

**ANNUAL PLAN 2012-2013**

##### 01 February, 2012 – 30 July, 2013

**Includes progress report for period from 01 February, 2011 to 30 January, 2012**

##### TABLE OF CONTENTS

[1](#_Toc319570094)

[Acronyms and Abbreviations iii](#_Toc319570095)

[1. INTRODUCTION 1](#_Toc319570096)

[1.1 Program origin 1](#_Toc319570097)

[1.2 Program implementation 2](#_Toc319570098)

[1.3 Preparation of the Annual Plan 3](#_Toc319570099)

[2. PROGRAM DESCRIPTION 3](#_Toc319570100)

[2.1 Program goal, objective and vision 4](#_Toc319570101)

[2.2 SoL Components and component objectives 4](#_Toc319570102)

[Component 1: Evaluation of improved food crop varieties 4](#_Toc319570103)

[Component 2: Formal seed production and distribution 5](#_Toc319570104)

[Component 3: Informal seed production and distribution 5](#_Toc319570105)

[Component 4: Seed system management 6](#_Toc319570106)

[2.3 Program outputs 6](#_Toc319570107)

[Component 1: Evaluation of improved food crop varieties 6](#_Toc319570108)

[Component 2: Formal seed production and distribution 7](#_Toc319570109)

[Component 3: Informal seed production and distribution 7](#_Toc319570110)

[Component 4: Seed system management 8](#_Toc319570111)

[2.4 Program inputs 9](#_Toc319570112)

[2.5 Program sites 9](#_Toc319570113)

[3. Program accomplishments by component (Feb, 2011 – Jan, 2012) 10](#_Toc319570114)

[Component 1: Evaluation of improved food crop varieties. 10](#_Toc319570115)

[Component 2. Formal seed production and distribution 13](#_Toc319570116)

[Component 3. Informal seed production and distribution 13](#_Toc319570117)

[Component 4. Seed system management 14](#_Toc319570118)

[Program management 15](#_Toc319570119)

[4. Workplan 01 February, 2012 – 30 January, 2013 16](#_Toc319570120)

[Component 1: Evaluation of improved food crop varieties. 16](#_Toc319570121)

[Component 2. Formal seed production and distribution 18](#_Toc319570122)

[Component 3. Informal seed production and distribution 19](#_Toc319570123)

[Component 4. Seed system management 19](#_Toc319570124)

[5. Expenditure and budget 21](#_Toc319570125)

[6. Monitoring 22](#_Toc319570126)

[7. Appendices 23](#_Toc319570127)

[Appendix 1. Progress against M&E framework 2011-2012 24](#_Toc319570128)

[Appendix 2 Progress towards end of program outcomes 2011-2012 30](#_Toc319570129)

[Appendix 3. Performance against target charts 2011-2012 35](#_Toc319570130)

[Appendix 4. Seeds of Life 3 communication and dissemination activities 2011-2012 37](#_Toc319570131)

[Appendix 5. Annual workplan for Seeds of Life 2012-2013 41](#_Toc319570132)

[Appendix 6. Budget for Year 2 (2012-2013) 44](#_Toc319570133)

### Acronyms and Abbreviations

|  |  |
| --- | --- |
| ACIAR | Australian Centre for International Agricultural Research |
| AEZ | Agricultural Ecological Zone |
| AP | Annual Plan |
| APC | Australian Program Coordinator |
| ATL | Australian Team Leader |
| AusAID | Australian Agency for International Development |
| CGIAR | Consultative Group on International Agricultural Research |
| CIAT | Centro Internacional de Agricultura Tropical (International Centre for Tropical Agriculture) |
| CIMMYT | International Maize and Wheat Improvement Centre |
| CIP | International Potato Centre |
| CLIMA | Centre for Legumes in Mediterranean Agriculture |
| CSPG | Community Seed Production Group |
| DSO | District Seed Officer |
| EoPOs | End-of-Program Outcomes |
| FAO | Food and Agriculture Organization |
| FSMG | Farmer Seed Marketing Group |
| FSPA | Formal Seed Production Advisor |
| GIS | Geographic Information Systems |
| ICRISAT | International Centre for Research in the Semi-Arid Tropics |
| IELTS | International English Language Testing System |
| IRRI | International Rice Research Institute |
| ISPA | Informal Seed Production Advisor |
| M&E | Monitoring and Evaluation |
| MAF | Ministry of Agriculture and Fisheries |
| NDA&H | National Directorate for Agriculture and Horticulture (MAF) |
| NDR&SS | National Directorate of Research and Special Services (MAF) |
| NDP&P | National Directorate of Policy and Planning (MAF) |
| NDACD | National Directorate of Agricultural Community Development (MAF) |
| NGOs | Non-Government Organizations |
| OFDTs | On-Farm Demonstrations and Trials |
| OJT | On the Job Training |
| OM | Office Manager |
| PDD | Program Design Document |
| PMT | Program Management Team |
| PSC | Program Steering Committee |
| RA | Regional Advisor |
| SEOs | Suco Extension Officer (MAF extension officer) |
| SoL1 | Seeds of Life 1 |
| SoL2 | Seeds of Life 2 |
| SoL3 | Seeds of Life 3 |
| SOSEK | Social Science and Economics (Sosial Ekonami) |
| STA | Short-Term Advisor |
| TAG | Technical Advisory Group |
| TL | Timor-Leste |
| UN | United Nations |
| UNTL | University of Timor Lorosae |
| UWA | University of Western Australia |

.

# INTRODUCTION

“Seeds of Life (SoL)” (Fini ba Moris) is a program within the Timor-Leste (East Timor) Ministry of Agriculture and Fisheries (MAF) to improve national food security through increased productivity of major foodcrops. The Governments of Timor-Leste and Australia collaboratively fund the program. Australian funding is through the Australian Agency for International Development (AusAID) plus the Australian Centre for International Agricultural Research (ACIAR) and is managed by ACIAR. The Centre for Legumes in Mediterranean Agriculture (CLIMA) within The University of Western Australia (UWA) coordinates the Australian funded activities. The current phase (Phase 3 or SoL3) commenced at the beginning of February, 2011.

This Annual Plan and Six Monthly/Annual Report summarizes the outputs during the first 12 months of the program placing special emphasis on the outputs of the second (August-January) six months of the 2011-2012 program year. The planned activities for the second year (2012-2013) are also included in this report. Details of the progress to date and planned activities are summarized in the Appendices.

a) Appendix 1, Progress against M&E framework,

b) Appendix 2. Progress against End of Program Outcomes table,

c) Appendix 3. Progress against End of Outcomes charts

d) Appendix 4. Seeds of Life communication and dissemination activities 2011-2012,

d) Appendix 5, Annual workplan in gant form for 2012-2013, and

c) Appendix 6, Program budget for Year 2 (2012-2013)

## 1.1 Program origin

The current phase of Seeds of Life (SoL3) consolidates the gains made by the Seeds of Life – East Timor (SoL1) Project (2000-2004), a five year Phase 2 (2005-2010) and a Phase 2 extension (September 2010 to January, 2011) (SoL2). Phase 1 conducted replicated trials mainly under research station conditions as an ACIAR project. The project commenced prior to the establishment of a Government of Timor-Leste and was slowly incorporated into the newly formed Ministry of Agriculture and Fisheries as a program under its direction. Likely high yielding varieties were identified in trials conducted in Aileu (Kintal Portugal), Manufahi (Betano) and Baucau (Fatumaca) but these test entries had not been tested under farmers conditions for release.

Seeds of Life 2 commenced in 2005 and conducted both on-station and on-farm trials. Two maize, one rice, one peanut and three sweet potato varieties were identified from the work conducted over the period from 2000 to 2006 and released by the MAF as MAF recommended varieties in 2007. Two cassava varieties were released in 2009 making a total of nine released varieties from SoL/MAF research. Access to seed of the newly released varieties proved to be a constraint and the scope of SoL2 was expanded in 2008 with extra funding to increase the production of seed of released varieties for distribution to farmers. In 2009 the program was evaluated by a review team and it was agreed by all parties that the program be continued. Subsequently a design mission prepared a design for the SoL3 which was approved as the SoL3 Program Design Document (PDD).

SoL3 possesses a) a component of research (Component 1) to continue the identification of suitable food crop varieties for release in Timor-Leste, b) a component of formal seed production (Component 2) for the multiplication of high quality seed for direct distribution to seed producers and for use by c) the informal seed production component (Component 3) by community seed production groups. The program also possesses a component on raising the capacity of MAF to effectively manage a national seed system (Component 4).

## 1.2 Program implementation

The SoL 3 Program Steering Committee (PSC) provides overall strategic direction and resource allocation to the program. It is chaired by the Minister of the Ministry of Agriculture and Fisheries and possesses representation from MAF, AusAID, ACIAR and Program management. MAF is represented by the Director General (DG), MAF directors for a) National Directorate for Research and Special Services (NDR&SS) b) National Directorate for Agriculture and Horticulture (NDA&H) c) National Directorate for Agricultural Community Development (NDACD) and d) National Directorate for Policy and Planning (NDP&P) plus the Australian Program Coordinator (APC) and Australian Team Leader (ATL). The PSC meets twice a year to approve both the six monthly and annual progress reports plus the Annual Plan.

In addition, a team of national and district MAF Directors also meets quarterly with the MAF Director General and the ATL to discuss operational matters and resolve any problems emerging during the interim period. This management team is called the Program Management Team (PMT). The MAF Director General (DG) acts as the head of the team along with MAF directors for a) NDR&SS b) NDA&H c) NDACD and d) NDP&P plus the ATL with support from the advisors.

Long term Australian funded advisor personnel in Timor-Leste includes the ATL, advisors for Research, Formal Seed Production, Informal Seed Production, Monitoring and Evaluation/Social Science Research, climate change and three regional advisors. The program also has an office manager.

MAF provides a majority of the technical staff working on the program. A list of personnel working full time with the program is presented in Table 1.

**Table 1.  Personnel working full time on SoL3**

|  |  |  |  |
| --- | --- | --- | --- |
|  | *Positions* | | |
|  | *MAF* | *SoL* | *Total* |
| **Research staff – Component 1** |  |  |  |
| On-Station Research Officers (OSRO) | 11 | 0 | 11 |
| OFDT Coordinators (OFDTC) | 2 | 0 | 2 |
| OFDT Officers (OFDTO) | 9 | 5 | 14 |
| Pure Seed Officers (PSO) | 2 | 0 | 2 |
| **Seed production staff – Component 2** |  |  |  |
| Seed Production Coordinators (SPC) | 0 | 1 | 1 |
| Seed Production Officers (SPO) | 10 | 2 | 12 |
| **C-B seed production staff – Component 3** |  |  |  |
| C-B Seed Production Coordinators (CBSPC) | 9 | 0 | 9 |
| **Program management – Component 4** |  |  |  |
| M&E/ SOSEK Staff | 4 | 0 | 4 |
| Germplasm curator | 1 | 0 | 1 |
| Climate change | 2 | 0 | 2 |
| Dili and regional office staff |  | 15 | 15 |
| Drivers | 5 | 17 | 22 |
| *Total GoTL positions* | *56* | *40* | *96* |
| *Advisors and office manager* |  | *10* | *10* |
| *Total program personnel* | *56* | *50* | *106* |

The program manages 106 locally employed staff member including field staff, drivers, and office staff. The MAF funds 56 of these directly. Their classifications include on-station and on-farm (on-farm demonstrations and trials known as OFDTs) research staff, formal and informal seed production coordinators and officers, climate change research personnel and monitoring and evaluation/social science researchers. Drivers and administrative staff are funded by both MAF and from SoL directly.

The office is located in the MAF compound, Comoro, Dili.

## 1.3 Preparation of the Annual Plan

This, the second Annual Plan of SoL3, was prepared during January, 2012 following discussions with MAF directors from four national directorates (NDR&SS, NDA&H, NDP&P and NDACD) and Directors of the Districts SoL3 will be working in during the second year. The plan is a reflection of the interactions between SoL personnel and MAF personnel in Dili and at the District level, NGOs, and other organizations working in the agriculture sector to ensure the annual program was designed to reach the maximum number of collaborators and reached its objectives effectively and efficiently. The ATL discussed planned program activities with the DG on a daily basis, regularly with National and District directors plus at Quarterly program management meetings.

A draft of this plan was submitted to the Program Steering Committee meeting held on 21 March, 2012 for discussion and approval.

# PROGRAM DESCRIPTION

SoL addresses the underlying causes of food insecurity in Timor-Leste. These include low yields of staple crops, vulnerability of unfavourable seasons and natural disasters, lack of cash incomes to purchase food during periods of shortfall, post harvest losses and low market distributional capacities.

SoL3 builds on the success of previous phases and maintains a core focus on increasing yields by selecting and distributing improved varieties of superior genetic quality. It also has a secondary focus on analysing and developing strategies to overcome climate variability and change; improving agronomic practices to reduce weed burdens and increase soil fertility; reducing post harvest storage losses and improving input supply arrangements for seed.

The program concentrates on evaluating higher yielding varieties of crops currently cultivated by farmers in Timor-Leste. These are maize, sweet potato, cassava, rice and peanuts. A small amount of work is also conducted on some minor crops such as wheat, barley, potato and various bean crops.

SoL3 remains a program within the MAF and is being implemented over a five year period (01 February, 2011-31 January, 2016). During the first year, activities were concentrated in the Districts of Aileu, Baucau, Viqueque, Bononaro, Manufahi, Ainaro and Liquica. During the second year (2012-2013) Component 2 and Component 3 will expand their activities into three adjoining districts of Lautem, Manututo and Ermera. Raising the capacity of MAF to manage a national seed system (Component 4) will include MAF personnel from all thirteen of TL’s districts.

## 2.1 Program goal, objective and vision

**The goal** of the Program is ‘Improved food security through increased productivity of major food crops’.

**The objective** (purpose) is for 81,000 (70%) of Timor-Leste farmers (35,000 rice farmers and 46,000 upland farmers) to be using SoL improved food crop varieties by the 2015-2016 wet season.

To achieve the objective by the end of the 2015-2016 wet season it will be necessary for the following numbers of farmers to be using SoL varieties each year.

|  | Year | | | | | |
| --- | --- | --- | --- | --- | --- | --- |
| Crop |  | 2011 | 2012 | 2013 | 2014 | 2015 |
| Rice | 6000 | 21000 | 28000 | 33000 | 35000 |
| Upland crops | 7000 | 28000 | 36000 | 43000 | 46000 |
| Total | 13000 | 49000 | 64000 | 76000 | 81000 |

**The Vision** for the end of Phase 3 is to have the foundations of a national seed system for TL established and capable of providing a high level of access to seed of improved varieties to farmers throughout the country. Within this vision: (i) MAF is competently managing an adaptive research program that is regularly identifying and releasing improved varieties; (ii) MAF is competently managing formal seed production and processing activities at an appropriate scale; (iii) MAF is effectively distributing formal seed in a manner that maximises scale-up benefits; (iv) informal seed production and distribution is stimulated nation-wide through the establishment of community seed production groups (CSPGs); and (v) MAF is effectively managing overall development of the national seed system for Timor-Leste.

## 2.2 SoL Components and component objectives

SoL 3 has four components and a management unit. The four components are a) Evaluation of improved food crop varieties, b) Formal seed production and distribution, c) Informal seed production and distribution and d) Seed system management. The objectives and general direction of these components are as follows:

### Component 1: Evaluation of improved food crop varieties

**Component objective:** Improved varieties of food crops identified and released.

Variety evaluation work continues to concentrate on the major crops of maize, rice, sweet potato, peanuts and cassava. A small amount of research is also devoted to improving staple crops growing in the poverty affected temperate upland areas (e.g. legumes, wheat, barley, and potatoes). An extra dimension of research effort in recent years has been on food crops that may adapt to climate change such as more variable rainfall and higher temperatures.

**End-of-Program outcomes: (**EoPOs), against which performance of Component 1 will be assessed, include:

* National network of research centres and smaller research stations established, sufficient to cover major crop types and agroecological zones.
* 10-15 new varieties of food crops evaluated and officially released.
* MAF competently managing all phases of the research cycle including objective setting, planning and implementation of trials, analysis, and reporting.

### Component 2: Formal seed production and distribution

**Component objective:** Sufficienthigh quality seedbeing produced through formal channels to maintain the genetic quality of released varieties.

Production of formal seed is an essential component of any national seed system but is expensive to produce. Its production is therefore targeted towards supplying the informal seed production activities both directly through SoL and with NGOs plus other organizations involved in seed production. There is an increased emphasis on cost-recovery and a rationalisation of seed processing/ storage infrastructure to improve production efficiency.

**End-of-Program outcomes:** End of program outcomes (EoPOs) against which performance of Component 2 will be assessed, include:

* Four seed processing centres established (2 new) for receiving, grading, drying, storing, and packing formal seed, with a combined capacity of approximately 175 mt per year.
* Production of 100 mt of formal maize seed, 50 mt of rice seed, 25 mt of peanut seed, 600,000 sweet potato cuttings, and 600,000 cassava canes per year.
* Formal seed and planting material effectively and efficiently distributed to CSPGs and farmers.
* MAF competently managing the production and processing of targeted quantities of formal seed, and the effective distribution of this seed to farmers.

### Component 3: Informal seed production and distribution

**Component objective:** Mechanisms for the production and distribution of seed through informal and market channels strengthened.

Under this component, a range of new approaches are supported to begin building the foundation of a commercial seed industry in TL and hence increase farmers' access to improved varieties, outside of government channels. These include the production of informal seed by community seed production groups (CSPGs), which will complement and provide a scale-up mechanism for the seed produced through formal channels (Component 2). In year 3 a range of initiatives will also be piloted to stimulate market-based seed exchange.

**End-of-Program outcomes:** EoPOs against which performance of Component 3 will be assessed, include:

* Around 1,000 CSPGs established and producing a marketable surplus of informal seed.
* CSPGs linked with market outlets and selling seed.
* Mechanisms for strengthening market-based exchange of informal seed trialled, evaluated, and where appropriate replicated.

### Component 4: Seed system management

**Component objective:** MAF capacity to manage the national seed system strengthened.

The focus of this component is on developing MAF’s capacity to manage strategically a national seed system, balancing formal (Component 2) and informal (Component 3) seed production and supply, and linking with on-going improved variety evaluation work (Component 1). Cross cutting issues included in this component include gender, climate change, and policy engagement.

**End-of-Program outcomes:**

EoPOs against which performance of Component 4 will be assessed, include:

* National seed planning, allocation and inventory control systems established.
* M&E/ SOSEK unit competently managing field evaluation activities, providing a sufficient basis for progressive learning.
* Policy issues identified and advice provided on key issues related to development of the national seed system.
* Gender issues reflected in the implementation of the national seed system.
* Widespread awareness of SoL varieties in all districts.
* Improved varieties and management practices being identified taking into consideration projected climate change impacts.

## 2.3 Program outputs

### Component 1: Evaluation of improved food crop varieties

National Agricultural Research Centres and Research Stations established. Research centres existing at the beginning of the program (Betano and Loes) are being rehabilitated where necessary. Three addition stations are also being established at: (i) at Darasula (Baucau District) for evaluation of varieties at mid-altitude on red acid soils; (ii) a high altitude site in Ainaro District for evaluation of temperate crops; and (iii) in an irrigated rice growing area in Bobonaro for evaluation of rice varieties.

Genetic material of potential improved varieties identified and sourced. Under SoL 3, the range of species evaluated is broadened from rice, maize, peanuts, sweet potato and cassava to include food legumes, and temperate species such as wheat, barley and potatoes. The scope of the adaptive research program has also been broadened to identify improved varieties and farming systems that are resilient to projected climate change impacts.

Potential new varieties evaluated on-station. All introduced material will be evaluated on MAF research centres based at either Betano, Aileu, Loes, Ainaro, Darasula or at the rice research site in Bobonaro. The material is being examined in replicated trials

Potential new varieties evaluated on-farm. Support continues to be provided for on-farm demonstration trials (OFDTs), as an essential final stage of variety evaluation across all agroecological zones.

Selected new varieties officially released. A Variety Release Committee established in 2007, chaired by the Minister of Agriculture, is functioning well.

Sufficient foundation seed being produced. Foundation seed production has been expanded to include Loes and will also include the new rice station.

Capacity of MAF staff to manage the identification and release of new varieties strengthened. The overall objective of training provided under this component is to improve the performance of research and OFDT staff to the point where they can competently manage all phases of the research cycle.

### Component 2: Formal seed production and distribution

Formal seed being produced through farmer contracts. For species that are propagated from true seed (e.g. maize, rice and peanuts), farmers continue to be contracted to produce seed.

Quality assurance systems established. Quality assurance processes underpinning the production of true seed crops will continue to be monitored. They encompass crop production monitoring, roguing, monitoring of harvest operations, routine measurement of moisture content (and drying if necessary), routine assessment of germination percentage, lot management procedures, inventory control, and labelling.

Technical extension support provided to contracted seed producers. SoL 3 will establish stronger linkages with district extension staff for extension support of formal seed distribution.

Seed grading, packing and storage facilities established. The number of seed processing centres was expanded during the first year of SoL3 to Baucau, Manufahi, Bobonaro, Liquica, Aileu and Viqueque.

Formal seed distributed through preferred distribution channels. Priority for seed produced through the formal seed system is given to informal seed production under Component 3. Any surplus to the needs of this program is then sold to other informal seed producing programs (generally under (NGOs or International Organizations) or finally distributed directly to farmers by the MAF. Seed sales are on a cost recovery basis.

Capacity of MAF staff to manage the production and distribution of formal seed strengthened. The overall objective of training provided under this component is to improve the performance of the SPOs responsible for supervising the production and processing of formal seed, and extension staff (at all levels) responsible for managing seed distribution activities, to the point where they can competently manage these activities.

### Component 3: Informal seed production and distribution

Community Seed Production Groups established. CSPGs provide a means of increasing the volumes of seed produced and diversifying production sites, both of which can help widen access to seed. CSPGs increase seed access and seed security of their own members, but eventually they should be able to supply other farmers, in some cases beyond the immediate locality. Under SoL3, approximately 1000 groups will be established in rural districts by the end of the Program. A typical CSPG will comprise 10-15 farmers, self-selected, and will receive 2 years of intensive support.

Farmer Seed Marketing Groups established. Farmer Seed Marketing Groups (FSMGs) are organisations that cluster together several CSPGs as a way of facilitating their marketing of seed and overall scope of activities. The Program will initially support the establishment of up to 6 FSMGs as a pilot, covering maize, rice and peanuts. These groups will be established in the second year.

Focal seed merchants in local markets established. Focal merchants in district markets will be assisted to access seed of new varieties, with the eventual aim of establishing links, and possibly contracts, with CSPGs and FSMGs.

Access to seed for vulnerable groups improved through seed fairs. Seed vouchers and fairs are increasingly used in post-disaster situations to help monetise seed producers and improve access to seed for seed-insecure farmers. Vouchers for SoL released varieties will be distributed to target households in advance, allowing them to purchase the seed they require during the day of the fair. This program will commence during the current year of SoL3.

Systems linking informal seed producers with potential buyers enhanced. Unknown or unpredictable local demand for seed is often a major constraint to local seed enterprise development. The Program will support a set of activities intended to improve the flow of information on potential seed suppliers, and areas of demand, to facilitate trade. This will entail: (i) gathering information on surplus production from CSPGs and FSMGs; (ii) gathering timely information about the potential demand for seed, from projects, local NGOs, and SEOs; (iii) collating and managing this information at a higher level; and (iv) facilitating links between buyers and potential sellers.

Capacity of MAF extension staff to establish CSPGs strengthened. MAF extension staff will be provided with training so that they can support the establishment of the CSPGs, in addition to that included under Component 2.

### Component 4: Seed system management

Seed planning and management systems established. The Program supports the development of systems to manage a national seed system encompassing the formal and informal sectors.

M&E systems established. The SOSEK Unit is responsible for the routine assessment of performance against EOPOs, as well as for conducting the range of field evaluations necessary to guide the refinement of implementation approaches. The Unit is linked to the MAF’s National Directorate of Policy and Planning.

GoTL seed policy being informed by SoL experience. Capitalising on its central position in the national seed system and its strong field presence, there is a prime opportunity for the Program to influence seed-related policy. This requires identification of policy issues; analysis of evidence based on field experience; and reporting to relevant government officials.

Seed system gender strategy implemented. A Gender Strategy for SoL 3 was prepared during the second half of year 1. A draft 2 page gender ‘action plan’, based on this strategy, was also prepared for finalizing during Year 2.

Improved-variety technical and promotional materials developed. SoL is already producing a range of high quality technical and promotional materials, including brochures, posters, calendars, and banners. Additional materials will be developed as new varieties are developed and new activities are initiated.

Awareness of improved varieties increased. As seed supply increases, a key challenge will be increasing the awareness of improved varieties amongst farmers to stimulate the demand for seed, especially from the informal sector. The Program is in the process of developing strategies to further promote SoL varieties using mass media such as radio, text messaging, and television.

Environmental and climate change impacts addressed. The climate change unit will assess the likely impacts of climate change on food crop production in TL to help inform the selection of species/varieties that are better adapted to climate change.

Capacity of MAF staff to manage the national seed system enhanced. Provision is made for targeted training of national MAF staff as an integral part of developing the above systems. Provision is also made for exposure visits by senior staff to review the structure and operation of seed systems in other countries such as Australia and Indonesia.

## 2.4 Program inputs

The MAF provides office space in its Comoro compound to house most of SoL’s Dili based staff. An increase in team size for SoL 3 resulted in a need for more office space. An expansion of the office was completed mid January, 2012. In addition, SoL/MAF personnel operate from program dedicated offices at the MAF District centres in the three regions based in Baucau, Same and Maliana. The team also utilizes office space in the districts plus research sites at Aileu, Bobonaro (Corluli), Liquica (Loes), Manufahi (Betano), Baucau (Darasula) and at the highland research site in Maubissi (Urulefa). A temporary building will be constructed at the irrigated research site in the Suco of Raimaten, in the sub district of Maliana, Bobonaro district. Where possible, these buildings are serviced with electricity and security.

MAF personnel provide leadership and manage all research in the districts. The program co-leaders designate approximately 10% of their time to SoL and 51 of the 74 professional staff assigned full time to duties at SoL are fully funded by MAF.

AusAID/ACIAR funding through CLIMA supports the operation of the SoL office, installation and management of replicated and on-farm trials, formal seed production, informal seed production, social research and M&E, climate change activities, training activities, short and long term advisors, infrastructure rehabilitation, some research station maintenance and the operation of SoL vehicles.

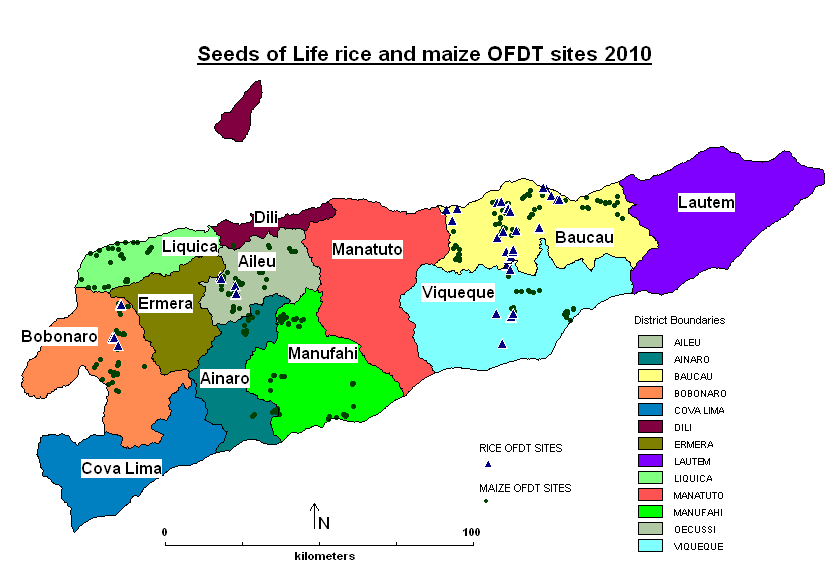
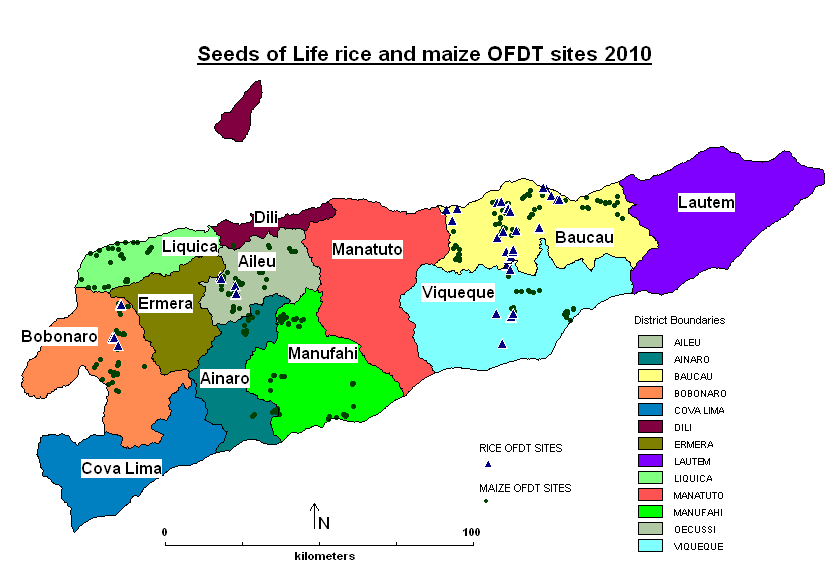
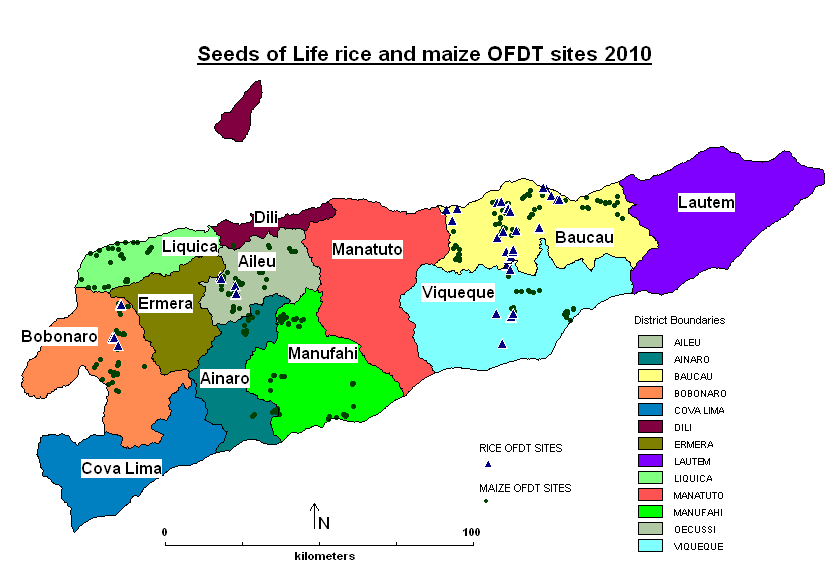
Program inputs and their budgeted costs for 2012-2013 is presented in Appendix 5.

## Program sites

SoL performed activities in 8 districts during the first year of SoL3 (2011-2012) (Manufahi, Aileu, Liquica, Baucau, Ainaro, Bobonaro, Viqueque and Dili). Components 2 and 3 will expand their programs into three extra districts (Lautem, Manututo and Ermera) during the second year of operation (2012-2013) while district personnel from all Districts will be involved in developing the seed management system (Component 4).

Research will continue to be performed in 19 subdistricts spread across the 7 districts of Manufahi, Aileu, Liquica, Baucau, Ainaro, Bobonaro and Viqueque. In addition, there are seed production centres in Triloka (Baucau), Loes (Liquica), Betano (Manufahi), Corluli (Bobonaro), and Aileu (Aileu) and Viqueque (Viqueque). Regional Advisors are located at the regional centres in Baucau, Same (Manufahi) and Maliana (Bobonaro). The program will expand into further districts in later years. A map (excluding the enclave of Oecussi) noting all districts and main towns is presented in Figure 1.

map of timor-leste (east timor)

 **Figure 1. Districts and main towns in Timor-Leste (Oecussi excluded).**

# Program accomplishments by component (Feb, 2011 – Jan, 2012)

Introduction

Implementation of SoL 3 program activities were initially delayed at the beginning of the year due to the last minute signing of the MOU between the Governments of Timor-Leste and Australia and subsequent delayed commencement of personnel. However, by the end of the year all components were fully functional. Program activities for the whole year are briefly described below and summarized in the Appendix 1, Appendix 2 and Appendix 3 Some extra detail is provided on the progress made over the latter six months of the year.

### Component 1: Evaluation of improved food crop varieties.

National agricultural research centres and research stations established. During the first six months of the year, buildings were rehabilitated or constructed on TriLoka (Baucau) and Corluli (Bobonaro). At the end of January, 2012, these buildings (accommodation/office and warehouse respectively) were complete. A warehouse and accommodation/office building at Darasula were constructed during the latter half of 2011. Temporary buildings were designed for erection at Kintal Portugal (Aileu) and Raimaten, (Bobonaro). The MAF allocated an area for cultivation on the Urulefa high altitude research station site in Maubisse and this was utilized during the 2011-2012 wet season for the first time. A suitable site was also identified to conduct research on irrigated lowland rice and irrigated upland crops and for seed multiplication. This site 1.7ha in area is located near a main road and the main irrigation canal and is close to the water source. The site is in the suco of Raimaten, Maliana sub District of Bobonaro.

The irrigation system at Loes was being rehabilitated and improved during the period and extra buildings to house equipment designed. Road construction on the site was under quotation at the end of January, 2012. Betano, Loes and Darasula stations were manned by MAF professional staff and operating to a budget.

Genetic material of potential improved varieties identified and sourced. During the first year of SoL 3, new improved test entries imported were 25 new wheat and 25 new barley varieties and 13 wingbean entries from Australia plus 104 upland rice and 60 lowland rice varieties from IRRI, Philippines.

Potential new varieties evaluated on-station. 38 wet season trials were designed and being implemented during the wet season of 2011-2012. A list of trials is presented in Table 2.

**Table 2. Wet season germplasm evaluation trials, 2011-2012**

| *Species* | *No. Trials* |
| --- | --- |
| Cassava | 4 |
| Maize | 5 |
| Peanut | 4 |
| Potato | 2 |
| Rice-irrigated | 6 |
| Rice-upland | 2 |
| Sweet potato | 5 |
| Velvet bean | 4 |
| Wing bean | 1 |
| Barley | 2 |
| Climbing beans | 1 |
| Wheat | 2 |
| *TOTAL* | *38* |

As the trials presented in Table 2 were being implemented, the trials installed during 2010-2011 were being analyzed, the best of the selection being included in OFDTs. The number of entries in each trial varied from 13 to 106 depending on the crop. 10 elite peanut varieties were selected for consideration and included in 2011-2012 and 2012-2013 replicated trials. 3 new sweet potatoes were identified for inclusion in 2011-2012 and 2012-2013 OFDTs.

Potential new varieties evaluated on-farm. 318 OFDTs were installed by the end of January, 2012. Of these, 182 were maize, 14 legumes (wing beans), 62 sweet potato and 62 cassava. The OFDTs were installed across 7 districts and 19 sub districts. The total number of OFDTs will increase above this number as the final upland demonstration/trials are installed and lowland rice trials are planted after February.

Selected new varieties officially released. One new white maize variety was identified for release in by the SoL team in June, 2011. This variety identified as P07 originated from the Philippines. The breeders have provided permission to release the variety in Timor Leste and the variety release committee is awaiting the naming of the variety before officially releasing it to farmers.

Sufficient foundation seed being produced. On hand at the end of January, 2012 were 1500kg of Sele foundation seed and 3,500 kg of P07 stored at Betano station; 1 ha of cassava plants for cuttings at Loes and 1 ha at Corluli. Approximately 3000 m2 of sweet potato seedling material were also grown at Loes and 800m2 at Aileu. 200 panicles of Nakroma rice were selected for purity and bulking up as foundation seed in 2011.

Capacity of MAF staff to manage the identification and release of new varieties strengthened. During the first six months of 2011, statistics courses were held in Aileu (35 persons) and Liquica (30 persons). Two research data analysis courses (15 and 17 persons) were held during the second half of the year in addition to one course on scientific report writing. Three persons from UNTL were assisted through their scripsi’s. Three MAF personnel were assisted in the preparation of papers for presentation at a conference in Dili, an indication of their capacity to conduct research. A list of all training conducted during the period from 01 February, 2011 to 31 July, is presented in Table 3.

In the second half of the year, training for research included courses in research data analysis, wheat and barley disease identification, English language training and mathematics (four courses) (See Table 3). In addition to short term courses, five East Timorese graduates were assisted with their post graduate training. Two masters degree students were directly sponsored by SoL at a university in Indonesia. In addition, three students were assisted with gaining ACIAR, John Allwright scholarships for study in Australia. All three had completed their English language training and were studying for their masters degree in 2012.

**Table 3. Summary of training (February 1 – July 31, 2011)**

| Date | Title | No. of Participants | Training Days |
| --- | --- | --- | --- |
| Jan 3 – Feb 4 | CELT - Australia | 2 | 33 (66) |
| March 14-18 | Statistics Training - Aileu | 22 | 5 (110) |
| March 21-25 | Statistics Training - Liquica | 31 | 5 (155) |
| April 18-20 | Research Report Writing – Betano | 4 | 3 (12) |
| May 3-4 | Seed Multiplication - Covalima | 23 | 2 (46) |
| June 13-17 | Maize OFDT Analysis - Dili | 18 | 5 (90) |
| June 20-24 | English Training in Aileu (Level 4) | 13 | 5 (65) |
| June 27 | Informal Seed Production training. NGOs | 10 | 1 (10) |
| July 18-22 | English Training in Liquica (Level 3) | 19 | 5 (95) |
| July 26-29 | Training Workshop on Variety Selection | 6 | 4 (24) |
|  | *Total* | *148* | *68 (673)* |

**Table 4. Summary of training 1 August 2011 – 31 January, 2012**

| *Date* | *Title* | *No. of Participants* | | *Training Days* |
| --- | --- | --- | --- | --- |
| August 6-9 | Research Data Analysis (OFDT) | | 17 | 4 (68) |
| August 12-13 | ToT on Informal Seed Production – Liquica | | 14 | 2 (28) |
| August 16-27 | Training Workshop on Rice Technology Transfer Systems in Asia - Suwon, Korea | | 2 | 12 (24) |
| August 22-23 | Wheat and Barley Disease Identification | | 4 | 2 (8) |
| Aug 22- Sept 23 | CELT - Australia | | 3 | 33 (99) |
| 6-Sep | Training to District MAF Extension Officers on Informal Seed Production Maliana, Bobonaro | | 15 | 1 (15) |
| 9-Sep | Training to District MAF Extension Officers on Informal Seed Production , Liquica | | 17 | 1 (17) |
| 13-14 September | Training to District MAF Extension Officers on Informal Seed Production, Ainaro | | 21 | 2 (42) |
| 15-Sep | Training to District MAF Extension Officers on Informal Seed Production, Manufahi | | 14 | 1 (14) |
| 16-Sep | Training to District MAF Extension Officers on Informal Seed Production, Aileu | | 18 | 1 (18) |
| 20-Sep | Training to District MAF Extension Officers on Informal Seed Production, Baucau | | 14 | 1 (14) |
| 22-Sep | Training to District MAF Extension Officers on Informal Seed Production, Viqueque | | 13 | 1 (13) |
| 23-Sep | Training to Extension staff of INGOs (Hivos and World Vision) on Informal Seed Production, Baucau | | 28 | 1 (28) |
| Sept 26 – Oct 28 | CELT - Australia | | 3 | 33 (99) |
| Sept 26-27 | Mathematics for Agronomists Level 1 in Maliana | | 18 | 2 (36) |
| Sept 26 - 30 | English Training in Baucau (Level 4) | | 8 | 5 (40) |
| Oct 3-4 | Mathematics for Agronomists Level 1 - Liquica | | 20 | 2 (40) |
| Oct 3-7 | Training of Seeds of Life Baseline Surveyors | | 45 | 5 (225) |
| Oct 17-20 | Data Entry of Seeds of Life Baseline Survey | | 13 | 4 (52) |
| October | Suco Informal Seed Prod’n Socialization Workshops | | 1653 | 1 (1653) |
| Oct 18-20 | Basic maize and peanut seed production | | 15 | 3 (45) |
| Oct 18-19 | Variety Evaluation and Selection | | 7 | 2 (14) |
| 16 Oct | Basic Informal Seed Production Techniques | | 14 | 1 (14) |
| 27-Oct | Rice Variety Selection | | 3 | 1 (3) |
| Nov 7 – Dec 9 | CELT | | 1 | 33 (33) |
| 14-Nov | Monitoring Formats and Group Book Socialization Workshop | | 14 | 1 (14) |
| 15-Nov | Communication Strategy Workshop | | 20 | 1 (20) |
| 18-Nov | Communication Strategy Workshop | | 31 | 1 (31) |
| Nov 16-18 | Data Analysis for Baseline Survey | | 24 | 3 (72) |
| Nov 21-22 | Mathematics for Agronomist Level 1 in Baucau | | 20 | 2 (40) |
| Nov 29-30 | Mathematics for Agronomist Level 1 in Viqueque | | 17 | 2 (34) |
| Nov | Suco Informal Seed Prod’n Socialization Workshops | | 303 | 1 (303) |
| December 12-16 | English training in Aileu | | 21 | 5 (105) |
| December 19-23 | English training in Liquica | | 15 | 5 (75) |
| December 13-14 | Seed Prod’n for Rice, Sweet Potato and Cassava | | 21 | 2 (42) |
| December 6 | Gender Training | | 40 | 1 (40) |
| January 9-13 | English training in Liquica | | 6 | 5 (30) |
| January 23-27 | Statistics Training (ANOVA) | | 23 | 5 (115) |
| Jan 23-27 | Study Tour on Seed System in Indonesia | | 8 | 5 (40) |
| 26-Jan | Rice Seed Production for Contract Seed Growers | | 42 | 1 (42) |
| *TOTAL* | | | *2585* | *194 (3645)* |

### Component 2. Formal seed production and distribution

Formal seed being produced through farmer contracts. Seed production officers (SPOs) contracted farmers to produce seed (and planting material) of maize, rice and sweet potato. Two extra sweet potato multiplication fields (one in Liquica and one in Bobonaro) were established during 2011. All cassava multiplication for the program was at Betano or Loes research stations during 2011-2012.

Quality assurance systems established. Seed Production Officers and Seed Production Coordinators underwent training during the second half of the year (Table 3) to improve their understanding of seed quality regulation. High quality seed was maintained by rejecting up to 20% of that harvested and one technician was dedicated to laboratory analysis of seed quality. A new rice cleaner was purchased to improve seed quality and seed germinators were delivered to Baucau, Aileu, Manufahi, Liquica, and Bobonaro seed warehouses for internal quality control purposes. The MAF/SoL seeds analyst has been asked by MAF to inspect imported maize seed germination rates prior to it’s distribution. Sampling and testing procedures has been implemented properly by staff and test results have been delivered to MAF.

Technical extension support provided to contracted seed producers. One training course presented during first half of year and two courses in the second half. In addition, seed producers received regular visits from MAF/SoL seed production officers.

Seed grading, packing and storage facilities established. New storage facilities were established at Darasula (Baucau), Maliana, Aileu and Loes and the facilities in TriLoka (Baucau) upgraded during the year. Construction of an additional warehouse in Viqueque was also commenced. Betano warehouse maintained. Each warehouse is capable of storing 30t of seed and cleaning/grading rice and maize at 1t/hr. 15 persons assigned by MAF to seed production program. 6 new personnel including one new coordinator and one pure seed officer. 3 are women.

Formal seed distributed through preferred distribution channels. 100 % maize seed required for the SoL/MAF-Informal Seed Production (IFSP) and NGO-IFSP was produced and supplied. Some maize and rice seed for direct distribution by MAF and NGOs was also multiplied and delivered during the year. Extra sweet potato and cassava cutting sites were installed during the second half of the year to cater for the programs expanded needs. Meanwhile, 10000 sweetpotato cuttings were delivered for MAF-IFSP (Ainaro and Liquisa). Cassava cuttings were distributed to Baucau for Formal Seed Production (9000 cuttings); SoL/MAF-Informal Seed production (IFSP) Ainaro (300 cuttings); SoL/MAF-IFSP Liquica (200 cuttings); MAF IFSP Baucau (100 cuttings).

Capacity of MAF staff to manage the production and distribution of formal seed strengthened. One course held during the first half of the year, two in the second half plus a study tour to discuss seed systems in Indonesia.

### Component 3. Informal seed production and distribution

The informal seed production component is budgeted to commence during Program Year 2. However, planning of activities in this component for the wet season of 2011/2012 commenced with the assignment of an Informal Seed Production advisor at the beginning of April, 2011. The informal seed group negotiated with NGOs working in agriculture to become involved in seed production systems. SoL/MAF also formed their own groups in seven districts.

Community Seed Production Groups established. 280 groups were established by SoL/MAF in seven districts over the second half of the year. NGOs established 446 groups using SoL seeds. 13 women only group (5% of total 280 groups) established. Of the 280 groups 102 were maize, 51 maize, 52 rice, 6 cassava and 40 sweet potatoes. Total members were 3,815. (men 73%, women 27%). By mid January, 2012, approx. 89% of the groups had planted their seed production crops (Table 5).

**Table 5. Target and achievement for planting by districts as of mid January, 2012**

| Crop  District | Maize  Target | Maize Achieved | Peanut  Target | Peanut Achieved | S/Potato Target | S/Potato  Achieved | Cassava  Target | Cassava Achieved | Total  Target | Total  Achieved | % achieved |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Bobonaro | 13 | 12 | 8 | 8 | 1 | 0 | 2 | 2 | 24 | 22 | 92 |
| Liquica | 10 | 10 | 10 | 9 | 8 | 7 | 5 | 5 | 33 | 31 | 94 |
| Aileu | 21 | 21 | 10 | 9 | 3 | 2 | 0 | 0 | 34 | 32 | 94 |
| Ainaro | 20 | 20 | 7 | 7 | 9 | 9 | 1 | 1 | 37 | 37 | 100 |
| Viqueque | 12 | 10 | 7 | 7 | 3 | 3 | 9 | 9 | 31 | 29 | 94 |
| Baucau | 10 | 10 | 5 | 5 | 9 | 9 | 6 | 6 | 30 | 30 | 100 |
| Manufahi | 17 | 6 | 5 | 3 | 7 | 5 | 2 | 0 | 31 | 14 | 45 |
| *TOTAL* | *103* | *89* | *52* | *48* | *40* | *35* | *25* | *23* | *220* | *195* |  |
| *Overall*  *progress %* |  | *86%* |  | *92%* |  | *88%* |  | *92%* |  |  | *89%* |

Note:

1. Paddy target and achievement is not included as planting season not applicable as of mid January.
2. In Manufahi, due to insufficient rainfall in areas close to sea, planting of the above mentioned crops have been delayed.

Farmer Seed Marketing Groups established is a second year activity.

Focal seed merchants in local markets established is a second year activity.

Access to seed for vulnerable groups improved through seed fairs. is a second year activity.

Systems linking informal seed producers with potential buyers enhanced is a second year activity.

Capacity of MAF extension staff to establish CSPGs strengthened. 11 training sessions held in first six months of program, 187 trainees (122 from MAF and 65 form NGOs) trained on informal seed production techniques. During the second half of the year, there were 9 formal training sessions and 32 socialization workshops reaching 2147 participants (Table 3). Seed groups from each of the 70 sucos involved attended the latter, totalling 1956 persons. 64% were men and 36% women.

### Component 4. Seed system management

Seed planning and management systems established. Forward planning systems yet to be established. Inventory system for SoL seed established and will be expanded to encompass the National seed program. A study tour of Indonesian seed systems was conducted in January, 2012 to provide direction to MAF staff for the initial design.

M&E systems established. Two additional MAF staff were assigned to the M&E/SOSEK Unit in August, 2011, bringing total to four plus one advisor. In the second half of the year, a baseline survey was conducted by the M&E/SOSEK Unit in collaboration with DNE, the National Directorat of Statistics. The M&E framework was reviewed early in the year (April, 2011) and again discussed by the TAG (Nov, 2011). The M&E manual was drafted.

Seed system gender strategy implemented. The short term gender advisor spent two months developing a work plan for Gender in SoL. An action plan for each component has been developed and personnel trained on Gender in Agriculture perspectives. The MAF assigned two persons to work on gender activities in MAF/SoL.

Improved-variety technical and promotional materials developed. Scientific publications of SoL research were prepared and released during the first year of SoL 3. These included 5 papers accepted by international journals indicating the high quality of research conducted by the program. Variety and technical recommendations in Tetun were also printed and distributed (See Appendix 2).

Awareness of improved varieties increased. SoL activities received considerable publicity during the period both on local and international TV in addition to publicity in local press. The Australian Minister of Foreign affairs supported SoL activities on both radio and TV. The MAF Secretary of State HE Marcos da Cruz also visited SoL activities in January, 2012 and publically expressed support for the program on local TV. A list of the publications, reports and some publicity events are presented in Appendix 4.

Environmental and climate change impacts addressed. A climate change report addressing the extent of expected change in rainfall and temperature on agricultural activities was completed during the first six months of the year and field work on terraces conducted during the second half of the year. Two MAF staff were assigned to work on climate change.

Capacity of MAF staff to manage the national seed system enhanced. MAF staff received considerable training during the year (Table 4). One masters degree student in Australia also studying participatory plant breeding and seed distribution systems.

### Program management

A major activity of SoL during the first year of the program was in setting up the program to operate effectively within the MAF and with other organizations, particularly nationally, on a regional and district basis. A program management team (PMT) was established with four directors, seven district directors, the SoL ATL and chaired by the MAF DG. Three PMT meetings were held during the year plus one extra one during the visit of the TAG.

Three Regional Offices were established and operating during the year as planned and District coordinators joined regular meetings. Three Regional advisors (all male) were appointed and management systems established. Physical and financial management systems were established with the assistance of extra logistical and financial staff members. Charles Sturt University (CSU) developed a communications strategy and re-established the SoL web page. Administrative guidelines were developed and the M&E Framework was reviewed and being implemented. The first TAG completed its report on November, 2011 and its recommendations are being acted upon.

# Workplan 01 February, 2012 – 30 January, 2013

A gant chart of the workplan for Year 1 is presented as Appendix 5.

### Component 1: Evaluation of improved food crop varieties.

National Agricultural Research Centres and Research Stations established. Building construction at the research stations were almost complete at the end of Year 1. In year 2 a warehouse in Viqueque needs completion. Other facilities that need either construction or rehabilitation include a toilet block at Maliana, erection of a temporary building at Kintal Portugal, the installation of water and electricity at Darasula research station, Baucau, plus the construction of roads and rehabilitation of the water supply at Loes. Some small infrastructure will also be necessary at the a) irrigated rice site in Raimaten, Bobonaro and b) the temperate crop research station at Urulefa, Maubisse.

Genetic material of potential improved varieties identified and sourced. New improved test entries of wheat, barley, wingbean, were imported during 2011 for evaluation over a number of years. No new material of these species will be imported for two years. SoL/MAF research personnel will travel to IRRI, Philippines in February to discuss accessing new upland rice and fragrant lowland rice varieties for evaluation in Timor-Leste. Suitable sweet potato, peanut, cassava, red bean and pigeon pea germplasm is already in the country ready for evaluation.

Potential new varieties evaluated on-station. 38 wet season trials carried over from 2011-2012 (Table 2) and 15 dry season trials will be established during the year and approximately 35 extra replicated trials designed and installed during the 2012-2013 wet season. The number of entries in each trial will vary from 10 to over 100 depending on the crop.

Potential new varieties evaluated on-farm. The 318 OFDTs from the 2011-2012 season will be evaluated and possible releases identified during researcher meetings. Based on these results the OFDT program for 2012-2013 wet season will be designed. Approximately 400 OFDTs will be installed across 7 districts and 19 sub districts during the 12 month period.

Selected new varieties officially released. New varieties identified from the replicated and on-farm trials will be submitted to the variety release committee for evaluation to be officially released. Potential varieties recognized by research staff after undergoing agronomic social (taste tests etc) evaluation. P07 which is recommended for release will be named early in 2012. One mungbean and one sweet potato also show potential for release depending on the results of the 2011-2012 wet season trials.

Sufficient foundation seed being produced. Both research and formal seed production needs will be assessed at the beginning of both the dry and wet seasons of 2011. Based on this demand, the research stations will multiply sufficient seed for Components 1 and 2. This is approximately catered for with 300-500 kg of Sele and 200kg of Nakroma seed. Additional seed is requested for Component 3 and for direct distribution to farmers by MAF. There will be 1ha of cassava plants for cuttings at Loes and 1 ha at Corluli. Approximately 3000 m2 of sweet potato seedling material will also be grown at Loes and 800m2 at Aileu. Foundation seed of Nakroma rice and Utamua peanuts will be conserved on commercial farmer’s fields. At the beginning of the year (February, 2012) 1,500 kg of Sele and 3,500kg of P07 maize was available. 200 panicles of Nakroma were also harvested during 2011 for multiplication as breeder seed in 2012.

Capacity of MAF staff to manage the identification and release of new varieties strengthened. Approximately 10 short term training courses of 1-2 days to 5 days will be held during the year to further improve the capacity of MAF personnel to design and operate a national agronomic research program (Table 4). In addition, four study tours including research personnel will be made to assist recognition of the quality of research required to achieve research outcomes with some confidence. The initial meeting at IRRI will serve to improve collaboration between the MAF and CGIAR centres. The program will continue to assist UNTL with the supervision of final year scripsi’s. MAF personnel with potential for post graduate training will also be identified and promoted for scholarships. A training plan for 2012-2013 presented in Table 6.

**Table 6. Draft Training Schedule, February 1, 2012 – January 31, 2013**

| Training Course Title | Target Participants | Preferred Dates | Location | Suggested Resource Person |
| --- | --- | --- | --- | --- |
| General | | | | |
| Mathematics Level 1 | Researchers, Seed Officers, SEOs | Feb | In-country | Sam Bacon |
| Mathematics Level 2 | Researchers, Seed Officers | May | In-country | Sam |
| Database Management | Researchers, Seed Officers, Admin staff | Feb | In-country | IRRI plus server mgt training |
| Gender Training | SoL, MAF, CSPG | Mar | In-country | Endah Agustiana |
| Facilitation/Coordination Skills | Researchers, Seed Officers, Admin staff, SEOs | July | In-country | CIAT, IIRR, Belun |
| Report Writing and Presentation Skills | Researchers, Seed Officers, Admin staff | Jan-Feb | In-country | IRRI |
| ToT & Training Materials Development (extension fact sheets and farmer guides) | Researchers, Seed Officers | April | In-country | IRRI |
| Basic Scientific Writing Workshop | Researchers, Seed Officers | August | In-country | IRRI |
| English | Researchers, Seed Officers, Admin staff and drivers | Whole year | In-country | Chona |
| English for Agriculture | Researchers, Seed Officers | Whole year | In-country | Online (IRRI) |
| CELT | Researchers, Seed Officers | Mar-Oct | Australia | UWA |
| Tetun | Advisers | As requested |  |  |
| Bahasa Indonesia | Advisers |  |  |  |
|  |  |  |  |  |
| Technical | | | | |
| Field Plot Techniques | Researchers, Seed Officers | Oct | In-country | Rob Williams |
| Analysis & Reporting (Analysis, Interpretation & Presentation of Results) | Researchers | April, May, Jun, July | In-country | Rob Williams |
| Statistics for Agronomists | Researchers, Seed Officers | Jan | In-country | Detha |
| Crop Cutting Measurement Techniques | Researchers, Staff of A&H | Feb - March | In-country | Dina and Luis |
| Soils Training (identification of major soils in Timor; Soil pH) | Researchers | Jan | In-country | UWA Bob Gilkes |
| Identification of major insect pests and diseases of rice and maize | Researchers, Seed Officer | Feb | In-country or EMBRAPA | Rob |
| Informal Seed Production (Harvest and Postharvest Operations) for first 70 SEOs | Extension staff | Jan/Feb | In-country | c/o Buddhi |
| Community Facilitation Skills for first batch of SEOs | Extension staff | Jan/Feb | In-country | c/o Buddhi, Belun |
| Informal Seed Production (Intro) for the 2nd batch of SEOs (another 70) | Extension staff | July/August | In-country | c/o Buddhi |
| Community Facilitation Skills for the second batch of SEOs | Extension staff | July/August | In-country | c/o Buddhi, Belun |
| Suco Socialization Workshop for the new batch of Sucos | Farmer/Community groups | Sept/Oct | In-country | c/o Buddhi |
| Seed Production Techniques | Seed Officers | Feb | In-country | c/o Asep |
| Seed Processing and Storage Management | Seed Officers | Feb | In-country | c/o Asep |
| Seed Quality Control | Seed Officers | Feb | In-country | c/o Asep |
|  |  |  |  |  |
| Study tours/Visits | | | | |
| IRRI for research and training | DG, NDs researchers | February | Philippines | c/o Pipot |
| Formal and Informal Seed Production Systems | NDs, DD, IFSP | March | Nepal | c/o Buddhi |
| Rice Breeding Extension | Researchers | March | Yanco, Australia | c/o Rob |
| Seed Production, Processing & Storage, Quality Control, Field Inspection (Advanced) | Seed Officers | April | Indonesia | c/o Asep |
| Rootcrop agronomy & crop management (Cassava – CIAT Asia) | Researchers, Seed Officers, Advisers | Just before harvest time | Laos or Cambodia or Indonesia |  |
| PO7 agronomy and crop management | Researchers, Seed Officers, Advisers | Just before harvest time | CMU Philippines |  |
| M&E/SOSEK | M&E/SOSEK Researchers and Adviser | Mid-year | Indonesia | c/o Luc |
| Training of MAF research leaders in research management and research center administration. | Director General, NDs, DD, Adviser | July | c/o EMBRAPA |  |
|  |  |  |  |  |
| Postgraduate Studies | | | | |
| MS in Agronomy (Soils and Plant Protection) | Researchers, Seed Officers | July |  |  |
|  |  |  |  |  |
| Bachelor degrees/Diplomas | | | | |
| BS in Agronomy | Researchers in Districts |  |  |  |
| Diploma | Researchers in Districts |  |  |  |

### Component 2. Formal seed production and distribution

Formal seed being produced through farmer contracts. The program will target planting 50ha of Sele maize, 25 ha of Utamua peanuts, 40 ha of Nakroma rice, 3800m2 of Hohrae sweet potato and 2.85ha of Ai Luka cassava by farmer contracts. The harvest from these sites will provide sufficient seed for Components 1, 2 and 3 with some extra for distribution direct to farmers by MAF and NGOs. Extra seed can be produced in the dry season on a need basis.

Quality assurance systems established. SoL has established quality assurance systems that, in past years, has resulted in up to 20% of the harvest being rejected thereby maintaining high quality seed. One technician is especially dedicated to laboratory analysis of seed to ensure the quality remains high. Seed officers have also been trained on newly installed cleaning equipment to keep the material clean of weeds and undersized seed.

Technical extension support provided to contracted seed producers. Training is scheduled for the 2012 with both seed officers and with contracted farmers (Table 6).

Seed grading, packing and storage facilities established. New storage facilities established at Maliana, Aileu, Viqueque and Loes during 2012 will be maintained as will the facilities at Betano. Each warehouse is designed to store 30t of seed and cleaning/grading rice and maize at 1t/hr. 22 MAF personnel are assigned to the seed production program to ensure the program runs smoothly (Table 1).

Formal seed distributed through preferred distribution channels. It is planned that 50t rice, 32 t maize, 17 to peanuts, 64,000 sweet potato cuttings and 50,000 cassava canes will be distributed during 2012.

Capacity of MAF staff to manage the production and distribution of formal seed strengthened. Six formal training courses are planned for 2012 (See Table 4). Seed officers may also join general training courses to improve their capacity to perform not technical activities.

### Component 3. Informal seed production and distribution

Community Seed Production Groups established. 726 groups established over the 2011-2012 wet season (280 SoL and 446 NGO groups) will undergo further training during 2012-2013. The number of SoL sponsored groups in the original 7 districts will increase to approximately 500 depending on the number of sucos in each district. An addition 10 groups in each of the new Districts of Lautem, Ermera and Manatutu will also be established. These initial group numbers will be expanded further in 2013-2014.

Farmer Seed Marketing Groups established. 3 seed marketing groups will be established during 2012. It will be the objective to establish one group in each of the original 7 districts later in the year and expand the number of groups in all 10 districts in the program during 2013-2014.

Focal seed merchants in local markets established. 3 seed merchants in each of the initial Districts (7) will receive training to properly market SoL improved seed during 2012. The number of seed merchants handling SoL seed will be expanded further in 2013-2014.

Access to seed for vulnerable groups improved through seed fairs One seed fair in each of the 70 CSBGs in the initial Districts (7) will held during 2012. The number of seed fairs associated with local seed merchants handling SoL seed will be expanded further in 2013-2014.

Systems linking informal seed producers with potential buyers enhanced. These activities will commence at the beginning of 2012 with discussions between SoL and Losconi in Manufahi/Manatutu for Losconi to consider commercially growing seed for sale to Sol and NGO informal seed producers. They and other merchants will also be encouraged to buy seed from successful informal seed producers for sale at other locations. A series of workshops will be held during the lead up to the 2012-2013 wet season to extend the potential for marketing by local seed producers and CSBGs in 7 districts during 2012.

Capacity of MAF extension staff to establish CSPGs strengthened. At least 20 training sessions are planned for the second year of Component 3 to form sufficient CSPGs to reach the goal of 1000 SCPGs by the end of Year 5. Training will be provided to District Extension Department personnel in all 13 districts, 2 MAF/SoL National Seed Production Coordinators, MAF/SoL District Informal Seed Production Coordinators and Suco Extension Officers. (See Table 6).

### Component 4. Seed system management

Seed planning and management systems established. An seed inventory system developed for SoL2 has proven to be effective and will be expanded to the National program.

M&E systems established. The baseline survey commenced in 2011 will be complete early in 2012. The four person M&E/SOSEK unit will then complete the M&E manual and commence evaluating the effectiveness of the SoL programs, with particular emphasis on seed producer groups.

Seed system gender strategy implemented. The short term gender advisor will work with the two MAF gender in agriculture specialists identified in 2012 to assist the implementation of the Gender Action Plan for 2012-2013 (Table 7). Training courses will be provided in each of the four SoL components as presented in Table 6.

Improved-variety technical and promotional materials developed. Scientific publications of SoL research will be prepared and released during the year. Variety and technical recommendations in Tetun will also be printed and distributed. Four articles will be published in international journals, the SoL Annual Research Report completed and technical brochures on P07 printed and distributed.

Awareness of improved varieties increased. SoL activities receive considerable publicity during 2011 both on local and international TV in addition to publicity in local press. The communications strategy developed during 2011 will be followed and communication action plan implemented.

Environmental and climate change impacts addressed. Activities to address the recommendations of the 2011 climate change report for Timor-Leste will be implemented in 2012-2013. Included will be a completion of a report into the effectiveness of terraces previously installed in Timor Leste, a refined study of the climate in each sub-district to assist agricultural planning and

Capacity of MAF staff to manage the national seed system enhanced. MAF staff will receive considerable training during the year both in terms of short term training, study tours and some support will be given to long term training. (Table 6).

Table 7. Gender Action Plan, 2012-2013

| **COMPONENT** | **RECOMMENDATION** |
| --- | --- |
| **Component 1** | * Inclusion of gender considerations into the evaluation of new varieties * Incorporation of gender benefits analysis (along with other benefit analyses such as, economic, social and environment benefits) in the release of new varieties. * Ensure women’s representation, such as a representative from MAF-GWG, female seed producers, and Gender Team in the new varieties release committee. * Ensure equal opportunity and participation of female research staff in gender awareness and capacity development program/events (Masters’ Degree, on-the job training, and in-country short courses). * Integrate and the use of sex-disaggregated data and gender analysis in research monitoring and reporting. |
| **Component 2** | * Ensure equal participation of female farmers as formal seed producers/contractors. * Develop policy direction for the inclusion of gender sensitivity criteria in formal seeds production, distribution and selection of formal seeds producers/contractors and recipients. * Ensure equal opportunity for the employment of women and men in the management and distribution of formal seeds (i.e., seed bagging and labeling, etc). * Ensure equal opportunity and participation for female and male seed production and extension staff in capacity development program (mentoring, meeting, on the job training, etc) * Ensure participation of MAF-SoL Senior Management and formal seed staff in awareness and capacity development program. * Integrate and the use of sex-disaggregated data in formal seed monitoring and reporting. |
| **Component 3** | * Integrate gender issues in orientation and capacity development for CSPG by SEOs * Integrate gender issues in the technical guidance to I/NGOs interested in informal seeds * Ensure equal opportunity and participation of female farmers/ female seeds production groups in seeds fairs. * Ensure equal participation of women and men in seed producer-buyer workshop. * Integration of gender issues/topic in the training program for district staff on informal seed production. * Inclusion of gender issues in the orientation program for SEOs on monitoring and reporting progress of CSPGs. * Inclusion of gender issues into the agenda of MAF-National Director (Extension) meetings. * Inclusion of gender issues in farmer field day. * Ensure women’s equal opportunity and participation in awareness and capacity development events on informal seed (i.e., mentoring, workshop, short courses, and study visit/comparative). * Ensure participation of SEOs in gender awareness and capacity development events. * Conduct gender awareness and capacity development events for CSPGs and ensure equal participation of women and men farmers/informal seed producers in the events. * Integrate and the use of sex-disaggregated data and gender analysis in informal seeds monitoring and reporting. |
| **Component 4** | * Ensure participation of M&E staff in gender awareness and capacity development program (i.e., mentoring, comparative study, short courses, workshop, etc) * Integrate and the use of sex-disaggregated data and gender analysis in socio-economic studies and report. * Integrate and the use of sex-disaggregated data in M&E report. * Inclusion of gender issues/topic in the workshop of formal seed production * Integrate gender issues and the use of gender-sensitive language and image in technical and promotional materials. * Integrate gender issues and analysis in environmental and climate change studies and reports. * Develop Gender Annual Action Plan 2012. * Inclusion of gender issues in the agenda of PMT meeting, adviser weekly meeting and other important meetings. * Strengthen functioning of the Gender Team * Support and facilitate GWG’s capacity development and its monthly meeting * Establish Gender Facilitator Team to facilitate gender awareness and capacity development/training program. * Conduct ToT for Gender Facilitator Team. * Develop gender capacity development plan 2012 for MAF-SoL program * Conduct Gender Awareness and Capacity Development for Senior Management, Adviser and Staff at the national and sub-national levels. * Develop gender mainstreaming manual/handbook for MAF-SoL program. * Develop Gender advocacy tools and materials. * Organize and participate in the celebration of international and national women’s day as part of MAF-gender awareness and advocacy program to gain a greater national and international support and visibility for the promotion of MAF-SoL III-gender program. * Develop and integrate gender sensitive indicators in M&E * Develop policy direction for the integration of gender considerations in MAF-SoL program. * Incorporation of gender issues and the use of sex-disaggregated data and gender analysis in MAF-SoL progress and annual report. |

# Expenditure and budget

At the end of December, 2011 (eleven months into year) 72% of the budget for the 2011-2012 program 72% of the budget had been spent (See Table 8). Under expenditure in most components was due to the fact that the program was late starting, rehabilitation of research and development were not completely paid for, consultant inputs were delayed until the second year, and seed system management activities were behind time. Other delayed expenditure are presented in Table 8 and include delays in infrastructure (Irrigation system at Loes and research station construction), training abroad, and equipment purchases (Toyota delivery times affected by Tsunami in Japan). Despite the slow start, many of these activities are “catching up” and the program is expected to be reasonably on budget at the end of the second year. The full operational budget is presented in Appendix 6.

**Table 8. Budget and expenditure to end of June, 2011**

|  | *Budget ($’000)* | *% Budget expenditure at end Dec, 2011* | *Activity behind schedule or being delayed* |
| --- | --- | --- | --- |
| *Component1: Evaluation of improved food crop varieties.* | 518 | 61 | Irrigation system Loes RS  Research station buildings  ST visits by CGIAR Specialists  Support for SEOs to assist w/OFDTs  Building for Potato Storage |
| *Component 2. Formal seed production and distribution* | 714 | 38 | Operating Sweet Potato cutting sites  Operating Sweet Potato cutting sites  Cassava cane distribution  Sweet Potato cutting distribution  On-job-Trg (visits to intl centres)  In-country short courses  Seed/agronomy/gender training  Operating costs SEOs |
| *Component 3. Informal seed production and distribution* | 149 | 56 | Training at int’l centres  In-country short courses  Operating costs of SEOs |
| *Component 4. Seed system management* | 331 | 41 | Seed management hardware and software  Adoption surveys  Promotional materials |
| *Program management* | 1600 | 76 | On target. Planning workshops overspent as indicator of priorities in 2011. Office staff and motorbikes underspent. |

# Monitoring

The monitoring and evaluation framework for SoL3 was reviewed and updated during April, 2011 (Seeds of Life Monitoring and Evaluation Review, April, 2011). Modifications to this framework were also suggested by the TAG in November, 2011. Many of the procedures to monitor the program were established by the end of the first year. A baseline survey had also been conducted to assess the household demographics and socio-economic characteristics of farmers in Timor-Leste in addition to evaluating their level of food security in 2011, the crops and land usage, food and seed storage and their familiarity with SoL. A similar questionnaire will be employed later in the program to determine the effectiveness and penetration of SoL recommendations.

The gender specialist developed a strategy for building the capacity and capability of the MAF to make and sustain real improvements to the contribution of women in agriculture. An action plan for each of the components has been formulated and will be refined in 2012. The three person SoL gender team will hold a number of training courses in the districts during 2012 to ensure there is equal opportunity for women in both the Government and at the farm level. SoL already targets involving women in the research program (especially the OFDTs) and this will expand into the formal and informal seed production programs. Involvement of both gender in SoL will continued to be monitored.

At the end of January, 2012, the short term training specialist had reviewed the SoL2 training database and was developing a training database for SoL3. The new database will be developed around a strategy for the development of mainly MAF Government employees. This is different to SoL2 where most of the personnel working with SoL were contracted to the Ministry.

Environmental impacts will continue to be monitored, although there is little threat of the use of higher-yielding varieties increasing environmental degradation in the short term. In the long term, as TL’s agriculture shifts towards more intensive land-use practices, additional attention will need to be paid to agronomic and farming system practices. Trials on plant spacing, nutrition, pest and disease control, weed management, soil moisture management are included as part of the current program and the number of these will increase under both the auspices of research and “climate change”.

No impact measurements were made during the first year of SoL3. However, scientific publications were prepared and data collected on the impact the research program has on the Timor-Leste science community. Data will also be collected on the institutional, economic and social science components for a late or post program evaluation.

The major risks to the success of SoL3 identified in the PDD are summarised to be mainly with regard to SoL and its interactions with the MAF. Many of these risks were reduced dramatically when a program management team was established to foster good relations between SoL, MAF at the national level and MAF in the districts. The MAF assigned a high proportion of the staff needed to manage the extra activities within the program and the three regional advisors work closely with District personnel to ensure all are fully involved with SoL program activities. This approach will continue to be monitored.

# Appendices

Appendix 1, Progress against M&E framework,

Appendix 2. Progress against End of Program Outcomes table,

Appendix 3. Progress against End of Outcomes charts

Appendix 4. Seeds of Life communication and dissemination activities 2011-2012,

Appendix 5, Annual workplan in gant form for 2012-2013, and

Appendix 6, Program budget for Year 2 (2012-2013)

### Appendix 1. Progress against M&E framework 2011-2012

| **Code** | **Intervention Logic** | **Performance Indicators**  **(PIs)** | **Means of Verification** | **Progress to January 2012 (After one year)** |
| --- | --- | --- | --- | --- |
| **G1** | **Goal:** Improved food security through increased productivity of major foodcrops. | Percentage of farmers experiencing periods of food shortage decreased by 33% in Timor-Leste | Secondary sources |  |
| **G2** | 47,000t increase in production of major staple food crops in Timor-Leste. | Secondary sources |  |
| **P1** | **Purpose:** 81,000 farmers have access to and are routinely using improved foodcrop varieties. | 35,000 (70%) of lowland rice farmers growing one or more SoL varieties.  46,000 (70%) of upland farmers growing one or more SoL varieties. | Program assessment via Distribution Surveys. | 3360 farmers (12 per group) from 280 groups involved in SoL CSPGs. 318 OFDTs installed. 446 CSPGs (approximately 5352 farmers) were distributed SoL seed by NGOs. In addition, farmers received improved seed directly from the MAF and NGOs. |
| **P2** | 95% of farmers adopting SoL/MAF released varieties reporting increased yields | Program assessment via Distribution Surveys. |  |
| **COMPONENT 1: EVALUATION OF IMPROVED FOODCROP VARIETIES** | | | | |
| **C1.1** | **Component Outcome:** Improved varieties of foodcrops evaluated and released. | National network of Research Stations and smaller Research Posts established, sufficient to cover major crop types and agroecological zones. | Consolidated Research Advisor Monthly Reports  Six Monthly Reports | Research stations established for most ecosystems in Timor-Leste. These are for irrigated lowland (Raimaten, Bobonaro), high altitude (Urulefa, Ainaro), medium altitude, high rainfall (Kintal Portugal), medium altitude, limestone acid soils (Darasula, Baucau), sea level, fertile soils, reliable rainfall (Loes, Liquica) and sea level, southern coastal soils, drought affected (Betano, Manufahi) |
| **C1.2** |  | 10-15 new varieties of foodcrops evaluated and officially released. | Consolidated Research Advisor Monthly Reports  Six Monthly Reports | One new white maize variety (P07) accepted by Variety Release Committee ready for naming and release by MAF. |
| **C1.3** |  | Sufficient foundation seed produced for national seed system | Consolidated Research Advisor Monthly Reports  Six Monthly Reports | 1,500kg of Sele, 500kg of Nakroma, 600kg of Utamua, 20,000 cuttings of Hohorae1-3 and 10,000 canes of Ai Luka 2,4 produced |
| **C1.4** |  | MAF research staff competently managing all phases of the research cycle, including objective setting, planning and implementation of trials, analysis, and reporting. | Staff competency assessments | MAF staff showing improved understanding of research design, management and analysis. |
| **Key Outputs:** | | | | |
| O1.1 | Establishment of Agricultural Research Centres and Stations completed. | **Research Centres** upgraded, nature of upgrade, location and cost.  # professional staff deployed at Research Centres, by position and sex.  Operational budget, by source.  **# Research Stations** established, location and cost. # professional staff deployed, by position and sex.  Operational budget, by source. | Research Officer Monthly Reports, including:  Program records.  MAF staff records.  SoL financial reports; MAF budget docs. | Major building construction at research stations complete. Installation of irrigation system and roads at Loes to be done plus the installation of temporary buildings at Kintal Portugal and Raimaten; water and electricity facilities at Darasula and permanent fencing at Urulefa. All stations and sites operating to a budget and manned by MAF professional staff. |
| O1.2 | Genetic material of potential improved varieties identified and sourced. | # and type of improved varieties introduced. | Research Advisor Monthly Reports | New improved test entries imported were 25 new wheat and 25 new barley varieties and 13 wingbean entries from Australia plus 104 upland rice and 60 lowland rice varieties from IRRI, Philippines. |
| O1.3 | Potential new varieties evaluated on-station. | # varieties trialed on-station, by type and location.  # trials completed and reported.  # varieties selected for OFDTs.  # Research Centre and Station deployed, by position and sex. | Research Advisor Monthly Reports | 38 wet season trials installed by end of January, 2012 The number of entries in each trial varied from 13 to 106 depending on the crop.  10 elite peanut varieties selected from 2011 trials actively growing in replicated trials.  2 new sweet potatoes identified in 2010 -2010 included in current wet season’s OFDTs.  7 barley varieties identified for replicated trials in two locations during 2012 |
| O1.4 | Potential new varieties evaluated on-farm. | # varieties trialed on-farm, by type and location.  # OFDTs conducted, by type and location.  # OFDT coordinators and OFDT officers deployed, by position and sex. | Research Advisor Monthly Reports | 318 OFDTs installed at end of January, 2012 Of these 182 were maize, 14 legumes, 62 sweet potato, 14 legumes and 62 cassava. They were spread across 7 districts and 19 sub districts. At least 80 extra OFDTs to be installed later in the year. |
| O1.5 | Selected new varieties officially released. | # new varieties officially released. | Research Advisor Monthly Reports | One new white maize variety (P07) accepted by Variety Release Committee ready for naming and release by MAF.. |
| O1.6 | Sufficient foundation seed being produced. | Qty of foundation seed produced, by type and location. | Research Advisor Monthly Reports  Research Centre records. | On hand at the end of January, 2012 were 1500kg of Sele and 3,500 kg of P07 foundation seed stored at Betano station; 1 ha of cassava plants for cuttings at Loes and 1 ha at Corluli. Approximately 3000 m2 of sweet potato seedling material were also grown at Loes and 800m2 at Aileu. Foundation seed of Nakroma rice and Utamua peanuts were conserved on commercial farmers fields. |
| O1.7 | Capacity of MAF research staff to manage the identification and release of new varieties strengthened. | # of people trained, by position, subject, type of training provided and sex. | Staff training records | Courses during the year included statistics (65 persons), research data analysis (32 persons), wheat and barley disease identification (4 persons), report writing (20 persons) data analysis (37 persons) and statistics (23 persons). Three persons from UNTL were also assisted through their scripsi’s. Three MAF personnel were assisted in the preparation of papers for presentation at a conference in Dili, an indication of their capacity to conduct research. |

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **COMPONENT 2: FORMAL SEED PRODUCTION AND DISTRIBUTION** | | | | |
| **C2.1** | **Component Outcome:**. Sufficient high quality seed produced through formal channels to maintain the genetic quality of released varieties. | Four Seed Processing Centres (SPCs) established (2 new) for receiving, storing, grading, drying and packing formal seed. | Consolidated Seed District Officer Monthly Reports  Six Monthly Reports | Seed storage and processing centres established at TriLoka, Loes, Maliana, Aileu and Betano. A further warehouse is being constructed at Viqueque. |
| **C2.2** | SPCs capacity approximately 175 Mt per year, consisting of 100 Mt of formal maize seed, 50 Mt of rice seed, 25 Mt of peanut seed, 600,000 sweet potato cuttings, and 600,000 cassava canes /yr. | Consolidated Seed District Officer Monthly Reports  Six Monthly Reports | The amount of formal seed distributed to various organizations at the end of January, 2012 equaled 50t rice, 32 t maize, 17 to peanuts and 19,600 sweet potato cuttings. Maize production was limited due to the very poor season. Cassava canes were yet to be distributed for the season. |
| **C2.3** | MAF seed production staff competently managing the production and processing of targeted quantities of formal seed; and extension staff competently managing the distribution of this seed to farmers. | Staff competency assessments | Staff competency assessments indicate a steady improvement in the skills throughout SoL2. A further assessment will be done during the first half of 2012. |
| **Key Outputs:** | | | | |
| O2.1 | Formal seed produced through farmer contracts. | Qty of true seed produced, by variety and location.  No. of farmers under contract, by variety and location.  Value of seed produced.  # and area of sweet potato and cassava nurseries established.  # of sweet potato cuttings and cassava canes produced.  # SPCs and SPOs deployed, by position and sex | SPC/SDO Monthly Reports.  MAF staff records. | At the end of January, the program was on target to plant 50ha of Sele maize, 25 ha of Utamua peanuts, 40 ha of Nakroma rice, 3800m2 of Hohrae sweet potato and 2.85ha of Ai Luka cassava. Quantity not determined by end of year.  Maize seed being sold at up to $6 per kg in districts due to poor previous year production.  1 seed production coordinator and 12 seed production officers deployed |
| O2.2 | Quality assurance systems established. | % of formal seed produced that meets minimum standards, by type. % rejected. | SPC/SDO Monthly Reports. | High quality seed is maintained by rejecting up to 20% of that harvested. One technician dedicated to laboratory analysis of seed quality. |
| O2.3 | Technical extension support provided to contracted seed producers. | # extension staff providing direct support to contract seedgrowers.  # of contract seedgrowers trained, by subject, type of training provided by sex. | SPC/SDO Monthly Reports.  Training records. | One training course presented during first half of year and two courses in second half of 2011. In addition, seed producers received regular visits from seed production officers. |
| O2.4 | Seed grading, packing and storage facilities established. | #, capacity and location of SPCs established.  Total investment.  # professional staff deployed, by position and sex.  Qty of seed processed by SPCs, by variety. | SPC/SDO Monthly Reports | New storage facilities were established at Darasula (Baucau), Maliana, Aileu and Loes and the facilities in TriLoka (Baucau) upgraded during the year. Construction of an additional warehouse in Viqueque was also commenced. Betano warehouse maintained. Each warehouse is capable of storing 30t of seed and cleaning/grading rice and maize at 1t/hr. 15 persons assigned by MAF to seed production program. 6 new personnel including one new coordinator and one pure seed officer. 3 are women |
| O2.5 | Formal seed distributed through preferred distribution channels. | Qty of seed distributed by distribution channel, location and variety.  # and type of field demonstration/ farmer training activities conducted by SEOs.  Budget provided to local extension services for farmer training activities.  $ generated from cost recovery on seed distributed. | SPC/SDO Monthly Reports | Formal seed produced in 2011 not distributed but 2010-2011 seed distributed to various organizations in 2011 equaled 50t rice, 32 t maize, 17 to peanuts, 64,000 sweet potato cuttings and 50,000 cassava canes.  2 field demonstrations were established (1 maize and one rice). |
| O2.6 | Capacity of MAF seed production and extension staff to manage the production and distribution of formal seed strengthened. | # of seed production staff trained, by position, subject, type of training provided and sex.  # of extension staff trained, by position, subject, type of training provided and sex. | Staff training records | One course held during the first half of the year, two in the second half plus a study tour to discuss seed systems in Indonesia. |
| **COMPONENT 3: INFORMAL SEED PRODUCTION AND DISTRIBUTION** | | | | |
| **C3.1** | **Component Outcome:** Mechanisms for the production and distribution of seed through informal and market channels strengthened. | Approximately 1000 CSPGs established and producing a marketable supply of informal seed | Consolidated Seed Extension Officer Monthly Reports  Six Monthly Reports | 280 groups were established by SoL/MAF in seven districts. NGOs established 446 groups using SoL seed. 13 women only groups (5% of total 280 groups) established. |
| **C3.2** | CSPGs linked with market outlets and selling seed. | Consolidated Seed Extension Officer Monthly Reports  Six Monthly Reports | This is a second year activity. |
| **C3.3** | MAF extension services staff and District-based officers competently establishing and supporting CSPGs | Consolidated Seed Extension Officer Monthly Reports  Six Monthly Reports | Training of MAF personnel commenced in May, 2011. |
| **C3.4** | CSPG members competently operating and managing informal seed production and distribution of targeted quantities | Group competency assessments | Competency assessments yet to be made. |
| **Key Outputs:** | | | | |
| O3.1 | Community Seed Production Groups established | # and location of CSPGs established, by crop type  Total membership, by sex.  # women-only groups established.  Total production of CSPGs, by variety.  Qty and value of sales, by variety.  # SEOs directly involved in supporting establishment of CSPGs | CSPG records  Seed Extension Officer Monthly Reports | 280 groups were established by SoL/MAF in seven districts over the second half of the year. NGOs established 446 groups using SoL seeds. 13 women only group (5% of total 280 groups) established. Of the 280 groups 102 were maize, 51 maize, 52 rice, 6 cassava and 40 sweet potatoes. Total members were 3,815. (men 73%, women 27%). By mid January, 2012, approx. 89% of the groups had planted their seed production crops. |
| O3.2 | Farmer Seed Marketing Groups established. | # and location of FSMGs established.  Total no of CSPGs as members.  Total production, by variety.  Qty and value of sales, by variety. | CSPG records  Seed Extension Officer Monthly Reports | Second year activity. |
| O3.3 | Focal seed merchants in local markets established. | # focal seed merchants supported, by sex.  Qty and value of sales, by variety. | CSPG records  Seed Extension Officer Monthly Reports | Second year activity. |
| O3.4 | Access to seed for vulnerable groups improved through seed fairs. | # of seed fairs conducted, by location.  # of merchants involved, by type.  # buyers involved.  Qty and value of sales, by variety. | CSPG records  Seed Extension Officer Monthly Reports | Second year activity. |
| O3.5 | Systems linking informal seed producers with potential buyers developed. | # districts where system established.  # of suppliers recorded.  # buyers recorded.  Qty and value of sales facilitated, by variety. | CSPG records  Seed Extension Officer Monthly Reports | Second year activity. |
| O3.6 | Capacity of MAF extension staff to establish CSPGs strengthened. | # of people trained, by position, subject, type of training provided and sex. | Staff training records | 20 training sessions and 32 socialization workshops held during the first year reaching 2147 participants. 64% were men and 36% women. |
| **COMPONENT 4: SEED SYSTEM MANAGEMENT** | | | | |
| **C4.1** | **Component Outcome:** MAF capacity to manage the national seed system strengthened. | National seed planning, allocation and inventory control systems established. | Planning, allocation and inventory control systems in place and being used. | Yet to be established |
| **C4.2** | M&E/ SOSEK unit competently managing the implementation of field evaluation activities, providing a sufficient basis for progressive learning. | Staff competency evaluations. | Staff competency evaluations yet to be completed. |
| **C4.3** | Gender issues fully reflected in implementation of the national seed system. | SOSEK Evaluation Reports. | Measurements yet to be taken. |
| **C4.4** | Widespread awareness of SoL varieties in all districts. | Program assessment via Distribution Surveys. | Variety brochures printed and distributed. SoL activities and new varieties receive considerable exposure on local media. |
| **Key Outputs:** | | | | |
| O4.1 | Seed planning & management systems established. | Forward planning systems developed and operational.  Allocation procedures developed and operational.  National inventory management system established and operational. | Seed production plans.  Allocation procedures and distribution plans.  Inventory control reports. | Procedures yet to be established.  Inventory system for SoL seed established and to expanded to National program. |
| O4.2 | M&E / SOSEK processes strengthened. | # of dedicated staff involved in the M&E / SOSEK Unit.  # and nature studies conducted and reported. | MAF staff records.  Evaluation reports. | Two additional MAF staff assigned to the M&E/SOSEK Unit, bringing total to four staff, as agreed to by MAF in the PDD.  The M&E/SOSEK Unit has started a study on the SoL experience with seed producing farmer groups and is finalizing the results of a baseline survey. |
| O4.3 | GoTL seed policy being informed by SoL experience. | # of seed system-related policy issues identified.  # of advisory documents prepared and submitted. | Policy advisory notes. | Seed policy with Parliament for discussion. |
| O4.4 | Seed system gender strategy implemented. | To be defined by Gender Specialist. | To be defined by Gender Specialist. | MAF assigned 2 persons to work on gender in agriculture. Gender strategy and gender action plan completed. Training at district level commenced. |
| O4.5 | Improved-variety technical & promotional materials developed. | # and type of technical and promotional materials prepared.  Extent of distribution. | Publicity records | Five scientific publications of SoL research were prepared and released during the first year of SoL 3. Variety and technical recommendations in Tetun were also printed and distributed. |
| O4.6 | Awareness of improved varieties increased though use of mass media. | # of mass media campaigns conducted, by channel and cost.  Size of target audience. | Publicity records | SoL activities received considerable publicity during the period both on local and international TV in addition to publicity in local press. 16 local and 9 international occasions documented in 2011. |
| O4.7 | Environmental and climate change impacts addressed. | # species/ varieties evaluated taking climate change considerations into account, by species/ variety. # released.  # and nature of farming system adaptations recommended. | Annual research work programs and technical reports. | Two MAF personnel assigned to work on climate change. Climate change report addressing the effect of expected change in rainfall and temperature on agriculture being acted upon. |
| O4.8 | Capacity of MAF staff to manage the national seed system enhanced. | # of people trained, by position, subject, type of training provided and sex. | Staff training records | MAF staff received considerable training during the year. One masters degree student in Australia also studying participatory plant breeding and seed distribution systems. A total 2571 MAF and farmers attended training events over 193 days (3631 training opportunities) during the year. |
| **PROGRAM MANAGEMENT** | | | | |
| **5.1** | **Objective:** SoL 3 effectively and efficiently managed in a manner that is responsive to stakeholder needs. | As per Mid-Term Review | Independent Mid-Term Review. |  |
| **Key Outputs:** | | | | |
| O5.1 | Program governance arrangements established and operating effectively. | PSC established and meeting routinely.  APs and M&E reports reviewed and endorsed by PSC. | PSC minutes.  PSC minutes. | First PSC meeting held in October, 2011. AP approved. Second scheduled for February, 2012. Program Management Team established and meets quarterly. |
| O5.2 | Program Management Team established and operating effectively. | PMT established and core GoTL staff appointed including the NPM.  Regional Offices established; Regional Coordinators appointed.  # GoTL staff appointed, by position, sex  # LT TA staff appointed, by position, sex  # and type of training conducted for PMT/ RO staff.  Staff performing to a satisfactory level.  Physical and financial management systems established.  Communication Strategy and Administrative Guidelines developed/ refined. APs prepared in timely manner and approved by AusAID/ ACIAR.  APs implemented in an efficient manner.  Timely Progress reports prepared  M&E Framework established and effectively implemented. Timely mobilisation of quality ST TA. # TAG visits conducted. | Staffing records and duty statements.  Training reports.  Annual staff performance evaluations.  6-mnth Progress and Financial Reports.  Communications Strategy and Admin  Guidelines.  APs.  6-mnthly Progress Reports.  MEF design and M&E Reports.  TA mobilisation records.  TAG Reports. | Quarterly PMT meetings scheduled.  Regional Offices established and operating. District coordinators join regular meetings.  Three Regional advisors (all male) appointed.  Management systems being established.  Physical and financial management systems established.  CSU being commissioned to develop communication strategy  Administrative Guidelines developed.  M&E Framework reviewed and being implemented.  Second TAG visit scheduled for April, 2012  . |
| O5.3 | Program effectively coordinated with other relevant donor programs. | # of other donor programs with which SoL 3 is formally associated.  Nature of cooperation. | 6-mnth Progress Reports. | SoL has established good relationships with NGOs, particularly working with CSPGs and climate change field trials. |
| O5.4 | Lessons learned reviewed and shared with Government and other donors. | # lessons learned/ sharing workshops conducted; # of participants. | 6-mnth Progress Reports.  Lessons-learned reports. | MAF/SoL personnel presented papers at a national conference on agriculture. Staff regularly attend interagency workshops. |
| O5.5 | Pilots on the direct use of MAF’s financial systems evaluated and reported. | % of *Chef de Suco’s* reporting satisfactory service delivery.  Satisfactory audit report. | SOSEK Evaluation Reports.  Audit reports. | Pilot to commence after system established. |

### Appendix 2 Progress towards end of program outcomes 2011-2012

|  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Program Goal and Objectives: Improved food security in Timor-Leste through increased productivity of major food crops**  **Progress towards end of program outcomes.** | | | | | | | | | | | |
| **Indicators** | **Unit of measure** | **Baseline** | **Cumulative target values** | | | | | **Frequency** | **Data source/**  **methodology** | **Responsibility for data collection** | **Description (indicator definition etc.)** |
|  | | | 2011 | 2012 | 2013 | 2014 | 2015 |  |  |  |  |
| Percentage of farmers in TL experiencing period of food shortages decreased by 33% | % | 26^ |  |  |  |  |  | Annual | Secondary sources | Secondary sources | Numbers of farmers reporting food shortages |
| % increase in production of major food crops in TL | % | Rice (Target 63%) |  |  |  |  |  | Annual | Secondary sources | Secondary sources | Number of farmers reporting increased production |
|  | Maize (Target 38%) |  |  |  |  |  |
|  | Sweet potato (Target 25%) |  |  |  |  |  |
|  | Cassava (Target 25%) |  |  |  |  |  |
| Proportion of rice farmers growing one or more SOL varieties | % | 44,000 rice farmers;  4,600 farmers growing SoL varieties\* (Target 70%) | 11\* |  |  |  |  | Baseline, mid-term, end-of-program | SOSEK & NDE surveys | SOSEK | The number of lowland rice farmers growing one or more SoL varieties |
| Proportion of upland farmers growing one or more SOL varieties | % | 111,000 upland farmers;  18,000 farmers growing SoL varieties\* (Target 45%) | 15.5 |  |  |  |  | Baseline, mid-term, end-of-program | SOSEK & NDE surveys | SOSEK | The number of upland farmers growing one or more SoL varieties |
| Proportion of maize farmers growing one or more SOL varieties | % | 96,000 maize farmers;  12,800 farmers growing SoL varieties\* (Target 40%) | 13.5 |  |  |  |  | Baseline, mid-term, end-of-program | SOSEK & NDE surveys | SOSEK | The number of upland farmers growing one or more SoL varieties |
| Proportion of peanut farmers growing one or more SOL varieties | % | 26,000 peanut farmers;  4,000 farmers growing SoL varieties\* (Target 70%) | 16 |  |  |  |  | Baseline, mid-term, end-of-program | SOSEK & NDE surveys | SOSEK | The number of upland farmers growing one or more SoL varieties |
| Proportion of cassava farmers growing one or more SOL varieties | % | 97,000 cassava farmers;  3,300 farmers growing SoL varieties\* (Target 20%) | 3.4 |  |  |  |  | Baseline, mid-term, end-of-program | SOSEK & NDE surveys | SOSEK | The number of upland farmers growing one or more SoL varieties |
| Proportion of sweet potato farmers growing one or more SOL varieties | % | 63,000 sweet potato farmers;  4,000 farmers growing SoL varieties\* (Target 50%) | 6.6 |  |  |  |  | Baseline, mid-term, end-of-program | SOSEK & NDE surveys | SOSEK | The number of upland farmers growing one or more SoL varieties |
| Crop yields increased | % | Local maize 1.6t/ha\*\*  Local rice 1.7t/ha  Local cassava 4.1t/ha\*\*\*  Local peanut 1.7t/ha  Local sweet potato 4.1t/ha | Maize 1.5t/ha |  |  |  |  | Annual | SOSEK & NDE surveys | SOSEK | Numbers of farmers reporting increased yields |

\* Percentage of farmers in baseline survey reporting to grow SoL varieties

\*\* OFDT yield 4 year means

\*\*\* FAO yields

^ Average over four years from BDL data. 337 respondents

|  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Component 1. Evaluation of new food crop varieties. Progress towards end of program outcomes.** | | | | | | | | | | | |
| **Indicators** | **Unit of measure** | **Baseline** | **Cumulative target values** | | | | | **Frequency** | **Data source/**  **methodology** | **Responsibility for data collection** | **Description (indicator definition etc.)** |
|  | | | 2011 | 2012 | 2013 | 2014 | 2015 |  | | | |
| National network of research centres established\* | % | 34 | 64 |  |  |  |  | Annual | Component 1 monitoring records | Component 1 team | The number of research stations established |
| Number of new food crop varieties evaluated and officially released | No. | 9  2 maize,  1 rice,  3 sw. potato, 1 peanut,  2 cassava |  |  |  |  |  | Annual | Component 1 monitoring records | Component 1 team | The number of varieties of each crop released |
| Progress towards meeting foundation seed demand | % | 95 |  |  |  |  |  | Annual | Component 1 monitoring records | Components 1 and Component 2 teams | Tonnage of rice and maize seed, and number of sweet potato cuttings and cassava canes compared with requirements |
| MAF managing all phases of research cycle. | % | 56\* |  |  |  |  |  | Annual | Component 1 monitoring records | MAF NDR&SS | Number of MAF staff competently objective setting, planning and implementation of trials, analysis and reporting |

\* 2010 Personnel evaluation at 56%

|  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Component 2: Formal seed production and distribution. Progress towards end of program outcomes.** | | | | | | | | | | | |
| **Indicators** | **Unit of measure** | **Baseline** | **Cumulative target values** | | | | | **Frequency** | **Data source/**  **methodology** | **Responsibility for data collection** | **Description (indicator definition etc.)** |
|  | | | 2011 | 2012 | 2013 | 2014 | 2015 |  | | | |
| Total capacity of formal seed production centres  (Target 175t/yr) | t/year | 82t | 73 |  |  |  |  | Annual | Component 2 monitoring records | Component 2 team | Total number of metric tons of formal seed the SPCs are capable of producing |
| SPC and contract farmers’ capacity to produce formal maize seed (Target 100t/yr) | t/year | 32t | 22.7 |  |  |  |  | Annual | Component 2 monitoring records | Component 2 team | The number of tons of formal maize seed produced per year |
| SPC and contract farmers’ capacity to produce formal rice seed (Target 50t/yr) | t/year | 50t | 47.6 |  |  |  |  | Annual | Component 2 monitoring records | Component 2 team | The number of tons of formal rice seed produced per year |
| SPC and contract farmers’ capacity to produce formal peanut seed (Target 25t/yr) | t/year | 12 | 2.7 |  |  |  |  | Annual | Component 2 monitoring records | Component 2 team | The number of tons of formal peanut seed produced per year |
| SPC and contract farmers’ capacity to produce formal sweet potato cuttings (Target 600,000 cuttings/yr) | ‘000 cuttings/year | 64 | 104 |  |  |  |  | Annual | Component 2 monitoring records | Component 2 team | The number of sweet potato cuttings distributed each year |
| SPC and contract farmers’ +capacity to produce formal cassava canes (Target 600,000 canes/yr) | ‘000 canes/year | 50 | 85 |  |  |  |  | Annual | Component 2 monitoring records | Component 2 team | The number of cassava canes distributed each year |
| Formal seed planting material effectively and efficiently distributed to CSPGs | Rice [t/yr] | 0 | 0.6 |  |  |  |  | Annual | Component 2 monitoring records | Component 2 and Component 3 teams | Evaluation of effectiveness of distribution system |
| Maize [t/yr] | 0 | 2.7 |  |  |  |  |
| Peanut [t/yr] | 0 | 1.4 |  |  |  |  |
| Sweet potato [‘000 cuttings/yr] | 0 | 96 |  |  |  |  |
| Cassava  [‘000 canes/year] | 0 | 12.8 |  |  |  |  |
| MAF effectively managing the production and processing and distribution of targeted quantities of formal seed. | % | Personnel evaluation in 2010 at 5.4/10 (54%) |  |  |  |  |  | Annual | Component 2 monitoring records | NDA&H | Number of MAF staff competently managing production and distribution of formal seed |

|  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Component 3: Informal seed production and distribution. Progress towards end of program outcomes.** | | | | | | | | | | | | |
| **Indicators** | **Unit of measure** | **Baseline** | **Cumulative target values** | | | | | **Frequency** | **Data source/**  **methodology** | | **Responsibility for data Collection** | **Description (indicator definition etc.)** |
|  | | | 2011 | 2012 | 2013 | 2014 | 2015 |  | | | | |
| Number of SoL managed seed production groups producing surplus or quality seed for sale | Target No. | na | 280 | 560 | 750 | 1000 | 1000 | Annual | Component 3 monitoring records | Component 3 team | | Number of SoL CSPGs producing surplus seed for sale |
| % target achievement | na | 89 |  |  |  |  |
| Total capacity of informal seed production groups (all CSPGs using SoL varieties) | Maize (t/year) | na | na | 26 |  |  |  | Annual | Component 3 monitoring records | Component 3 team | | Tons of seed each year |
| Rice (t/year) | na | na | 37 |  |  |  |
| Peanut (t/year) | na | na | 4 |  |  |  |
| Total capacity of informal sweet potato and cassava production groups (all CSPGs using SoL varieties) | Sweet potato (‘000 cuttings/ year) | na | na | 480 |  |  |  | Annual | Component 3 monitoring records | Component 3 team | | Number of cuttings of sweet potato and cassava produced each year |
| Cassava  (‘000 canes/year) | na | na | 28 |  |  |  |
| MAF extension services staff and District-based officers competently establishing and supporting CSPGs | % | na |  |  |  |  |  | Annual | Component 3 monitoring records | Component 3 team | | Competency assessments |
| CSPG members competently operating and managing informal seed production and distribution of targeted quantities | % | na |  |  |  |  |  | Annual | Component 3 monitoring records | Component 3 team | | Group competency assessments |

### Appendix 3. Performance against target charts 2011-2012

|  |  |
| --- | --- |
|  |  |

|  |  |
| --- | --- |
|  |  |

### Appendix 4. Seeds of Life 3 communication and dissemination activities 2011-2012

***Publications***

SoL, 2010 Annual Research Report, 2010, Seeds of Life, April, 2011, 238p (English and Tetun editions)

Shepherd C.J, McWilliam A. (2011) Ethnography, Agency, and Materiality: Anthropological perspectives on rice development in East Timor. East Asian Science, Technology and Society: An International Journal 5:189–215

Molyneux N, 2011. Seeds of Life: Adapting for food security. Issues, Vol 94. March, 2011

Partners. ACIAR Journal. March-May, 2011. A country farms its future.

Variety Fact Sheets, Sweet Potato (Tetun), fifth printing March, 2011

Variety Fact Sheet, Peanuts (Tetun), fifth printing March, 2011

Variety Fact Sheet, Rice (Tetun), fifth printing March, 2011

Variety Fact Sheet, Maize (Tetun), fifth printing March, 2011

Variety Fact Sheet, Cassava (Tetun), fifth printing March, 2011

Nicholas Molyneux, Gil Rangel da Cruz, Robert L. Williams, Rebecca Andersen and Neil C. Turner. Climate change and population growth in Timor-Leste: Implications for food security. 30pp Accepted for publication by Ambio, January, 2012

Lacoste, M, Borges F., L., Williams, R and Erskine, W. Varietal Diffusion in Marginal Seed Systems: Participatory Trials initiate Change in East Timor, 31p. Accepted by Journal of Crop Improvement, December, 2011

Williams, R., Borges F., L., Andersen, R., Lacoste M., Johansen C. and Nesbitt., H. On-farm evaluation of introduced maize varieties and their yield determining factors in East Timor 22pp. Submitted to Field Crop Research, January, 2012

Neil C. Turner, Nicholas Molyneux, Sen Yang, Youcai Xiong, Kadambot H. M. Siddique (2011). Climate change in south-west Australia and northwest China: challenges and opportunities for crop production. Crop and Pasture Science 62(6) 445-456

Marcal Gusmao, Kadambot H. M. Siddique, Ken Flower, Harry Nesbitt, Erik J. Veneklaas Water deficit during the reproductive period of grass pea (Lathyrus sativus L.) reduced grain yield but maintained seed size 37p. Accepted by Journal of Agronomy and Crop Science, January, 2012.

Williams, Robert; Rebecca Anderson, Armandina Marcal, Luis Pereira, Luis Almeida and William Erskine. Exploratory Agronomy within participatory varietal selection: The case of peanut in East Timor. 11 p. Accepted by Experimental Agriculture, December, 2011.

***SoL 3 reports***

Seeds of Life Phase 3. Program Design Document. Volume 1. Main Report. 63 p

Seeds of Life Phase 3. Program Design Document. Volume 2. Appendices. 187 p

Seeds of Life Monitoring and Evaluation Review. April, 2011. Geoff Moyle 45p

Guidelines for Informal Seed Production of Maize in Timor-Leste. Buddhi Kunwar and Asep Setiawan, MAF. May 2011 26p

Informal seed Production: An Introduction, Buddhi Kunwar, MAF, May 2011, 3p

Summary Recommendations of Major Crops – Maize, Peanuts, Paddy, Cassava and sweet Potato. Buddhi Kunwar and Asep Setiawan, MAF. August 2011 5p

Seeds of Life, 2011 Agricultural Interventions for improving food and nutritional security in Timor-Leste; with reference to Contemporary Predictions of Climate Change and Population Pressure. A policy and planning paper for the Ministry of Agriculture. 57p

Strategy for Promotion of Gender Equality in Informal Seed Production. MAF/Seeds of Life, August 2011 p4

Strategy for Capacity Building of MAF Extension Staff to implement Informal Seed Production, MAF/Seeds of Life September 2011 2p

Seeds of Life Program, Monitoring and Evaluation Manual (October, 2011) In draft

Gender Strategy Seeds of Life. Endah Agustiana, December, 2011. 24p

Gender Action Plan, Seeds of Life. Endah Agustiana, December, 2011. 2p

Communication Strategy, Seeds of Life. Chris McGillion, Charles Sturt University, Bathurst, Australia, 50p, October, 2011

Communication Action Plan, Seeds of Life. Chris McGillion, Charles Sturt University, Bathurst, Australia, 1p, October, 2011

***East Timor media coverage***

*Enjoy magazine – Timor-Leste.* Climate change and its effects on agriculture in Timor-Leste by Valentina Gjuraj. Report in Tourism and Business magazine on Climate Change report. November, 2010.

*Jornal Agrikultura. February, 2011.* Signing ceremony for SOL 3 (with large photographs) on front cover

CPA weekly show “Povu Nia Matenek” 13 April 2011. Seeds of life farmers and staff featured

A Voz de Suara Timor Lorosae, *MAP Lansa Projeito Fini Ba Moris*, 29 June 2011, Edisaun No. 9040 Tinan XVIII

Timor Post, *MAFP Lansa Projetu Fini Ba Moris Tinan Lima*, 29 June 2011

Jornal Agrikultura, July, 2011. Reporting SoL variety seed production at Betano Research Station, District of Manufahi.

TVTL. Visit of Australian Minister for Foreign Affairs visit to Seeds of Life activities in Maliana 11 July, 2011

Televisaun De Timor-Leste (TVTL), July 12, 2011, Visit of Mr Kevin Rudd, Australian Minister of Foreign Affairs to SoL activities

Benefits of informal seed production. August, 2011. Broadcast on Maliana Community Radio.

TVTL broadcast of SoL team participation in the First Lady’s Cup. August, 2011.

Video of Research Advisor’s presentation at the Lao T Hamutuk forum on Seed Policy. August, 2011.

Revolusaun Verde Hamosu Problema ba Toos Nain. Aug-2011. Timor Post Newspaper

Bi-weekly updates on Sol activities on Maliana Community Radio.

TVTL. Variety release of P07, Ministry to name new variety. 15 Nov.

TVTL broadcast of MAF Secretary of State, Marcos da Cruz visit to Aileu, 19 January, 2012

Seeds of Life distributes 24,956kg of seed. Article on Timor Post P6, 25 January, 2012

***Conference presentations***

Luis Fernandes, LuisPereira, Armindo Moises and Robert L. Williams. *Hili varidade ai horis trigu (titboa ho asinata) nian nebee resultadu diak hamutuk toos nain sira.* ‘Knowledge, Attitudes and Skills for Timor-Leste’s Development: an Opportunity for Dialogue’ 4 July 2011

Marcos Correia Vidal ho Robert L Williams - *Lehe bele hasae produsaun batar iha Timor-Leste.* ‘Knowledge, Attitudes and Skills for Timor-Leste’s Development: an Opportunity for Dialogue’ 4 July 2011

Felisberto A. Soares, Joao Bosco da Costa, Leandro C.R. Pereira Abril de Fatima ho Robert L. Williams. *Varidade ba batar balu, bele hetan produsaun aas, ho bele tahan ba fuhuk.*  ‘Knowledge, Attitudes and Skills for Timor-Leste’s Development: an Opportunity for Dialogue’ 4 July 2011.

Modesto Lopes and Harry Nesbitt. Improving food security in Timor-Leste with higher yielding crop varieties. Paper prepared for presentation at the Australian Agricultural and Resource Economics Society Mini Symposium “Food security in our own back-yard” 8-10 February, 2012

***Australian media coverage***

ACIAR. A country farms its future. Partners. March-May 2011. <http://aciar.gov.au/files/node/13748/a_country_farms_its_future_92962.pdf>

Radio Australia, 11 July, 2011. Kevin Rudd, Minister of Foreign Affairs [Interview with Phil Kafcaloudes, Radio Australia](http://www.foreignminister.gov.au/transcripts/2011/kr_tr_110711_radio_australia.html) spoke about the Seeds of Life visit conducted the previous day.

Minister of Foreign Affairs webpage has a selection of images from his visit to SoL in Maliana. <http://gallery.foreignminister.gov.au/Photo-Gallery/Visit-to-East-Timor-July-2011/17966129_s9NjPK#1375934150_zHpcGh8>

UWA News. 11 July, 2011. Hunger-beating 'Seeds of Life' for Timor-Leste. <http://www.news.uwa.edu.au/201107113737/business-and-industry/hunger-beating-seeds-life-timor-leste>

UWA News. 22 August, 2011. UWA helps to sow the seeds of a new life. <http://www.news.uwa.edu.au/201108243844/features/uwa-helps-sow-seeds-new-life>

Seeds of hope are being sown in Timor-Leste,. ABC News Online, Stephanie Dalzell. 7-Sep-2011. <http://www.abc.net.au/news/2011-09-07/seeds-of-life-feature/2875464>

UWA Institute of Agriculture, December 2011. Seeds of Life: continuous low cost supply of superior seeds in Timor-Leste.

UWA News. 15 November, 2011. UWA’s first PhD from Timor-Leste to address hunger. <http://www.news.uwa.edu.au/201111154138/alumni/uwas-first-phd-timor-leste-address-hunger>

ACIAR Blog, 9 January 2012. Timor-Leste PhD graduate. <http://aciarblog.blogspot.com/2012/01/timor-leste-phd-graduate.html>

**Website http://www.seedsoflifetimor.org/**

### Appendix 5. Annual workplan for Seeds of Life 2012-2013

annual workplan 2012-2013

annual workplan continued

annual workplan conitnued

annual workplan continuedannual workplan continued

### Appendix 6. Budget for Year 2 (2012-2013)

seeds of life budget 2012-2013

seeds of life budget 2012-2013 (continued)

seeds of life budget 2012-2013 (continued)