS will focus on institutionalising PHL systems since there is not REC currently involved in PHL activities The African Union Commission's activities will focus on implementing the new AU PHL Strategy.

CONCLUSIONS AND RECOMMENDATIONS

The workshop led to various conclusions based on the experience from the project implementation in the pilot countries as well as lessons from post-harvest loss and food waste management initiatives from around the globe. Below are the main conclusions.

- 1. FAO Food Assessment methodology was recognized as an effective tool in evaluating PHL systems in the different value chains and developing solutions. The methodology known in short form as 4 S i.e screening existing literature; sampling value chain actors and activities; surveys to collect the actual information along value chain and synthesis analysing the the data to develop the report of the study. The methodology allows for the evaluation of both qualitative and quantitative attributes There is need thus to carry out more capacity building amongst stakeholders and actors on the use of this tool. However it was noted that for the country case studies the data generated cannot be used to represent the national estimates.
- 2. The Technical Working Groups play a central role in coordinating and implementing the post-harvest loss strategy. TWG should thus be constituted with clear Terms of Reference and the membership defined. Among other things the TWG should: review the PHL indictors, coordinate Food Loss assessment studies, validate study results, develop and review Post Harvest Loss strategies, develop and review the M&E framework that will enable the tracking of progress in the implementation of the strategy. The membership should cover an array of stakeholders. The national central bureau of statistics should be a member of TWG, this will ensure data reliability and avoidance of data duplication.
- 3. Private sector engagement in the first phase of the Post-Harvest Loss reduction project was feeble and inconsistent. It was realized that the majority of private entities are particularly interested in participating when there is a strong business case. Going forward in the second phase the project should have a strong presence of the private sector.
- 4. Only 4 countries out of 42 reported on the post Loss target during the inaugural CAADP biennial review. This means post-harvest loss reporting at member state level still poor and lacks accurate data. This is a huge and opportunity, thus more effort should be made to improve data and reporting at country level.
- 5. A Post-harvest expert should be seconded to join the AU biennial review task force this will ensure the inclusion of PHL data processes.
- 6. Coordination of the post-harvest management is the mandate of the AUC however this is not explicitly articulate in the strategy. The revised strategy should include this aspect. There should be alignment of the Post-harvest management strategies at the RECs, AUC and the member state level.

- 7. The first phase did not have significant involvement of the Regional Economic Communities and they did not play any role. There is need to have more involvement of the RECs in the second phase, given that certain RECs already have strategies on Post-Harvest Management like IGAD.
- 8. The First African Post-Harvest Congress which took place in Nairobi Kenya was mainly dominated by the local organizing committee (members drawn from Kenya) with little representation from other regions of Africa. As a recommendation a steering committee should be constituted and institutionalized in the form of a secretariat or council under the African Union. The committee will be responsible for convening future congresses with clear Terms of Reference and roles and responsibilities and criteria for eligibility should also be laid done.

WORKSHOP IN PICTURES

1.	CLOSING REMARKS

1. ANNEXES

Annex 1: Workshop participants



Annex 2: Workshop Program

