

# Seeds of Life

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# Fini ba Moris

## **ANNUAL PLAN 2012-2013**

01 February, 2012 – 30 July, 2013

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

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## ***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

SOL3

Annual Plan 2012 - 2013

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

## 1. 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**

	<i>Positions</i>		
	<i>MAF</i>	<i>SoL</i>	<i>Total</i>
<b>Research staff – Component 1</b>			
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
<b>Seed production staff – Component 2</b>			
Seed Production Coordinators (SPC)	0	1	1
Seed Production Officers (SPO)	10	2	12
<b>C-B seed production staff – Component 3</b>			
C-B Seed Production Coordinators (CBSPC)	9	0	9
<b>Program management – Component 4</b>			
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
<i>Total GoTL positions</i>	<i>56</i>	<i>40</i>	<i>96</i>
<i>Advisors and office manager</i>		<i>10</i>	<i>10</i>
<i>Total program personnel</i>	<i>56</i>	<i>50</i>	<i>106</i>

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.

## **2. 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.

		<i>Year</i>				
Crop		2011	2012	2013	2014	2015
	Rice	6000	21000	28000	33000	35000
	Upland crops	7000	28000	36000	43000	46000
	<b>Total</b>	<b>13000</b>	<b>49000</b>	<b>64000</b>	<b>76000</b>	<b>81000</b>

**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:** Sufficient high quality seed being 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.

## 2.5 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.



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

### 3. 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**

<i>Species</i>	<i>No. Trials</i>
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
<b>TOTAL</b>	<b>38</b>

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 m<sup>2</sup> of sweet potato seedling material were also grown at Loes and 800m<sup>2</sup> 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)**

<i>Date</i>	<i>Title</i>	<i>No. of Participants</i>	<i>Training Days</i>
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)
	<i>Total</i>	<i>148</i>	<i>68 (673)</i>

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

<i>Date</i>	<i>Title</i>	<i>No. of Participants</i>	<i>Training Days</i>
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)
<b>TOTAL</b>		<b>2585</b>	<b>194 (3645)</b>



## **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 its 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-Formal 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-Formal 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**

<i>Crop</i>	<i>Maize</i>	<i>Maize</i>	<i>Peanut</i>	<i>Peanut</i>	<i>S/Potato</i>	<i>S/Potato</i>	<i>Cassava</i>	<i>Cassava</i>	<i>Total</i>	<i>Total</i>	<i>%</i>
<i>District</i>	<i>Target</i>	<i>Achieved</i>	<i>Target</i>	<i>Achieved</i>	<i>Target</i>	<i>Achieved</i>	<i>Target</i>	<i>Achieved</i>	<i>Target</i>	<i>Achieved</i>	<i>achieved</i>
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
<b>TOTAL</b>	<b>103</b>	<b>89</b>	<b>52</b>	<b>48</b>	<b>40</b>	<b>35</b>	<b>25</b>	<b>23</b>	<b>220</b>	<b>195</b>	
<i>Overall progress %</i>		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 from 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 Directorate 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.

#### 4. 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 m<sup>2</sup> of sweet potato seedling material will also be grown at Loes and 800m<sup>2</sup> 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
<b><u>General</u></b>				
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 Bahasa Indonesia	Advisers	As requested		
<b><u>Technical</u></b>				
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 2 <sup>nd</sup> 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

Training Course Title	Target Participants	Preferred Dates	Location	Suggested Resource Person
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
<b><u>Study tours/Visits</u></b>				
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	
<b><u>Postgraduate Studies</u></b>				
MS in Agronomy (Soils and Plant Protection)	Researchers, Seed Officers	July		
<b><u>Bachelor degrees/Diplomas</u></b>				
BS in Agronomy Diploma	Researchers in Districts 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, 3800m<sup>2</sup> 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
<b>Component 1</b>	<ul style="list-style-type: none"> <li>• Inclusion of gender considerations into the evaluation of new varieties</li> <li>• Incorporation of gender benefits analysis (along with other benefit analyses such as, economic, social and environment benefits) in the release of new varieties.</li> <li>• Ensure women's representation, such as a representative from MAF-GWG, female seed producers, and Gender Team in the new varieties release committee.</li> <li>• 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).</li> <li>• Integrate and the use of sex-disaggregated data and gender analysis in research monitoring and reporting.</li> </ul>
<b>Component 2</b>	<ul style="list-style-type: none"> <li>• Ensure equal participation of female farmers as formal seed producers/contractors.</li> <li>• Develop policy direction for the inclusion of gender sensitivity criteria in formal seeds production, distribution and selection of formal seeds producers/contractors and recipients.</li> <li>• 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).</li> <li>• 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)</li> <li>• Ensure participation of MAF-SoL Senior Management and formal seed staff in awareness and capacity development program.</li> <li>• Integrate and the use of sex-disaggregated data in formal seed monitoring and reporting.</li> </ul>
<b>Component 3</b>	<ul style="list-style-type: none"> <li>• Integrate gender issues in orientation and capacity development for CSPG by SEOs</li> <li>• Integrate gender issues in the technical guidance to I/NGOs interested in informal seeds</li> <li>• Ensure equal opportunity and participation of female farmers/ female seeds production groups in seeds fairs.</li> <li>• Ensure equal participation of women and men in seed producer-buyer workshop.</li> </ul>



COMPONENT	RECOMMENDATION
	<ul style="list-style-type: none"> <li>• Integration of gender issues/topic in the training program for district staff on informal seed production.</li> <li>• Inclusion of gender issues in the orientation program for SEOs on monitoring and reporting progress of CSPGs.</li> <li>• Inclusion of gender issues into the agenda of MAF-National Director (Extension) meetings.</li> <li>• Inclusion of gender issues in farmer field day.</li> <li>• 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).</li> <li>• Ensure participation of SEOs in gender awareness and capacity development events.</li> <li>• Conduct gender awareness and capacity development events for CSPGs and ensure equal participation of women and men farmers/informal seed producers in the events.</li> <li>• Integrate and the use of sex-disaggregated data and gender analysis in informal seeds monitoring and reporting.</li> </ul>
<b>Component 4</b>	<ul style="list-style-type: none"> <li>• Ensure participation of M&amp;E staff in gender awareness and capacity development program (i.e., mentoring, comparative study, short courses, workshop, etc)</li> <li>• Integrate and the use of sex-disaggregated data and gender analysis in socio-economic studies and report.</li> <li>• Integrate and the use of sex-disaggregated data in M&amp;E report.</li> <li>• Inclusion of gender issues/topic in the workshop of formal seed production</li> <li>• Integrate gender issues and the use of gender-sensitive language and image in technical and promotional materials.</li> <li>• Integrate gender issues and analysis in environmental and climate change studies and reports.</li> <li>• Develop Gender Annual Action Plan 2012.</li> <li>• Inclusion of gender issues in the agenda of PMT meeting, adviser weekly meeting and other important meetings.</li> <li>• Strengthen functioning of the Gender Team</li> <li>• Support and facilitate GWG's capacity development and its monthly meeting</li> <li>• Establish Gender Facilitator Team to facilitate gender awareness and capacity development/training program.</li> <li>• Conduct ToT for Gender Facilitator Team.</li> <li>• Develop gender capacity development plan 2012 for MAF-SoL program</li> <li>• Conduct Gender Awareness and Capacity Development for Senior Management, Adviser and Staff at the national and sub-national levels.</li> <li>• Develop gender mainstreaming manual/handbook for MAF-SoL program.</li> <li>• Develop Gender advocacy tools and materials.</li> <li>• 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.</li> <li>• Develop and integrate gender sensitive indicators in M&amp;E</li> <li>• Develop policy direction for the integration of gender considerations in MAF-SoL program.</li> <li>• Incorporation of gender issues and the use of sex-disaggregated data and gender analysis in MAF-SoL progress and annual report.</li> </ul>

## 5. 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**

	<i>Budget (\$'000)</i>	<i>% Budget expenditure at end Dec, 2011</i>	<i>Activity behind schedule or being delayed</i>
<i>Component 1: Evaluation of improved food crop varieties.</i>	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
<i>Component 2. Formal seed production and distribution</i>	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
<i>Component 3. Informal seed production and distribution</i>	149	56	Training at int'l centres In-country short courses Operating costs of SEOs
<i>Component 4. Seed system management</i>	331	41	Seed management hardware and software Adoption surveys Promotional materials
<i>Program management</i>	1600	76	On target. Planning workshops overspent as indicator of priorities in 2011. Office staff and motorbikes underspent.

## 6. 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.

## **7. 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 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

Code	Intervention Logic	Performance Indicators (PIs)	Means of Verification	Progress to January 2012 (After one year)
	and sourced.			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 m <sup>2</sup> of sweet potato seedling material were also grown at Loes and 800m <sup>2</sup> 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, 3800m <sup>2</sup> 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.	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).

		\$ generated from cost recovery on seed distributed.		
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	# of people trained, by position, subject, type	Staff training records	MAF staff received considerable training during the year. One masters



	manage the national seed system enhanced.	of training provided and sex.		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.
<b>PROGRAM MANAGEMENT</b>				
<b>5.1</b>	<b>Objective:</b> SoL 3 effectively and efficiently managed in a manner that is responsive to stakeholder needs.	As per Mid-Term Review	Independent Mid-Term Review.	
<b>Key Outputs:</b>				
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 <i>Chef de Suco's</i> 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**

<b>Program Goal and Objectives: Improved food security in Timor-Leste through increased productivity of major food crops</b>											
<b>Progress towards end of program outcomes.</b>											
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*	13.5					Baseline, mid-term, end-of-program	SOSEK & NDE surveys	SOSEK	The number of upland farmers growing one or more SoL varieties

		(Target 40%)									
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

<b>Component 1. Evaluation of new food crop varieties. Progress towards end of program outcomes.</b>											
<b>Indicators</b>	<b>Unit of measure</b>	<b>Baseline</b>	<b>Cumulative target values</b>					<b>Frequency</b>	<b>Data source/ methodology</b>	<b>Responsibility for data collection</b>	<b>Description (indicator definition etc.)</b>
			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

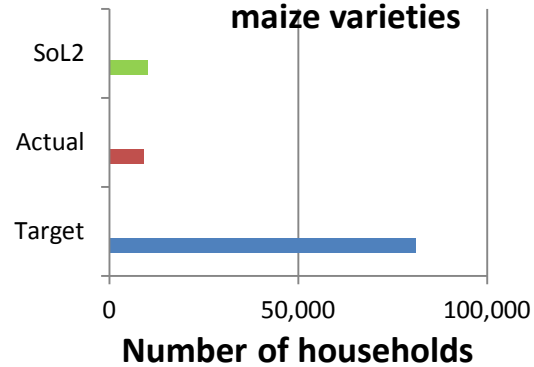
\* 2010 Personnel evaluation at 56%

<b>Component 2: Formal seed production and distribution. Progress towards end of program outcomes.</b>											
<b>Indicators</b>	<b>Unit of measure</b>	<b>Baseline</b>	<b>Cumulative target values</b>					<b>Frequency</b>	<b>Data source/ methodology</b>	<b>Responsibility for data collection</b>	<b>Description (indicator definition etc.)</b>
			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

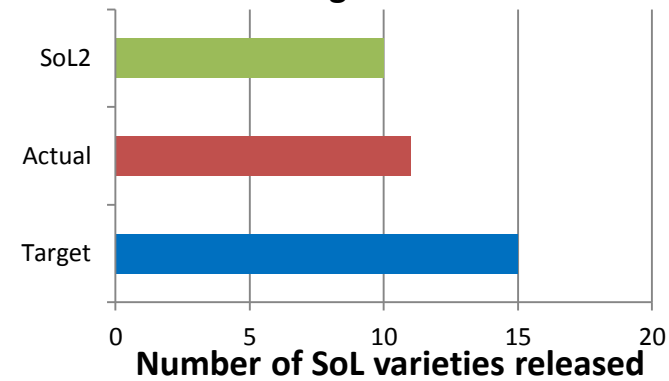
<b>Component 3: Informal seed production and distribution. Progress towards end of program outcomes.</b>											
<b>Indicators</b>	<b>Unit of measure</b>	<b>Baseline</b>	<b>Cumulative target values</b>					<b>Frequency</b>	<b>Data source/ methodology</b>	<b>Responsibility for data Collection</b>	<b>Description (indicator definition etc.)</b>
			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

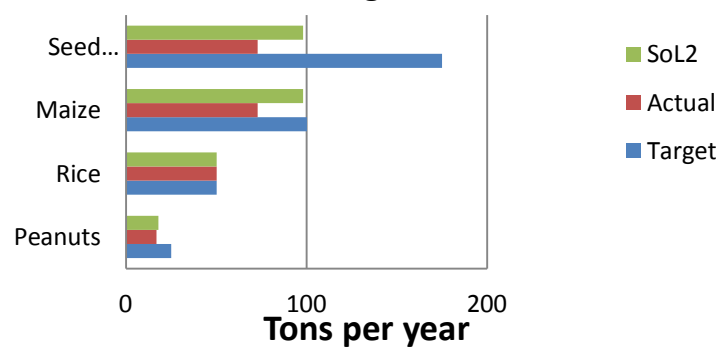
**SoL 3 Purpose performance against targets. No. Farmers using SoL maize varieties**



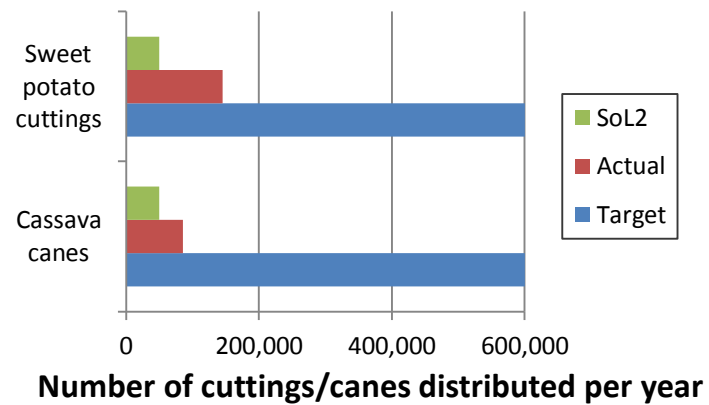
**SOL3 Performance against variety release targets**

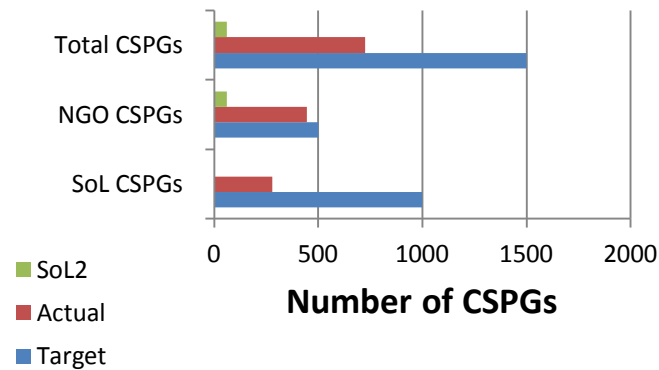
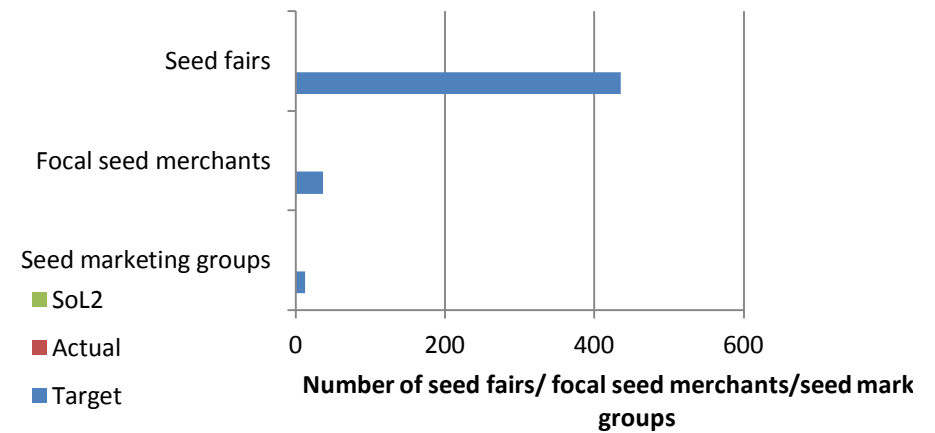
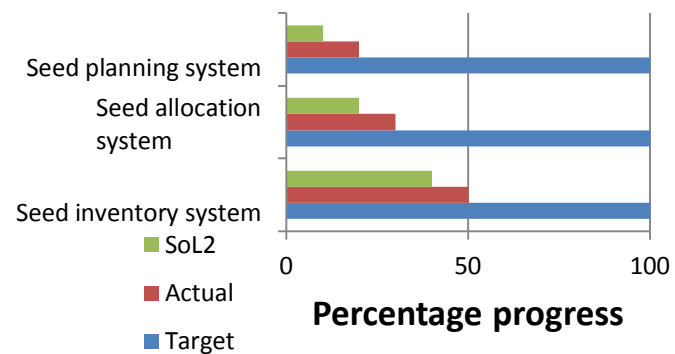


**SoL3 Progress against formal seed targets**



**SoL3 Progress against formal root targets**



**SoL3 Progress against CSPG targets****SoL 3 Progress against seed marketing targets****SoL3 Progress against national system establishment****SoL3 Progress against MAF capacity on seed system targets**



#### **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

Marcial 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 Projeitu 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://aciarc.gov.au/files/node/13748/a\\_country\\_farms\\_its\\_future\\_92962.pdf](http://aciarc.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](#) 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](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

1 February 2012 - 31 January 2013													
		<div>■ Preparation</div> <div>● ● ● Intermittent</div> <div>■ Continuous</div>											
No.	Component / Output / Activity	2012											
		Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan
1	Component 1: Evaluation of improved crop varieties												
1.1	Establishment of Agricultural Research Centres and Stations completed <ul style="list-style-type: none"><li>● Irrigation scheme for Loes</li><li>● Installation of temporary shelter, Raimaten and Kintal Portugal res. Sites</li></ul>												
1.2	Genetic material of potential improved varieties identified and sourced <ul style="list-style-type: none"><li>● Genetic material sourced from CG centres</li></ul>												
1.3	Potential new varieties evaluated on-station <ul style="list-style-type: none"><li>● Operations at Betano, Loes, Aileu and Darasula</li><li>● Operations at new upland site</li><li>● Operations at new irrigated (rice) site</li></ul>												
1.4	Potential new varieties evaluated on-farm <ul style="list-style-type: none"><li>● Potential new varieties tested on farm</li><li>● MAF SEOs conduct OFDTs</li></ul>												
1.5	Selected new varieties officially released <ul style="list-style-type: none"><li>● Variety launch events</li></ul>												
1.6	Sufficient foundation seed being produced <ul style="list-style-type: none"><li>● Building potato storage</li></ul>												
1.7	Capacity of MAF research staff to manage the identification and release of new varieties strengthened <ul style="list-style-type: none"><li>● Masters degree study</li><li>● On the job training</li><li>● In-country short courses</li></ul>												
2	Component 2: Formal seed production and distribution												
2.1	Formal seed produced through farmer contracts <ul style="list-style-type: none"><li>● Seed crop growing in contract farmer 2011/2012 seasons</li><li>● Seed processing by farmer</li><li>● Seed delivering to Seed Processing Unit (SPU)</li><li>● Seed grower application form submission for 2011/2012 planting season</li><li>● Contracting of seed growers for the 2012/2013 season</li><li>● Seed crop growing 2012/2013 season</li></ul>												
2.2	Quality assurance systems established <ul style="list-style-type: none"><li>● Field inspection of 2011/2012 planting season</li><li>● Seed processing at SPUs</li><li>● Conducting laboratory seed quality testing</li><li>● Seed bagging, labelling and distribution</li><li>● Application of seed grower for 2012/2013</li><li>● Pre planting field inspections</li><li>● Brief introduction on seed production to contract growers</li><li>● Field inspection of 2012/2013 planting seasons</li><li>● Repeat laboratory seed testing for seed &gt; 6 months of storage</li></ul>												
2.3	Technical extension support provided to contracted seed producers <ul style="list-style-type: none"><li>● SEO visits to contract growers</li><li>● Technical support by organic fertilizer producer for selected maize seed grower at Maliana</li><li>● Training of rice cultivation and basic formal seed production techniques</li></ul>												
2.4	Seed grading, packing and storage facilities established <ul style="list-style-type: none"><li>● Seed ware house construction and renovation at Aileu, Baucau, Bobonaro, Manufahi, Viqueque</li><li>● Ordering, delivering and installation of seed testing and processing equipment</li></ul>												
2.5	Formal seed distributed through preferred distribution channels <ul style="list-style-type: none"><li>● Seed distribution planning for 2012/2013 planting season</li><li>● Seed request submission from interested parties</li><li>● Seed request approval by MAF and SoL TL</li><li>● Seed distribution for SoL's program (Research; OFDT; Informal seed production; Formal seed production), MAF and NGOs</li></ul>												
2.6	Capacity of MAF seed production and extension staff to manage the production and distribution of formal seed strengthened <ul style="list-style-type: none"><li>● Individual mentoring during field visits</li><li>● Individual mentoring in Dili office</li><li>● Regular 2-monthly meeting</li><li>● District cross-visits of Seed Officers</li><li>● Seed District Officers on-the-job training of field inspection for seed certification</li></ul>												

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1 February 2012 - 31 January 2013														
		 Preparation			 Intermittent			 Continuous						
No.	Component / Output / Activity	2012												2013
		Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	
5	Program management													
5.1	Program governance arrangements established and operating effectively <ul style="list-style-type: none"><li>Regular (daily) meetings between ATL and MAF DG</li><li>Quarterly meetings of program management team</li><li>Regional personnel reporting to District Directors</li></ul>													
5.2	Program Management Unit established and operating effectively <ul style="list-style-type: none"><li><u>Staffing and regionalization</u><ul style="list-style-type: none"><li>Recruitment and mobilisation of long-term TA staff</li><li>Establishment of Regional Offices (Baucau, Maliana, Same)</li><li>Recruitment of additional MAF staff for secondment with SoL</li></ul></li><li><u>Program development</u><ul style="list-style-type: none"><li>Development of M&amp;E Framework</li><li>Preparation of SoL 3 Annual Program 2011</li><li>Preparation of SoL 3 Annual Program 2012</li><li>Baseline survey</li><li>Revision of SoL Training Management System</li></ul></li><li><u>Reporting</u><ul style="list-style-type: none"><li>Six-monthly progress report</li><li>Annual progress report</li></ul></li></ul>													
5.3	Program effectively coordinated with other relevant donor programs <ul style="list-style-type: none"><li>Attendance at harmonization meetings</li><li>Sharing of information</li></ul>													
5.4	Lessons learned systematically reviewed and shared with government and other donors <ul style="list-style-type: none"><li>Revision and updating of the SoL website</li><li>Annual research report 2011</li><li>Annual research report 2012</li></ul>													

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

Seeds of Life Phase III: Australian budget for 2012-2013 (A\$'000)								
			Year 2. 2012-2013					
Ref	Activities / Item	Unit	Cost (\$)	1	2	3	4	Tot
<b>C1</b>	<b>Evaluation of improved foodcrop varieties</b>							
<b>O1.1</b>	<b>Establishment of National Research Centres and Stations completed</b>							
O1.1.1	Irrigation system for Loes Research Centre	System	\$50,000	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
O1.1.2	Additional Research Stations	Centre	\$100,000	\$100.00	\$0.00	\$0.00	\$0.00	\$100.00
<b>O1.2</b>	<b>Genetic material of potential improved varieties identified and sourced</b>							
O1.2.1	ST visits by CGIAR specialists (3/year) (tech and training)	Visit	\$10,000	\$10.00	\$10.00	\$10.00	\$0.00	\$30.00
<b>O1.3</b>	<b>Potential new varieties evaluated on-station</b>							
O1.3.1	Operations at Betano and Loes	Year	\$120,000	\$120.00	\$0.00	\$0.00	\$0.00	\$120.00
O1.3.2	Operations at new upland Research Stations (2) (\$2,000/mth)	Year	\$50,000	\$50.00	\$0.00	\$0.00	\$0.00	\$50.00
O1.3.3	Operations at new irrigated Research Station (\$2,000/mth)	Year	\$25,000	\$25.00	\$0.00	\$0.00	\$0.00	\$25.00
<b>O1.4</b>	<b>Potential new varieties evaluated on-farm</b>							
O1.4.1	Cost of OFDTs (excluding staff time) (pds, equip, etc.)	OFDT	\$150	\$26.25	\$26.25	\$26.25	\$26.25	\$105.00
O1.4.2	Support for SEOs to assist with OFDTs	Year	\$10,000	\$10.00	\$0.00	\$0.00	\$0.00	\$10.00
<b>O1.5</b>	<b>Selected new varieties officially released</b>							
O1.5.1	Variety launch events and promotional events	Year	\$10,000	\$0.00	\$0.00	\$10.00	\$0.00	\$10.00
<b>O1.6</b>	<b>Sufficient basic and foundation seed being produced</b>							
<b>O1.7</b>	<b>Capacity of MAF staff to manage the identification and release of new varieties strengthened</b>							
O1.7.2	On-the-job training (visits to int'l res. centres) - 2 mnths	0	\$15,000	\$0.00	\$15.00	\$0.00	\$0.00	\$15.00
O1.7.3	Short courses run by CGIAR pers. In TL (no inc. cost)	0	\$0	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
O1.7.4	In-country short courses (15-25 pp, 1 week) (1 course/qtr)		\$8,500	\$17.00	\$17.00	\$17.00	\$17.00	\$68.00
<b>Component 1 operating costs</b>				<b>\$358.25</b>	<b>\$68.25</b>	<b>\$63.25</b>	<b>\$43.25</b>	<b>\$533.00</b>
<b>C2</b>	<b>Formal seed production and distribution</b>							
<b>O2.1</b>	<b>Formal seed being produced through farmer contracts</b>							
O2.1.1	Purchased rice seed (\$0.50/kg)	Mt	\$500	\$25.00	\$0.00	\$0.00	\$0.00	\$25.00
O2.1.2	Purchased maize (\$0.50/kg)	Mt	\$500	\$25.00	\$0.00	\$0.00	\$0.00	\$25.00
O2.1.3	Purchased peanut seed (\$1.00/kg)	Mt	\$1,000	\$25.00	\$0.00	\$0.00	\$0.00	\$25.00
O2.1.4	Operating sweet potato cutting sites (30 x 0.05 ha sites)	Site	\$500	\$15.00	\$0.00	\$0.00	\$0.00	\$15.00
O2.1.5	Operating sweet potato cutting sites (30 x 0.05 ha sites)	Site	\$5,000	\$15.00	\$0.00	\$0.00	\$0.00	\$15.00
O2.1.6	Operating cassava cane sites (1 ha/district) (replace 3 sites/yr)	ha	\$50,000	\$25.00	\$0.00	\$0.00	\$0.00	\$25.00
<b>O2.2</b>	<b>Quality assurance systems established</b>							
<b>O2.3</b>	<b>Technical extension support provided to contracted seed producers</b>							
<b>O2.4</b>	<b>Seed grading, packaging and storage facilities established</b>							
O2.4.1	Additional Seed Processing Centres (have 2)	Centre	\$80,000	\$80.00	\$0.00	\$0.00	\$0.00	\$80.00
O2.4.2	Annual operating & R&M Seed Centres (15% of cost)	Lump Sum/Yr	\$12,000	\$48.00	\$0.00	\$0.00	\$0.00	\$48.00
O2.4.3	Annual labour, seed packaging costs, etc.	Mt	\$1,000	\$125.00	\$0.00	\$0.00	\$0.00	\$125.00
<b>O2.5</b>	<b>Formal seed distributed through preferred distribution channels</b>							
O2.5.1	Seed distribution (some contracted, plus cooperation with MAF districts)	Mt	\$600	\$75.00	\$0.00	\$0.00	\$0.00	\$75.00
O2.5.2	Cassava cane distribution (by local staff)	Mt	\$200	\$0.00	\$20.00	\$0.00	\$0.00	\$20.00
O2.5.3	Sweet potato cutting distribution (some by local staff)	Mt	\$300	\$0.00	\$60.00	\$0.00	\$0.00	\$60.00
<b>O2.6</b>	<b>Capacity of MAF staff to manage the production and distribution of formal seed strengthened</b>							
O2.6.2	On-the-job training (visits to int'l seed centres) - 2 mnths	Visit	\$15,000	\$0.00	\$30.00	\$0.00	\$0.00	\$30.00
O2.6.3	In-country short courses (15-25 pp, 1 week) (1 course/qtr)	Course	\$8,500	\$8.50	\$8.50	\$8.50	\$8.50	\$34.00
O2.6.4	Seed/agronomy/gender training for SEOs	LS/pp/yr	\$100	\$8.00	\$8.00	\$8.00	\$8.00	\$32.00
O2.6.5	Operational costs for SEOs	LS/pp/yr	\$100	\$8.00	\$8.00	\$8.00	\$8.00	\$32.00
O2.6.6	Seed/agronomy/gender training for Dist & SD staff (80 pp)	LS/pp/yr	\$100	\$2.00	\$2.00	\$2.00	\$2.00	\$8.00
O2.6.7	Operational costs for Dist & SD staff (80 pp)	LS/pp/yr	\$100	\$2.00	\$2.00	\$2.00	\$2.00	\$8.00
<b>Component 2 operating costs</b>				<b>\$486.50</b>	<b>\$138.50</b>	<b>\$28.50</b>	<b>\$28.50</b>	<b>\$682.00</b>



Seeds of Life Phase III: Australian budget for 2012-2013 (A\$'000)									
					Year 2. 2012-2013				
Ref	Activities / Item	Unit	Cost (\$)	1	2	3	4	Tot	
C3	Informal seed production and distribution								
O3.1	Community Seed Production Groups (CSPGs) established								
O3.1.1	Cost of establishing CSPGs	Av cost/group	\$355	\$88.75	\$0.00	\$0.00	\$0.00	\$88.75	
O3.2	Farmer Seed Marketing Groups established								
O3.3	Focal seed merchants in local markets established								
O3.3.1	Assistance to sell branded seed in local markets	Av cost/merch/yr	\$1,000	\$0.00	\$3.00	\$0.00	\$0.00	\$3.00	
O3.4	Access to seed for vulnerable groups improved through vouchers and seed fairs								
O3.4.1	Lump sum cost of holding an annual seed fair	An L/sum	\$10,000	\$10.00	\$0.00	\$0.00	\$0.00	\$10.00	
O3.5	Systems linking informal seed producers with potential buyers developed								
O3.5.1	Computer-based record-keeping system	LS/district	\$4,000	\$0.00	\$8.00	\$0.00	\$0.00	\$8.00	
O3.6	Capacity of key actors involved in the production and distribution of informal seed strengthened								
O3.6.1	On-the-job training (visits to intl seed industries) - 2 mnths	Visit	\$15,000	\$0.00	\$30.00	\$0.00	\$0.00	\$30.00	
O3.6.2	In-country short courses (15-25 pp, 1 week) (1 course/mth)	Course	\$8,500	\$8.50	\$8.50	\$8.50	\$8.50	\$34.00	
O3.6.3	Group/seed/agronomy/gender training for SEOs	LS/pp/yr	\$100	\$8.00	\$8.00	\$8.00	\$8.00	\$32.00	
O3.6.4	Operational costs for SEOs	LS/pp/yr	\$100	\$8.00	\$8.00	\$8.00	\$8.00	\$32.00	
O3.6.5	Group/seed/agronomy/gender training for Dist & SD staff	LS/pp/yr	\$100	\$2.00	\$2.00	\$2.00	\$2.00	\$8.00	
O3.6.6	Operational costs for Dist & SD staff	LS/pp/yr	\$100	\$2.00	\$2.00	\$2.00	\$2.00	\$8.00	
Component 3 operational costs				\$127.25	\$69.50	\$28.50	\$28.50	\$253.75	
C4	Seed system management								
O4.1	Seed planning and management systems established								
O4.1.2	Training for NDFC&H staff (in-country short courses, 1/yr)	LS/year	\$8,500	\$0.00	\$8.50	\$0.00	\$0.00	\$8.50	
O4.2	M&E systems established providing a basis for progressive learning								
O4.2.2	SOSEK operations and surveys	LS/year (5 pp)	\$48,000	\$0.00	\$48.00	\$0.00	\$0.00	\$48.00	
O4.2.3	Adoption, impact, seed system, seed distribution, etc. surveys	LS/year	\$100,000	\$0.00	\$100.00	\$0.00	\$0.00	\$100.00	
O4.3	GoTL seed policy being informed by SoL experience								
O4.3.1	Experience related to MAF by Advisors and SoL staff								
O4.4	Seed system gender strategy implemented								
O4.4.1	Gender awareness training and support programs	LS/year	\$50,000	\$0.00	\$50.00	\$0.00	\$0.00	\$50.00	
O4.5	Improved variety technical and promotional materials developed								
O4.5.1	Lump sum per year	Year	\$70,000	\$70.00	\$0.00	\$0.00	\$0.00	\$70.00	
O4.6	Awareness of improved varieties increased								
O4.6.1	Lump sum/yr	LS/year	\$15,000	\$15.00				\$15.00	
O4.7	Environmental and climate change impacts addressed								
O4.7.1	Costs covered in Research Station operating costs and TA								
O4.8	Capacity of MAF staff to manage the national seed system enhanced								
O4.8.1	Intl study tours for exposure to sustainable mature seed systems	Tour	\$15,000	\$0.00	\$15.00	\$0.00	\$0.00	\$15.00	
Component 4 operational costs				\$85.00	\$73.50	\$0.00	\$0.00	\$306.50	
C5	Program management and coordination								
	Timor Leste Office and Admin Staff			\$44.70	\$44.70	\$44.70	\$44.70	\$178.80	
O5.1	Management and coordination								
	Establish Regional Offices (3)								
O5.1.4	Regional office operations (3)	Month	\$2,000	\$18.00	\$18.00	\$18.00	\$18.00	\$72.00	
O5.1.9	Transport operational & maintenance (20% of capital)	Qtr	\$71,825	\$71.83	\$71.83	\$71.83	\$71.83	\$287.30	
O5.1.11	Communications	Qtr	\$12,500	\$12.50	\$12.50	\$12.50	\$12.50	\$50.00	
O5.1.12	Program Reports	Qtr	\$6,000	\$6.00	\$6.00	\$6.00	\$6.00	\$24.00	
O5.1.13	Dili and Perth office ops & DG's Fund (\$50,000/yr for DG's fund)	Month	\$15,000	\$45.00	\$45.00	\$45.00	\$45.00	\$180.00	
	Program Workshops								
O5.1.15	National annual planning workshops (50 pp)	Event	\$10,000	\$0.00	\$10.00	\$0.00	\$0.00	\$10.00	
O5.1.16	District annual planning workshops (50 pp)	Event	\$1,500	\$0.00	\$18.00	\$0.00	\$0.00	\$18.00	
O5.1.17	Quarterly district coordination meetings (50 pp)	Event	\$1,500	\$18.00	\$0.00	\$18.00	\$18.00	\$54.00	
O5.2	Program publicity								
O5.2.1	Web-site management	Qtr	\$500	\$0.50	\$0.50	\$0.50	\$0.50	\$2.00	
O5.2.2	Program publicity brochures, calendars, etc.	Qtr	\$2,500	\$2.50	\$2.50	\$2.50	\$2.50	\$10.00	
O5.2.3	Program signage	Qtr	\$500	\$0.50	\$0.50	\$0.50	\$0.50	\$2.00	
O5.2.4	Promotional events	Event	\$500	\$0.00	\$0.50	\$0.00	\$0.50	\$1.00	
O5.2.5	Media liaison (International)	Event	\$1,000	\$0.00	\$1.00	\$0.00	\$1.00	\$2.00	
O5.2.6	Conference participation	Event	\$5,000	\$5.00	\$0.00	\$5.00	\$0.00	\$10.00	
O5.2.7	Promotional merchandise (non-technical)	Qtr	\$1,250	\$1.25	\$1.25	\$1.25	\$1.25	\$5.00	
Management and coordination operational costs				\$181.08	\$187.58	\$181.08	\$177.58	\$906.10	
Total Australian operational costs				\$1,238.08	\$537.33	\$301.33	\$277.83	\$2,681.35	