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Semi Annual Report

Project	**Sustainable Intensification of Maize-Legume based Cropping Systems for Food Security in Eastern and Southern Africa (SIMLESA)**
Project no.	*CSE/2009/024*
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Approved by	*Dr John Dixon*

ETHIOPIA KENYA MALAWI MOZAMBIQUE TANZANIA AUSTRALIA ICRISAT ASARECA The University of Queensland QAAFI ARC • LNR

SIMLESA target and spillover countries

***Note SIMLESA 2 activities no longer in South Sudan.**

** Zambia is currently benefiting from a USAID SIMLESA related program,* Sustainable Intensification of Maize-Legume Systems for the Eastern Province of Zambia (SIMLEZA)

Acronyms

ACIAR	Australian Center for International Agriculture Research
AGRA	Alliance for a Green Revolution for Africa
AGRIMERC	Organisation for Sustainable Development of Agriculture and Rural Markets
AIFSC	Australian International Center for Food Security
APSIM	Agricultural Production Systems Simulator
APSFarm	Agriculture Production Systems Simulation Model for the Whole Farm System
ARARI	Amhara Regional Agricultural Research Institute
ARC	Agricultural Research Council, South Africa
ASARECA	Association for Strengthening Agricultural Research in Eastern and Central Africa
ASSMAG	Association of Smallholder Seed Multiplication Action Group
BARC	Bako Agricultural Research Center
BMGF	Bill & Melinda Gates Foundation
BNF	Biological nitrogen fixation
BOM	Opportunity Bank of Mozambique
CA	Conservation agriculture
CIMMYT	International Maize and Wheat Improvement Center
CIRAD	Agricultural Research for Development, France
CORAF	Conference of the Agricultural Research Leaders in West and Central Africa
CRS	Center for Rhizobia Studies (Murdoch University)
CSIRO	Commonwealth Scientific and Industrial Research Organization
DALDO	District Agricultural and Livestock Development Officer
DEEDI	Department of Employment, Economic Development and Innovation, Queensland
DTMA	Drought Tolerant Maize for Africa Project
EGSP	Effective Grain Storage for Better Livelihood of African Farmers Project
EIAR	Ethiopian Institute of Agricultural Research
EPA	Extension planning area
FARA	Forum for Agricultural Research in Africa
HARC	Hawassa Agricultural Research Center
IAC	Chimoio Agriculture Center
IARC	International Agricultural Research Center
IAV	Crops and Veterinary Inputs
ICARDA	International Center for Agricultural Research in the Dry Areas
ICIPE	International Center of Insect Physiology and Ecology
ICRISAT	International Crops Research Institute for the Semi-Arid Tropics

IDEAA-CA	Associação dos Produtores de Oleaginosas (Oil crops association ex-Initiative for development of Agriculture in Africa)
IFAD	International Fund for Agricultural Development
IFDC	International Fertilizer Development Cooperation
IFPRI	International Food Policy Research Institute
IIAM	Mozambique's Agricultural Research Institute
IMAS	Improved Maize for African Soils Project
IITA	International Institute of Tropical Agriculture
ILRI	International Livestock Research Institute
IRRI	International Rice Research Institute
ISPM	Polytechnic Institute of Manica
KARI	Kenya Agricultural Research Institute
LER	Land equivalent ratio
MARC	Melkassa Agricultural Research Center
MASA	Malawi Seed Alliance
M&E	Monitoring and evaluation
NARES	National Agricultural Research and Extension System
NARI	National Agricultural Research Institute
NARS	National Agricultural Research Systems
NEPAD	New Partnership for Africa's Development
NGO	Non-Governmental Organization
OPV	Open pollinated variety
PARC	Pawe Agricultural Research Center
PASS	Program for Africa's Seed Systems
PVS	Participatory variety selection
QAAFI	Queensland Alliance for Agriculture and Food Innovation
SIMLESA	Sustainable Intensification of Maize and Legume Cropping Systems for Food Security in Eastern and Southern Africa Program
SPER	Provincial extension services
TLC	Total Land Care
TLII, TL-2	Tropical Legumes II Project
UCAMA	Manica Small-scale Farmers Association
WECARD	West and Central African Council for Agriculture Research Department

Contents

1 Progress summary

The Sustainable Intensification of Maize-Legume cropping systems for food security in Eastern and Southern Africa (SIMLESA) is a multi-stakeholder collaborative research programme managed by the International Maize and Wheat Improvement Centre (CIMMYT) and implemented by national agricultural research systems (NARS) in Kenya, Tanzania, Ethiopia, Malawi and Mozambique with backstopping inputs from other partners. The programme focuses on leveraging science and technology to develop and deliver technological and institutional innovations in relation to maize-legume production systems. In turn it is envisaged that these will make significant measurable positive changes in the livelihoods of all categories of smallholder farmers.

The aim of SIMLESA program is to improve farm-level food security, in the context of climate risk and change, through the development of more resilient, profitable and sustainable farming system that overcome food insecurity for significant numbers of farm families in eastern and southern Africa. SIMLESA Program, is being funded by the Australian Centre for International Agriculture Research (ACIAR) launched in March 2010 and expanded in April 2012 (with funding support from AusAID) to cater for three additional regions in Ethiopia,.

SIMLESA Program falls under the African Food Security Initiative (AFSI) that was launched in 2009/2010 by the Australian Government to assist selected African countries reduce poverty and eliminate hunger as part of fulfilment of Millennium Development Goal Number 1 (MDG1). It is aligned within the African Union (AU) initiated and led made-in-Africa solution known as the Comprehensive Africa Agriculture Development Program (CAADP[1]). CAADP was established as part of the New Partnership for Africa's Development (NEPAD), and endorsed by the African Union Assembly in July 2003.

SIMLESA is led and managed by the International Maize and Wheat Improvement Centre (CIMMYT), as the commissioned organisation. CIMMYT is assisted by the following in implementing the program: the national agricultural research systems (NARS) in five eastern and southern African countries; Association for Strengthening Agricultural Research in Eastern and Central Africa (ASARECA), International Crops Research Institute for the Semi-Arid Tropics (ICRISAT); Agriculture Research Council (ARC)-SA; Queensland Alliance for Agriculture and Food Innovation (QAAFI), in association with Queensland Department of Employment, Economic Development and Innovation, (QDEEDI); and Murdoch University. SIMLESA related activities have been initiated in four spillover countries (Botswana, Rwanda, South Sudan and Uganda) for wider impact. The leadership of the Queensland research component has been transferred from DEEDI to QAAFI. The main thrust of the SIMLESA program is increasing farm-level food security, productivity and incomes through promotion of maize-legume intercropping systems, in the context of reduced climate risk and change. SIMLESA Program is envisaged to reach 650,000 small farming households in the five countries over a period of 10 years.

Phase one of the ACIAR-funded Program (2010-2014), Sustainable Intensification of Maize-Legume Cropping Systems for Food Security in East and Southern Africa (SIMLESA), initiated implementation in March, 2010. SIMLESA program since 2010 up to 31 June 2014 was implemented under the following five fundamental objectives:

Objective 1: To characterize maize-legume production and input and output value chain systems and impact pathways, and identify broad systemic constraints and options for field testing.

Objective 2: To test and develop productive, resilient and sustainable smallholder maize-legume cropping systems and innovation systems for local scaling out

[1] CAADP pillars number 3 and 4- increasing food supply and reducing hunger across the region by increasing smallholder productivity and improving responses to food emergencies; and improving agricultural research and systems to disseminate appropriate new technologies, and increasing the support given to help farmers to adopt them.

Objective 3: To test and develop productive, resilient and sustainable smallholder maize-legume cropping systems and innovation systems for local scaling out

Objective 4: To support the development of regional and local innovations systems

Objective 5: Capacity building to increase the efficiency of agricultural research today and in the future

The second phase of SIMLESA started on the 1st of July 2014 with is scheduled to end on 30th of June 2018. The main focus of the second phase of SIMLESA is based on scaling out of tried and tested innovative technologies. Scaling out was limited in the first phase mainly due to lack of well packaged message and lack of enough resources to effectively engage partners to scale out the technology. In the fourth year SIMLESA tried to engage partners for scaling out best practices. What has changed in the second phase of the program is the introduction of competitive grants for partners. The fundamental aim of competitive grants is to enhance effectiveness of scaling out process of SIMLESA technologies to farmers.

Considering the importance of scaling out new innovations, around 25-30% of the national budget has been set aside for the competitive grants under objective four. Competitive Grants selection committee will be formed in each country with the following composition:

- National coordinator
- ACIAR rep
- Project Coordinator (Program Management Committee representative)
- SIMLESA objective 4 representative

Project coordinator already drafted competitive grant guidelines which will be shared with ACIAR before selection of country partners. The guide will be reviewed bi-annually-twice per year.

SIMLESA 2 was launched on the 1st of July 2014 with modified program objectives detailed below:

Objective 1: Enhance the understanding of CA-based sustainable intensification for maize-legume production systems, value chains and impact pathways.

During the reporting period, July to December 2014 main SIMLESA activities carried in operational countries include planning meetings, adoption monitoring, value chain analysis, updating database of productive and risk reducing CA-based intensification options. Market analysis will strengthen farmer-private sector relationship which was weak in the initial phase of SIMLESA. This will enhance both input and output markets within agricultural sector.

Objective 2: To test and adapt productive, resilient and scalable CA-based intensification options for sustainable smallholder maize-legume production systems.

Last half of 2014 was characterised by execution of objective 2 fundamental activities which include scaling out, planning meetings at country level, establishment and monitoring of trials, strengthening of innovation platforms and formation of new IPs in some countries. Field days and exchange visits were conducted during the reporting period in eastern parts of Africa, Ethiopia and Tanzania.

The teams and activities will be expanded through an additional focus on fodder/forage varieties in Ethiopia, Kenya and Tanzania, and new research on soil health focusing on the identification and rehabilitation of non-responsive soils and the development of nutrient management systems.

Objective 3: **To increase the range of maize, legume and fodder/forage varieties available to smallholder farmers.**

Under objective 3 main activities implemented during the reporting period were participatory variety selections, establishment and monitoring experimental trials, scaling out of improved technologies and testcross formation.

A shortlist of new experimental maize and legume varieties (all countries) and forage/fodder species/varieties (in Ethiopia, Kenya and Tanzania) with potential adaptation to the conditions and farmers' will be identified by NARS for each country and targeted maize-legume system. Maize and legume varieties will mostly originate from on-going breeding program such as DTMA or TL-11. Significant progress has been made in developing and registering of drought tolerant maize and legume varieties, which are being promoted by both governmental and private institutions in respective countries.

Objective 4: To support the development of local and regional innovation systems and scaling-out modalities.

During the reporting period objective four was dominated by proper planning meetings at country level focusing more on cross participation and objective linkages. Field activities carried out during the same period include field days, exchange visits, innovative platforms in all SIMLESA countries and involvement of other organizations to scale out SIMLESA technologies. These platforms are of paramount importance in dissemination of information and as training sessions to farmers at community level. In Mozambique, dissemination of agricultural information technologies through SMS based technologies has started.
ACIAR SRA-Small Research Activity grant was acquired to strengthen Innovation Platforms in spillover countries plus Burundi and Zambia. Training and mentoring meetings were held for partners in Embu and a regional training in Rwanda in September 2014. Subsequent activities are scheduled for Uganda.

A number of policy options and organizational models for the delivery of CA-based intensification options will be developed. Activities thereby include the formulation and advocacy of policy options to address institutional constraints for CA-based intensification options in terms of reach, farmer use and sustainability.

Objective 5: Capacity building to increase the efficiency of agricultural research today and in the future.

Object five schedule plan was developed by country staff and relevant stakeholders like ARC-Southern Africa. The program will use short courses, workshops, field days and exchange visits in support of the program agenda, and free online courses in topics that are relevant to SIMLESA. Capacity building will be targeted at program scientists and technical staff in partner organizations, and include researchers, extension agents, the private sector and farmers.

Project coordination and Management

SIMLESA-2 objectives are now organized and structured in an integrated multidisciplinary functional team at the regional and country level. This has taken off very smoothly in the reporting period. Teams have been active on the ground and busy synthesizing lessons. The project manager and the recently recruited communication specialist have relieved the project leader from monitoring of activities and communication tasks. The 2014/2015 planning meetings held in Lilongwe, Addis Ababa and Aruhsa are well documented and proceeding reports are loaded on the SIMLESA website. A communication strategy is being developed

The CIMMYT wide new Research Management System (RMS) is being used to monitor the progress and performance of the project.

The Project leader have been interacting with NARS leaders on how to implement the research coordination and oversight budget under each country. Ethiopia has indicated and suggested to use their existing system established for other projects. The other countries are to share their views in the near future.

Given the continuous change in staff movements SIMLESA Tanzania and now have a new National coordinators, Dr John Sariah and Dr Bedru Beshir, respectively

Building Visibility:

Initial findings of Conservation agriculture based sustainable intensification from partners countries (Ethiopia, Mozambique, Kenya Tanzania and Uganda) were presented at the 6th World Congress of Conservation Agriculture in Winnipeg, Canada in 22-26 June 2014. SIMLESA and ACIR facilitated a side vent on CA for Smallholder agriculture in Asia and Africa. SIMLESA also featured at the African Green Revolution Forum organized by AGRA in Addis Ababa Ethiopia 1-4 September 2014.

SIMLESA's experience and its implications for Asian maize –legume system was presented at the 12th Asia Maize conference in Bangkok, Thailand 29 Oct-01 November 2014

2 Achievements

Achievements against project activities and outputs/milestones: July 2014 – December 2014

This is the first semi-annual report of activities conducted between July 2014 and December 2014 in eastern and southern Africa under SIMLESA phase 2 Program. The first objective of the program is to enhance the understanding of CA-based intensification options for maize-legume production systems, value chains and impact pathways.

Notable achievements this semi-annual period include but are not limited to:

Planning and review meetings were conducted at both regional and country level. Other objective one activities carried out include adoption monitoring, data processing workshops, input and output value chain reviews and evaluation of farming technologies in some countries. Program achievements are presented objective by objective: from 1 up to 5.

Objective 1: **To enhance the understanding of CA-based intensification options for maize-legume production systems, value chains and impact pathways.**

The achievements of milestones toward objective one are summarized in table 1.1 below. For each objective, the achievements of each partner are presented in the following sub-sections.

Table 1.1 Objective 1 Summary of milestones according to the log frame and project work plan

Output	Milestone	Date due for implementation	Comments
1.1.1: Create a continuously updated database of productive and risk reducing CA-based intensification options based on: i) review of the literature and other projects; ii) stocktaking of SIMLESA-1 experiences, including surveys and empirical evidence from on-station and on-farm experimentation, and; iii) on-going SIMLESA activities.	A dynamic web-based database of CA-based intensification options (agronomic practices, varieties, crop choices/diversification, fodder/forage) established.	2014-2018, updated annually	On-going
1.1.2: A meta-analysis of CA-based intensification options focusing on productivity, yield stability/risk, profitability, sustainability and adaptability.	- One peer reviewed synthesis of performance of CA-based intensification options - Implications of CA-based intensification options on crop failure analyzed and documented	2014, updated 2016	On-going
1.1.3 Evaluation of crop-livestock interactions, feed demand and	Synthesis of feed demand, and feed intervention options	2014, updated 2015	Work plan was developed in

supply options in six farming systems, through quantitative and participatory data collection and use of analytical tools. (Ethiopia, Kenya, Tanzania)			consultation with key stakeholders in 2014
1.2.1: Analysis of agricultural input accessibility (fertilizers, herbicides, pesticides) in enhancing CA-based intensification options, including agribusiness opportunities and constraints.	Agricultural input supply options, constraints and (agribusiness) development opportunities identified	June 2015	Work plan was developed by agri-business specialist in 2014
1.2.2: Update the analysis of opportunities and constraints for output market and agribusiness development	Report on (gender specific) output markets constraints and (agribusiness) development opportunities for maize, legumes and fodder	June 2015	Value chains were analysed in 2014
1.2.3: Determine local, national and regional institutional/agribusiness constraints (incl. policy) in the delivery and uptake of CA-based intensification options (by different farm types and farming systems)	Documentation of institutional/-agribusiness constraints to the delivery and uptake of CA-based intensification options	June 2015	On-going
1.2.4: Testing of alternative value chain interventions for developing competitive and efficient market system	Alternative input and output delivery options identified and report produced and shared with program members and other stakeholders	Oct 2015	On-going
1.3.1: Assess farmers' attitude toward risk and perception of risk sources and risk management strategies under different farm household types, resource condition (e.g. farm size) and agro-ecology	Survey instruments to collect data on risk perception and risk management strategies and carry out risk experiment survey to elicit risk attitude Country synthesis report on farmers risk attitude and perception of risk sources and risk management strategies under different risk attitude behavior produced and shared with stakeholders	Dec 2015	On-going
1.3.4 Estimate the relationship between farmers' perception of risk sources and attitude toward risk against farm and farmer socio-economic characteristics and the cost of risk and risk attitude on technology adoption	Work on factors influencing risk perception and attitude to risk and associated costs	July 2015	On-going

Ethiopia

The update covers the activity of SIMLESA - Ethiopia for the period July to December 2014. Research activities planned for the period were implemented accordingly. Main activities carried out under objective one are as follows:

i. SIMLESA-2 launch and planning workshop on 23-25 September 2014 at Hawassa. Objective one team managed to develop a consolidated work plan for the country project.
ii. Conducted a 3-day (15-17 December 2014) workshop for compiling and processing data obtained from Phase 1.
iii. Report on adoption monitoring survey has been prepared and is under review
iv. Report on input-output value chain of maize-legumes system was prepared and is under review

Researchers working on objective 1- of SIMLESA program from CIMMYT Ethiopia, the federal and research institute and their centers (Melkassa, Bako, Wondogenet, Somali Region Pastoral Agro-pastoral Research Institute, Pawe, Amahara Region Agricultural Research Institute, South Agricultural Research Institute) came together to consolidate the primary field data on Partial Budgets, Adoption monitoring, Farm Typologies, Crop-Livestock interaction, and risk. The team members produced power point presentations (while some of them have already produced a draft report). The team shared their two day group work results with SIMLESA objective 2 and 3 coordinators and researchers would give feedback and get their views on the results for further refinements.

The workshop has also enhanced mutual understanding among the researchers working on different objectives of the SIMLESA program. The researchers thoroughly discussed on each topic of the workshop (Partial Budgets, Adoption monitoring, Farm Typologies, Crop-Livestock interaction, and risk) and agreed to provide refined data - for example for partial budgeting where the yield tends to be inflated when it is calculated from small unit area and accordingly affect the benefit cost ratio calculation. Adoption monitoring survey for ARARI was planned for 2015 while other centers planned to conduct this form of survey every two years where the next two surveys were expected to take place in 2016 and 2018. Concerning farm typologies further field testing and modelling is planned to come up with applicable farm typologies which can be recommended for extension personnel to apply in the field. For risk assessment, inclusion of climatic data is suggested to capture major environmental variables responsible for farm crop production risks.

The workshop created an opportunity to learn the activities of one another and share responsibilities to contribute to the larger objective SIMLESA program.

Kenya

The project implementation activities in Kenya started in 2010 with the first activity being the selection and characterization of two trial sites in maize/beans (UM_3) and two more maize/pigeon peas (LM_4) in Embu, Tharaka-Nithi and Meru counties. The SIMLESA project is implemented under the project objectives 1, 2, 3, 4 and 5 dealing with socio-economics, agronomy, varieties/seed systems and scaling out of best bet agricultural technologies, and capacity building respectively.

Main activities carried out in Kenya during the reporting period included updating database of productive and risk reducing CA-based intensification options, quantify productivity and risk trade-offs faced by farmers under different risk attitude and analysis of agricultural input accessibility in enhancing CA-based intensification options, including agribusiness opportunities and constraints.

Tanzania

In Tanzania, SIMLESA activities under objective one were implemented as planned during the period -July to December 2014. These were mostly i) end of season (after harvest) evaluation of farming technologies, Conservation Agriculture (CA), Conventional (CONV) and alongside with farmer practice (FP) during

September, 2014 ii) evaluation of maize and pigeon pea in PVS trials in both Karatu district (Upper Kitete village) and Mbulu district (Bargish Uwa) in the northern zone, and Gairo district (Msingisi village), Kilosa district (Dodoma Isanga, and Mandera villages) and Mvomero district (Vitonga, Makuyu and Milama villages). Ten and 12 maize varieties were in the PVS in the northern and eastern zone, respectively. In addition, seven and six pigeon pea varieties were in the PVS in the northern and eastern zone, respectively. The maize and pigeon pea PVS evaluations were conducted in collaboration with other objective scientists, particularly breeders. Social economic data collected has been processed, analysed and a report developed.

Malawi

In Malawi objective one activities mainly focused on participatory planning in consultation with other objective team members during the reporting period. Focus of this activity was on making consultations with objectives 2, 3, and 4 building synergies between objectives, data stock taking and consolidation, and making preparations to hold joint meetings with the Pathways Project - a sister project to SIMLESA to share research results and knowledge gaps. Training was scheduled for the first quarter of 2015 to facilitate effective documentation of and analysis of data available.

Mozambique

With the help of objective 1 leader, Maria da Luz, a project being led by Caspar Roxburgh – a PhD candidate from the Queensland Alliance for Agriculture & Food Innovation (QAAFI), interviewed 43 farmers in Marera working with SIMLESA to identify possibilities for improved agronomic management while accounting for local soil and climate conditions. Using reported maize management practices, production levels and soil chemical analysis, a multivariate regression analysis will be used to identify existing of on-farm production ceilings and practices correlated with higher productivity. These management practices will be further explored for risk using APSIM to model year-to-year variability in production levels. As part of the project activities, farmers' maize fields were sampled for soil which will later undergo physical and chemical analysis. In addition, the project provided an opportunity to assess the uptake of conservation agriculture (CA) practices which are being promoted through SIMLESA activities. Data will also be collected to evaluate the financial capacity of farmers for investment in fertilizers and improved maize seed. Results will be disseminated to local objective coordinators to inform other SIMLESA activities.

A draft brochure on agronomic recommendations was produced and shared with key stakeholders for comments. The information brief on adoption of improved technologies promoted by SIMLESA in Mozambique is being developed by objective one and two teams. Currently, SIMLESA is also working on a journal publication focusing on gender, social networks and adoption of technologies promoted by the project in Mozambique.

Queensland Alliance for Agriculture and Food Innovation (QAAFI)

Contribution toward the development of protocols and annual research plans

- QAAFI team members attended and contributed to all SIMLESA- 2 country planning meetings, including the development of new experimental protocols as requested by CIMMYT and NARs.

SIMLESA Objective 1. *Copy this link in your browser to download a more detailed report (2MB)* https://dl.dropboxusercontent.com/u/20788757/SIMLESA%20II%20Report%202014/Objective%201.pdf

Summary of Activity 1.3.5 Exploration and refining of opportunities for investment in maize, legume and forage value chains through a better understanding of climate and markets risks

- A participatory modelling workshop was run by John Dimes in Ethiopia's Central Rift Valley in collaboration with Solomon Hassen (QAAFI PhD student) and EIAR extension and research staff (Activity 1.3.5).

- A participatory modelling workshop was run by John Dimes in Malawi in collaboration with Donwell Kamalongo and the Malawi research and extension team (Activity 1.3.5).

Summary of Activity 1.4.2 Quantify the benefits and trade-offs of alternative CA-based intensification options for different farm household types and farm systems

- Work has continued on modelling household and two abstracts have been submitted to the Farming Systems Design Conference to take place in Montpellier, France during September 2015 (Activity 1.4.2).
    - Rodriguez D, Bekele A, deVoil P, Herrero M, Kassie M, Power B, Rufino M, van Wijk MT (2015) Pathways for the sustainable development of agriculture: Simple rules to inform best-fit interventions http://fsd5.european-agronomy.org
    - Rodriguez D, deVoil P, Herrero M, Kassie M, Odendos M, Power B, Rufino M, van Wijk MT To mulch or to munch?. Modelling the benefits and trade-offs in the use of crop residues in Kenya http://fsd5.european-agronomy.org

Objective 2: To test and adapt productive, CA-based intensification options for sustainable smallholder maize-legume production systems

In the last half of 2014, main SIMLESA activities under objective 2 conducted includes Annual Review Planning Meeting for scaling out phase 2, establishment of trials, identification of scalable technologies, field days and strengthening of local innovation platforms. The achievements of milestones toward objective 2 are summarized in table 2.1 below. For each objective, the achievements of each partner are presented in the following sub-sections.

Table 2.1: Objective 1 summary of milestones according to the log frame and agreed work plan:

Output	Milestone	Date due for implementation	Status
2.1.1: Annual on-farm **exploratory trials** to verify co-identified promising CA-based intensification options in terms of productivity, yield stability/risk, profitability and sustainability (excl. variety evaluation. see 2.1.2) - at least three sites per SIMLESA country testing at least three refined options every year	Verified CA-based intensification options under smallholder farmer conditions.	2014-2018, findings reported annually	Done and on-going
2.1.2: Annual on-farm **participatory evaluation trials** of released improved	Improved maize, legume and forage/fodder varieties suitable for CA-based practices identified.	2014-2018, findings reported	Done and on-going

maize, legume and forage/fodder varieties under CA practices to identify most suitable varieties with male and female farmers – with at least three sites per SIMLESA country testing at least three refined options every year		annually	
2.1.3: Annual adaptive on-farm experiments with CA-based intensification options to: (1) smart-sequence options and; (2) integrate options at farm-level. This is done for different farm types in different agro-ecological conditions – with at least two farm types for five main farming systems in ESA, and at least one refined set per SIMLESA country every year	Verified strategies to smart-sequence and integrate CA-based intensification options for different farm types and agro-ecologies	2014-2018, findings reported annually	Country work plans were developed during the reporting period
2.2.1: Annual continuation of on-station long-term trials under conditions representative of the agro-ecologies to monitor the medium to long-term productivity, yield stability/risk and soil health dynamics of CA based intensification practices, including effects on disease, pest and weed dynamics.	Precise data on the effects of CA-based intensification practices focusing on crop productivity, water and soil health dynamics.	2014-2018, repeated annually	On-going
2.2.2: Annual on-station evaluation of maize/legume varieties for CA-based intensification (released varieties only)	Suitable varieties for CA-based systems identified	2014-2018, repeated annually	On-going
2.3.1: Fine-tuning the implications of the tested options through analysis of trade-offs and synergies at intra-household, farm scale (in terms of resource allocations and seasonality) and village scale.	Detailed adoption constraints of CA-based intensification options at intra-household, farm and village scale	Dec 2014 and annually thereafter	Done and on-going

2.3.2: Aligning and refining on-farm experimentation and soil health dynamics research to recommendation domains	Updated recommendation domains	2014-2018, refined annually	Done and on-going
2.3.3: Development of an interdisciplinary monitoring protocol for on-farm experiments of CA-based intensification options focusing on productivity, stability/risk, profitability and sustainability, and including some farm and household indicators	An interdisciplinary monitoring protocol for on-farm experiments of CA-based intensification options that can be used beyond the project's lifespan.	Dec.2014, refined 2016	Protocols are being developed reviewed in SIMLESA countries

Ethiopia

The activities under objective 2 were implemented and the results were shared with stakeholders in to refine CA-based intensification options. The strategies adopted are: field days and innovation platforms, exchange visits and trainings were organized across research centers where SIMLESA project activities are implemented. The trainings included CA practices, and soy bean utilization. SIMLESA organized field days to demonstrate SIMLESA technologies (Table 2.1).

Table 2.1: Farmer training on field days and exchange visits conducted

District	**Activity**	**Number of participants**	
		Men	Women
Gobu-Sayo	Field day and exchange visit	100	15
	Training on Soy bean food preparation	0	100
Ilu-Galan	Field day and exchange visit	123	24
East Badawacho	Training and exchange visits	85	5
Hawassa Zuria	Training and exchange visits	100	16
Meskan	Training and exchange visits	201	50
East Badawacho	Training and exchange visits	256	25
Hawassa Zuria	Field day	164	10
Meskan	Field day	143	15
Regional innovation plat form	Field day	82	5
Siraro	Field day	300	120
Dugda	Field day	210	50
Miesso	Field day	100	10
Total		**1,864**	**445**

Other than field demonstration and scaling up, seed of selected improved crop varieties were multiplied and distributed to farmers.

Kenya

In Kenya, objective 2 team, managed to continue with CA and maize/legume cropping systems in 12 on-farms and one on-station sites The 9th set of the trials comprising of 12 on-farms and one on-station were established

at the start of October 2014 short rains in eastern Kenya. Data sets on climate, soil, crops performance and management continued to be collected in collaboration with the other objective leaders to determine the effects of CA practices on soil nutrients and crop yields. The trials were used for out scaling of technologies together with those from Objectives 3 and 4 and for training of partners on various aspects of management. Local Innovation Platforms continued to be strengthened and the LIPs participated in the establishment and management of mega demos which acted as avenues of scaling out preferred technologies.

Tanzania

Activities under objective 2 of SIMLESA were implemented according to plan during the reporting period. Harvesting was conducted for the 36 exploratory trials that were established in four villages in the northern zone, namely, Masqaroda, nine trials, Bargish-Uwa ninr trials in Mbulu district, and Bashai (eight trials) and Rhotia villages (10 trials) in Karatu district. In eastern zone, harvesting of 35 exploratory trials was established in six villages across the three districts, namely, Gairo district (Msingisi village), Kilosa district (Dodoma Isanga, and Mandera villages) and Mvomero district (Vitonga, Milama and Makuyu villagea) was conducted. From July to December 2014, the major activities were data collection of the trials. Maize crop was earlier harvested from the exploratory trials from September to October 2014, however, harvesting of the pigeon pea was done during the first week of November 2014, both in the Eastern and Northern zone of Tanzania

Harvesting of maize crop from the 11 researcher managed trials was conducted during September 2014. Maize from three trials in Karatu district, in (Bargish Antsi and Bashai villages) and two trials established at Selian Agricultural Research Institute in the northern zone were also harvested during September 2014. Additionally, six trials were established at Ilonga Research Station , Kilosa were also harvested during the same month. Maize yield performance from the long- term trials at Selian and Ilonga Kilosa during the 2014 cropping season was better than during the 2013 cropping season. Pigeon pea was harvested during November 2014 and collected data was analyzed and a report for the 2014 cropping season developed.

Only two field days were conducted in two districts at Selian Agricultural Research Institute (SARI) 15 July 2015 and Agricultural Research Institute Ilonga on 13 August 2014. The number of field days was limited to two because of limited funding. Participants included district, DAICOs, village leaders, researchers, extension staff, farmers, NGOs and representatives from seed companies.

Ten local level Innovation Platforms (IP) established in 10 communities, six IPs in the Eastern zone, namely, Mandera, Dodoma Isanga, (Kilosa district), Makuyu, Milama and Vitonga (Mvomero District), and 4 IPs in the northern zone in communities, namely, Rhotia, Barshai (Karatu District), Bargish Ua nad Masquaroda in Mbulu district during July to December 2014. The newly established local innovative platforms received training and have gone one cycle of problem identification and found solutions for respective problems.

Malawi

Research protocols were developed to guide implementers to successfully carry out both exploratory and on station long- term field trials. These were done in collaboration with the Objective 2 coordinator.

Inputs in form of seed, fertilizers, herbicides, inoculants and small- scale planting equipment in CA field were purchased and distributed to farmers for on-farm trials and at the station for long term trials.

An undergraduate student was identified to evaluate the performance of small- scale planting equipment.

Soil percent cover assessments in CA plots were done before the onset of the rains in all SIMLESA project districts.

SIMLESA host farmers including out-scaling farmers were interviewed by CIMMYT communication specialists to testify success stories of SIMLESA phase 1, including challenges. The stories were earmarked for the SIMLESA quarterly bulletin, and the project website.

Mozambique

During the reporting period, objective 2 organized inputs and materials for 30 modified exploratory trials with three new varieties to test compatibility with CA. The new varieties are two hybrids (Pristine and Molocue) and one OPV (ZM309). The varieties conform to the requirements of farmers such as:

a) Earliness in seasons with dry-spells;

b) Dent grain, so that it is hard and is not easily damaged by insects and produce high content of flour.

c) Resistance to major pests and diseases (Grey leaf spot, virus, etc.)

d) Resistance to lodging.

e) Highly productive

Inputs and materials for the long term trials (on-station) wereready and would be modified to suit SIMLESA II planned activities:

On-station trials would be laid in two locations:

ISPM

- Continued the big long-term trials but with the same new maize varieties as applied on –farm in the exploratory trials entirely managed by local SIMLESA personnel. Each maize plot was divided into three to accommodate new varieties and the planting would be carried out in blocks to allow for phased planting since this is a big trial.
- Run the weed control trial one more season as is but with intensified data collection including weed diversity, weed counts.
- Dropped the termite control
- Set up the new relay trial at ISPM
- Establish a trial to assess the effect of varying plant densities on soil N mineralization, maize nitrogen uptake, radiation use efficiency and yield under different weed management and N input scenarios (PhD work from Caspar).

ANGONIA: N'tengo-Umodzi

- Continued with weed control trial as before.
- Discontinued the intensification trial.
- Run the new raised bed trial to assess the advantage of CA using raised beds as in conventional plots in Angonia farming system where excess rains occur mostly.

Objective 3: To increase the range of maize, legume and fodder/forage varieties available to smallholders

During the reporting period, under objective three, key activities carried out were participatory variety selections, experimental trials, scaling out of improved technologies and testcross formation. Table 3.1 summarizes objective achievements.

The table 3.1 Objective 3 progress summary

Output	Milestone	Date due	Status/ comments
3.1.1: Prioritize available stress tolerant maize varieties for SIMLESA sites annually	Per farming system, revisit 2-3 newly released hybrids and OPVs with potential suitability for the targeted farming system	Dec.2014 and annually until project end	Done and on-going
3.1.2: Potential legume species and varieties for the target environment in the program countries analyzed with TL II partners annually.	Per farming system, 1-2 potential legume species and 2 varieties each for the target communities identified.	Dec.2014 and annually until project end	Plans with relevant key stakeholders were developed in 2014
3.1.3: Identify and refine best bet forage/fodder species and varieties suitable for target AEZs for use in maize-legume-forage production systems	Per farming system in eastern Africa, 2-3 forage/fodder spp. identified and acquired from available sources	Dec.2014 and annually until project end	ILRI developed a plan-They agreed to use SIMLESA 1 funds balance
3.1.4: Increase farmer access to promising but underinvested material (improved maize, grain legume and forage/fodder species and varieties), through seed increase at relevant stage of seed production pipeline.	Seed for promising but underinvested maize, grain legume and forage varieties increased annually to meet country demands.	Annual (Jun 2014-Jun 2017)	On- going
3.1.5: Identify, tackle and refine seed availability bottlenecks of improved maize, legume forage/fodder varieties (from sister projects such as DTMA and TL-II), including seed systems and agribusiness support and improved seed distribution road maps in each of the five countries.	Farmer (m/f) access to improved maize, legume and forage/fodder varieties	2014-2017	Plans with relevant key stakeholders were developed in 2014

The specific country and partner achievements of outputs and milestones toward Objective3 are detailed below:

Ethiopia

Various field days were conducted during the reporting period. Seed varieties observed by farmers included BH547, BH661, BH546 and Gibe 2. The exercise was not restricted to seed systems only but also on farming technologies like common/soy bean and forage varieties in mid-altitude areas such as Bako whereas Shalla MHQ138, Shalla, MHQ138/Nasir, BH540 and Melkassa 6Q, CA-based conservation were demonstrated under minimum tillage, conventional tillage under sole and intercropping systems in the Central Rift valley and Southern Region which is implemented by Melkassa ARC, SARI and Wondogente (Hawasa maize).

Several variety field performance trials, participatory variety selection were conducted across the centres, But the yield result of this activity was not completed during the review period. Preliminary results indicated some superior varieties were identified. Likewise farmers selection criteria revolved around yield as yield level and farmers' selection ranking were inline. The researcher attended a three day workshop at Hawassa (September 23-25) and refined their research areas for SIMLESA-2.

Kenya

Under Objective 3 more maize, legume and pasture varieties were acquired for testing and promotion under CA practices. The team dealt more on acquiring maize and legume varieties for further testing and promotion under the intercropping systems on the basis of CA practices. The activities were mainly done on-farm with participation of members of LIPs in all four sites with mega-demo plots.

Tanzania

Objective three activities were implemented as planned both in the northern as well as eastern zone. Activities done between July to December 2014 were: i) Participatory Variety Selection (PVS) with farmers. Ten maize varieties, namely, TZH 536, TZH 538, SELIAN H 208, SELIAN H 308, IF 510, SC 627, H 614 D, LISHE H2, CKH 10692 and MERU HB 513 were evaluated in northern zone. Similarly, 12 maize varieties, namely, TMV 1, ZM 309, ZM 525, SITUKA M1, ZM 523, SELIAN H 208, SELIAN H 308 TAN H 600, TZH 538, MERU, HB 515, MERU HB 513 and MERU HB 409 were evaluated in the eastern zone. All maize varieties were evaluated and harvested during September 2014 and data was analyzed and final reports were developed

In addition, seven pigeon pea varieties, namely ICEAP 00936, ICEAP 00576-1, ICEAP 00040 (MALI), ICEAP 00911, ICEAP 1514/15, ICEAP 00850 and ICEAP 00068 (TUMIA) were evaluated in the northern zone and six pigeon pea varieties, namely, ICEAP 00554, ICEAP 00557, ICEAP 00053, ICEAP 00932, ICEAP 00040 (MALI) and ICEAP 00068 (TUMIA) were evaluated in PVS in the eastern zone. The farmers field day was conducted at Selian Agricultural Research Institute (SARI) on15 July 2014 and more than 400 stakeholders visited the pigeon pea seed production. Other activities included harvesting of increased seed of the two pigeon pea varieties, namely, Mali (ICEAP 00040) and Tumia (ICEAP 00068) during the second week of September 2014. The seed increase of the pre-release and newly released pigeon pea varieties, namely, ICEAP 00932 and ICEAP 00053 were also harvested during September 2014. The pigeon pea data has been analysed and a final report was developed

Malawi

An inventory of potential DT-maize and legume varieties with seed companies, ICRISAT, IITA and NGO partners was developed. Hybrid maize MH30 was selected for planting under pit planting by Kachere Farmers Group in Lilongwe. CADECOM was out scaling soy bean seed multiplication, while Natural Resources College (Agriculture College training students in Agriculture and Natural Resources Management) testeddifferent maize varieties under CA and conventional practice imparting knowledge about CA and varieties to students and other relevant stakeholders.

Two on-station CA x Variety trials were planted at Chitedze and Chitala, two trials on Variety x Plant population x CA were planted at Chitedze and Chitala.Peacock, Funwe Fram Ltd, CPM-Agri-enterprise each were implementing breeder and basic seed multiplication for DT-maize hybrids MH30, MH32 MH31 respectively. Two variety proposals for ground nuts were developed and forwarded to the Agriculture Technology Clearing Committee in Malawi.

The following groundnut genotypes were released in Malawi in 2014 after a series of on - station and on - farm trials:

Virginia groundnut genotypes: - ICGV-SM 01724, ICGV-SM 01731, ICGV-SM 08501, and ICGV-SM 08503. These are high yielding, resistant to rosette disease, medium duration, and have medium seed size.

Spanish genotypes: - ICGV-SM 01514, ICGV-SM 99551 and ICGV-SM 99556. These are short duration, high yielding compared to Kakoma, resistant to rosette diseaseand have a medium seed size.

Breeder seed multiplication for these released varieties will be carried out in the 2014/15 season. Demonstrations plots will be mounted at Chitedze Research Station.FPVS trials to evaluate with farmers and facilitate release of extra new varieties of groundnuts resistant to GRD, ELS, RUST, drought with either local or new genetic backgrounds will continue in the season 2014/15.

Mozambique

In 2014 SIMLESA-Mozambique noted better improvements on trials management and seed quality although in areas where they are new extension officers, some trials were not planted according to the field protocols:

- Seed germination was good in almost all the planted sites
- Trial management including residue retention practices were observed in some farmers' plots.

Seed production

Local companies, Dengo commercial, Lozane and Semente Perfeita were selected to produce commercial seeds from IIAM

- Seeds from beans, soybeans, cowpea and pigeon pea were produced in collaboration with IIAM's USEBA (Basic Seed Unit) and ICRISAT Mozambique/Malawi

Table 2. Seed production for maize and legume in 1 Station (August 2014).

Institution	Crop			
	Maize (4 varieties ZM 309, 523, 625 and 721)	Cowpea (1 variety)	Pigeon pea (2 varieties	Soybean (9 varieties)
Sussundenga Research Station	5,000 Kg	50 Kg	250 Kg	900 Kg

A small meeting for seed production contracts for the upcoming season was held and three institutions (IAV, N'tengo-Umodzi and Gurue Research Station) were selected to produce seed for the communities and SIMLESA program needs. The selection was based on the following principles:

a) Low cost of production

b) Efficiency and quality product produced and,

c) Climate favorable for seed production

The objective provided maize ZM 625, 721 and ZM 309 and legumes (Cowpea var. IT-16 and Soybean TGX 1740-2F for on-station trials and outscaling activities. The exploratory trial received two hybrids (Molocue and Pristine) and 1 OPV ZM 309.

Objective 4: To support the development of local and regional innovations systems and scaling-out modalities

During the reporting period, the following key activities were carried out under program objective 4. Table 4.1 below summarizes program achievements under objective four.

Table 4.1 below outlines the relevant outputs and milestones during this reporting period

Output	Milestone	Date due for implementation	Status
4.4.3: Cross-participation in annual research workshops between program members and other programs (other Australian food security initiatives) and effective working relations will be strengthened with six other related projects	Shared understanding of regional research challenges and products; sharing of innovative agronomy, breeding and socio-economic research methods and maize legume system products	Cross-participation in all years	Done and on-going
4.4.4: Annual exchange visits of farmers (m/f) and extension agents between different sites to discuss experiences with CA-based intensification practices	Farmer-to-farmer networking and knowledge exchange facilitated. At least one farmer study visit will take place in each country per year (gender sensitive selection of participants)	2014-2018, annual activity	Done and on-going

During the reporting period objective four was dominated by proper planning at country level focusing more on cross participation and objective linkages. Field activities carried out included field days, exchange visits, innovative platforms in all SIMLESA countries and involvement of other organizations to scale out SIMLESA technologies.

In Mozambique, dissemination of agricultural information technologies through SMS based techonolgies has started. The web platform established during the last season has limitation to reach the main mobile companies in the rural areas. Contacts with some of the mobile phones in Manica produced no results due to lack of capacity locally to sign contracts. Therefore, any reliable contract should involve the respective headquarters in Maputo. Today, a web platform is being used and a contract to use the SMS studio software has been established. These mechanisms work in the short and medium term and SIMLESA still need to engage the mobile phone companies to ensure sustainability and resiliency**.**

Objective 5: Capacity building to increase the efficiency of agricultural research today and in the future modalities

Table 5.1: Relevant outputs and milestones during this reporting period are outlined below:

Output	Milestone	Date due for implementation	Status
5.4.1: Management training for NARS staff in SIMLESA (incl. 'soft-skills', leadership and team building, M&E, administration and prioritization).	Trained managers from NARS	Dec 2014	ARC South Africa will conduct the training in May 2015

Below are the specific details on achievements of the outputs and milestones towards Objective five during the period under review.

The major activity with the capacity building component in Phase 2 is as follows:

1. Capacity building will focus on outcomes-based training (with tangible outcomes); for example, on Gender Leadership Training, SIMLESA will make sure that gender-based activities are incorporated into the work plans of the countries/ objectives and also how to report these activities.
2. The two MSc and one PhD student finished their experiments and analysis of results in South Africa. They have even submitted their theses. The PhD student is hoping to graduate in April/ May 2015
3. The ARC together with the University of KwaZulu-Natal will be mentoring Mekonnen Simme (former SIMLESA-Ethiopia Country Coordinator) on his PhD studies.

Three agronomists from SIMLESA countries - Mozambique, Kenya and Tanzania, and one from Uganda, a spill over country - presented posters and abstracts on agricultural developments from their respective countries at the sixth World Conservation Agriculture Congress held at Canada's Winnipeg Convention Center from 23-25 June, 2014.

On the last day of the congress, ACIAR/SIMLESA organized a parallel meeting to discuss cross-cutting issues affecting small-scale farmers, policy challenges, networking, general constraints to CA adoption and challenges affecting CA promotion particularly in East and Southern Africa where SIMLESA is being implemented.

The need for farm mechanization to ease CA demand for labor, particularly for weeding and residue maintenance, was also viewed as a key strategy for CA success at the three-day congress. In the case of Africa, special CA equipment such as jab planters, and small tractors were considered critical tools.

QAAFI

SIMLESA Objective 5: **Summary of Capacity building to increase the efficiency of agricultural research today and in the future**

- Report on activities of Caspar Roxburgh PhD candidate based in Chimoio, Mozambique. Caspar Roxburgh was posted to Chimoio, Mozambique until March 2015 to run on farm and on station trials in collaboration with the Mozambique team.
- Progress report for the free online statistical course for supporting capacity building under SIMLESA II.

Other capacity building activities

- Daniel Rodriguez was appointed Course Advisor for the ADS Scholarships 2014. A number of SIMLESA country students applied and were interviewed in Nairobi, Kenya.
- Daniel Rodriguez continued the supervision and co-supervision of Nascimento Nathumbo, Abeya Tefera, Caspar Roxburgh, Solomon Jemal and Yohannis Mulu.
- The QAAFI team hosted Givemore Munashe Makonya at the Gatton Research Station. Givemore is a MSc student of Isaiah Nyagumbo (SIMLESA Objective 2 Leader). Givemore will participate in the Queensland based research activities at Gatton Research activities during the summer months till March 2015. Givemore is a beneficiary of the UQ summer scholarship program and the SIMLESA program.
- Get details from the link below: https://dl.dropboxusercontent.com/u/20788757/SIMLESA%20II%20Report%202014/ProgRepMain.pdf

3 Variations to future activities

The original objective of SIMLESA to sustainably increase yields and reduce risks has been couched largely in terms of adoption of conservation agriculture (CA) practices alongside improved germplasm. During 2012, the annual program review meeting agreed that adoption of components of CA packages in systematic sequences consistent with local circumstances is a viable pathway and should be considered a success. During the 2013/14 meetings, it became clearer that even more flexibility is needed, starting from current famers' practices to adopt practices consistent with SI that in many cases may be outside of the conventional (three-principle) definition of CA. These additional practices are included in the current phase two of the program, for example, soil fertility, fodder/forage and integration of livestock activities in eastern Africa region.

In attempting to strengthen gender and M&E in phase two, these were internalized into the project – instead of being outsourced as in SIMLESA-1. As part of internalizing M&E system within SIMLESA an expert in this area will be recruited soon.

Around 30% of the national budget has been set aside for the competitive grants under objective four for scaling out SIMLESA technologies. A grants selection committee will be formed in each country for effective selection of partners with the following composition:

- National coordinator
- ACIAR representative4
- Project Coordinator (as PMC representative)
- Objective four representation

4 Variation to personnel

During the period under review, personnel variations are summarized below:

Personnel and variations for SIMLESA program partners - Kenya

Name	Agency, position (location)	Role in program (discipline)	Variation
Charles Nkonge	Senior Principal Research Officer KALRO Headquarters	National Coordinator	
John Achieng	Senior Research Officer, KALRO Kakamega	Agronomy research (Agronomist)	Left in August 2012
Philip Kwena	Senior Research Officer, KALRO Kakamega	Breeder	Left in 2013
John Ojiem	Centre Director KALRO Kibos	Site Coordinator	
Charles Mutinda	KALRO, Principal Research Officer	Maize Breeder	Left in 2012
George Ayaga	Kakamega, New site Coordinator, western Kenya, KALRO Kakamega	Agronomy research (Agronomist)	Joined in August 2012
Roselyne Juma	Senior Research Officer, KALRO Kakamega	Agronomist	Joined in 2013
Vincent Woyengo	KARI, Senior Research Officer, KALRO Kakamega	Breeder	Joined 2013

Name	Agency (location)	Role in program (discipline)	Variation
Dr Lucas Mugendi	SARI	National Coordiantor	
Dr. John Sariah	SARI	Agronomist/ molecular breeder	
Bashir Makoko	Ilonga ARI	Agronomist (Site Coordinator)	
Adrian Mbiza	Ilonga ARI	Agronomist	Left in July 2011
Thresia Greory	SARI	Social - economist	
Phillemon Mushi	SARI	Legume Seed Systems	
Frank Mmbando	SARI	Socio-economist	Study leave PhD SA
Kheri Kitenge	SARI	Maize breeder	
Twael Mmbaga	SARI	Agronomist	Left September 2012

Elisha Mkandya	Ilonga ARI	Socio-economist	
Dr. Joseph Mligo	Ilonga ARI	Legume Breeder	Passed away 2012
Beatrice Mwaipopo	Ilonga ARI	Legume breeder	Joined 2012
George Iranga	Ilonga ARI	Agronomist	
Dr. Albert Mushi	Ilonga ARI	Maize Breeder	Passed away 2011
Dr. Barnabas Kiula	Ilonga ARI	Maize breeder	Joined June 2011
Christine Kaswahili	Ilonga ARI	Maize breeder	
Ruth Madulu	Mikocheni ARI	Socio-economists	
Meshack Makenge	Ilonga ARI	Legume breeder	
Gonzaz Kazimoto	SARI	Legume breeder	
Shida Nestory	SARI	Agronomist	On study leave MSc SUA
John Joseph	DAKAWA	Agronomy	On study leave MSc SUA
Jacob Kiyyo	Ilonga ARI	Maize breeding	On study leave MSc SUA
Theophl Tarmo	Arusha	Crop protection	On study leave MSc SUA
Rose Sakwera	Mvomero	Extension	On study leave MSc SUA

Tanzania

Ethiopia

NO	Name	Agency/position	Role in the program	Variation
1	Yalfal Temesgen	ARARI	socioeconnomist	Team member
2	Dr. Adam Bekele	EIAR/Melkassa	Agricultural economics	Team leader
3	Abebaw Asaye	EIAR/Pawe	Agricultural economics	Left in Sep
4	Getahun Degu	SARI	Agricultural economics	Team member
5	Hibo Ahmed	SoRPARI/Jijiga	Statistics	Joined in Nov 2014
8	Muluken Philipos	EIAR/Wondogenet	Rural Devt and Agrl Ext	Team member
9	Bayisa Gedefa	OARI/Bako	Rural Devt and Agrl Ext	Team member
10	Yayeh Bitew	Adet/ARARI	Agronomist	Team member
11	Zerihun Abebe	OARI/Bako	Agronomist	Team member
12	Tadese Birehanu	OARI/Bako	Agronomist	Focal person from Oct 27/2014
13	Shiferaw Tadese	OARI/Bako	Agronomist	Team member
14	Beyene Abebe	Bako national maize research	Maize breeder	Team member
15	Abdulkadir Haibe	SoRPARI/Jijiga	Agronomist/Crop Director	Team member

NO	Name	Agency/position	Role in the program	Variation
16	Bahiru Tilahum	EIAR/Melkassa	Agronomist/objective II	Joined in July 2014
17	Tesfaye Midega	EIAR/Pawe	Micro-Biology	Team member
18	Daniel Markos	SARI	Agronomist	Focal person
19	Shegaw Deribew	SARI	Maize breeder	Team member
20	Alemayehu Zemede	EIAR/Wondogenet	Breeder- Working on objective 2	Focal person
21	Ashenafi Niguse	EIAR/Wondogenet	Agronomist	team member
22	Getinet Asefa (PhD)	EIAR	Livestock research director	Director
23	Tesfaye Shimbre (PhD)	EIAR	Soil and water research director	Director
24	Bisrat Getinet	EIAR/MARC	Agric. Mechanization	Team member
25	Girma Moges	EIAR	Mechanization research director	team member
26	Kim Haekoo (PhD)	CIMMYT/Ethiopia	Agronomy	Team leader
27	Endeshaw Tadesse	Bako national maize research	Maize Breeder	Team member
28	Goshime Muluneh	EIAR/Wondogenet	Maize breeder	Focal person
29	Gezaheng Bogale	EIAR/Melkassa	Maize breeder	Team member
30	Shigidef Mekuria	ARARI	Animal production	Team member
31	Likawent Yiheyis (PhD)	ARARI	Livestock research director	Livestock Director ARARI
32	Adane Arega	OARI/Bako	Bean breeder	Team members
33	Yohanis Seyoum	SoRPARI/Jijiga	Maize breeder	Team member
34	Dereje Ayalneh	EIAR/Melkassa	Maize breeder	Team member
35	Ashebir Tegeng	EIAR/Melkassa	Forage	Team member
36	Zelalem Zewdu	EIAR/Pawe	Bean breeder	Team member
37	Mezgebu Getinet	EIAR/Pawe	Forage	Team member
38	Daniel Ambachew	SARI	CRD	Team member
39	Alemishet Lema	EIAR/MARC	Maize breeder	Objective 3 Leader from Oct 27/2014
40	Dagne Wegari (PhD)	CIMMYT/Ethiopia	Maize breeder	
41	Mekonnen Sime	EIAR/MARC	Rural Dvt and Ag Ex	team member and IMLESA-1 Coordinator up to Oct 2014
42	Tilaye T/wold (PhD)	ARARI	Agricultural economics	Team member
43	Hinda Farah	SoRPARI/Jijiga	Breeder- Working on gender	Team member

NO	Name	Agency/position	Role in the program	Variation
46	Yeshitila Merene	ARARI	Entomology	Focal person ARARI
47	Dr. Bedru Beshir	EIAR/Melkassa	International Development	SIMLESA Country coordinator from Oct 27/2014
48	Zewdineh Melke	EIAR/Pawe	Bean breeder	Focal person
49	Abebaw Shimelis (PhD)	SoRPARI/Jijiga	Agricultural economics	Focal person
50	Asnake Fikire (PhD)	EIAR	Crop Research Director	Director
51	Dawit Alemu (PhD)	EIAR	Ag Ec., Ext. Gender Research	Director
53	Adane Melak	EIAR/Pawe	Rural Devt and Ag. Ex.	Pawe Center Director, member
54	Mohammed yesuf	ERAR/MARC	Director MARC	Director
55	Kifle Degefa	OARI/Bako	Bean breeder	Rejoined the team in Nov 2014

QAAFI

- Brendan Power (20% Full time equivalent (F.T.E.)) resigned. His project component was data mining and statistics support. These activities have been transferred to Peter deVoil who will now contribute 70% of his time to SIMLESA (previously 50% F.T.E.).
- Stuart Irwin Brown (soil scientist) is being appointed to QAAFI's post in Addis Ababa, Ethiopia. Stuart would be able to start in Addis Ababa in mid to late February 2015. Stuart will report directly to Joe Eyre (farming systems – crop ecophysiology) who is the QAAFI Research Fellow posted to Harare, Zimbabwe.
- John Dimes will be contracted as a consultant as per requests from the NARS to run Climate Risk and Participatory Modelling workshops.
- Caspar Roxburgh (QAAFI PhD student) was posted to Chimoio in Mozambique for four months to collect survey data and run field experiments on nitrogen use efficiency in maize at ISPM in collaboration with the Mozambique team.

5 Challenges and opportunities

Challenges

Moisture stress due to erratic rains and the overall effect of climatic change is one of the main problems being experienced in all the SIMLESA countries. In Malawi and Mozambique, for example, rains were received late and the season is unpredictable. In Malawi, it was discovered that most seed companies' staff involved in seed multiplication programs had little experience in seed production hence they required constant backstopping by the department of agricultural research services (DARS) as well as training to be conversant with seed production issues. Lack of irrigation facilities for most seed companies limited their seed production.

Opportunities

After six months of implementation, SIMLESA 2 is on course to start working toward its main objectives. In all SIMLESA operational countries it was noted that farmers, key stakeholders and members of the community were ready to work and scale out the project technologies. Participatory methodologies used in the selection process of the best bet technologies empowered the communities and it gave them a sense of ownership. Farmers' efforts were also being complemented by the established local innovation platforms. This will enable effective transfer of SIMLESA technologies to many farmers in a sustainable manner.

In the 2015 season we expect to implement the Competitive Grant system to enhance scaling out effort

We also expect that feed backs from the forthcoming 5th ARPM will be help usto improve efficiency of deliverables.

ANNEX 1: ARC CAPACITY BUILDING WORK PLAN

CAPACITY BUILDING PROGRAMME FOR SIMLESA 2

Programme	Issues to tackle	Intended outcomes	Trainees	Proposed date
Gender Leadership & Planning	a. How does CA contribute to labour reduction? b. How does this help women and food security? c. What opportunities do school going children derive from CA? d. How does CA contribute to diversification of crops	1. Proposals for each country 2. Data collection & Analysis 2. Publications	1. Gender focal people 2. Objective leaders (20)	May 2015
Economic Benefits of CA	a. Increased productivity and spins-offs b. Diversification and intensification to cash crops and livestock	1. Data collection format 2. Costs at input and output level of different farming operations 3. Cost of spin-off operations 4. Publication	2 people per country (10-14)	July 2015
CA Field Guide/ Resource Book	1. Practical "how to" color and step by step 2. Pest and disease management 3. Costs and benefits	Full colour and durable resource book	5 people	October 2015
CA Videos	Clear videos of each stage of CA and in different countries; capturing the before and after to visualize and track the changes	Videos than can be shared and uploaded for learning & media	1 person per country led by SIMLESA Communications Specialist	January 2015 to end of SIMLESA 2

Post-Harvest Management	Storage of maize & legume grain and seed, especially as output increases Access to markets Processing	1. Post-harvest management guide 2. Analysis of potential markets/ country 3. Facilitate access to suitable storage facilities	10 people (1 technical and 1 economist/country)	To be negotiated
Publications	3. Develop and implement a strategy for accelerating generation of publications from SIMLESA's research activities. Key issues to be articulated are • **Time:** How to ensure scientist set aside time to writing: what platforms have to be created for this? • **Access to literature:** assist scientist improve access to non-open access journals literature • **Language Editing:** Support some finished products with language polishing • **Statistical support**: Facilitate 1:1 contacts with Biometricians	Publications	10 people at a time	2016