

# STRENGTHENING CAPACITY FOR AGRICULTURAL RESEARCH AND DEVELOPMENT IN AFRICA (SCARDA)

## Discussion Paper 1

### CASE STUDY ON INSTITUTIONAL CHANGE OF THE NATIONAL AGRICULTURAL RESEARCH SYSTEM IN LESOTHO



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**Acronyms**

AIS	Agricultural Innovation System
ANAFE	African Network for Agro-forestry and Education
AR4D	Agricultural Research for Development
ARC	Agricultural Research Council (of South Africa)
ARM	Agricultural Research Management
BCA	Botswana College of Agriculture
CAADP	Comprehensive Africa Agriculture Development Programme
CBO	Community Based Organisation
CCARDESA	Centre for Coordination of Agricultural Research and Development for Southern Africa
CMAP	Change Management Action Plan
DAR	Department of Agricultural Research
DFID	Department for International Development (UK)
DFS	Department of Field Services
DPPA	Department of Planning and Policy Analysis
DST	Department of Science and Technology
FANR	Food, Agriculture and Natural Resources programme of SADC
FARA	Forum for Agricultural Research in Africa
FI	Focal Institute
FPR	Farmer Participatory Research
IA	Institutional Analysis
ICART	Implementation and Coordination of Agricultural Research and Training (project under SADC-FANR)
LAC	Lesotho Agricultural College
LECCARD	Lesotho Centre for the Coordination of Agricultural Research and Development
LNWMGA	Lesotho National Wool and Mohair Growers Association
MAFS	Ministry of Agriculture and Food Security
MoU	Memorandum of Understanding
NARS	National Agricultural Research System
NEPAD	New Partnership for Africa's Development
NGO	Non-Governmental Organisation
NRI	Natural Resources Institute
NRM	Natural Resource Management
NUL	National University of Lesotho
NUL-FA	NUL Faculty of Agriculture
PS	Principal Secretary
RSDA	Rural Self-Help Development Association
RUFORUM	Regional Universities Forum for Capacity Building in Agriculture
SADC	Southern Africa Development Community
SCARDA	Strengthening Capacity for Agricultural Research and Development in Africa
SRO	Sub-Regional Organisation
SWOT	Strengths, Weaknesses, Opportunities and Threats method

## 1. Summary

This paper examines the design and implementation of a package of capacity strengthening interventions undertaken between March 2007 and March 2011, which aimed to enhance the performance of the national agricultural research system (NARS) in Lesotho. It also identifies some initial outcomes from these interventions and makes recommendations to sustain the process of organisational and institutional change and build on the results that have been achieved. The paper is the first of three case studies which investigate the application of a holistic approach to capacity strengthening developed through the project 'Strengthening Capacity for Agricultural Research and Development (SCARDA)' which was coordinated by the Forum for Agricultural Research in Africa.

SCARDA activities in southern Africa were implemented by the Food and Natural Resources Directorate of the Southern African Development Community Secretariat. The National University of Lesotho (NUL) was designated as the 'focal institution' in Lesotho because of the key strategic role it plays within the NARS as a research and a capacity building institute. SCARDA provided an opportunity for NUL to enhance its research management capacities and to upgrade the professional skills of its research staff, whilst at the same time strengthening its links with its partner organisations in the NARS.

The findings of this case study show that, in spite of certain limitations, the institutional analysis and change management processes used in the project in Lesotho were effective in developing a strong awareness of the need for changes in the way research is managed in the NARS. The project has also played a catalytic role in the development of new research structures; notably, the Lesotho Centre for the Coordination of Agricultural Research and Development. Agricultural research and development organisations in Lesotho have begun to use farmer participatory research approaches and are beginning to incorporate innovation systems thinking into their research planning through involvement of key stakeholders from both the supply and demand sides of agricultural research for development. However, the findings also suggest that these gains may be short-lived unless further support is provided to consolidate and institutionalise them, as the approaches introduced by the project are new to the NARS.

**Key words:** Agriculture, capacity strengthening, change management, innovation systems approach, institutional analysis, national agricultural research systems

## 2. Background

The Strengthening Capacity for Agricultural Research and Development in Africa (SCARDA) project was designed to strengthen national agricultural research and development systems in Sub-Saharan Africa. Its stated purpose was: “*to strengthen the institutional and human capacity of African agricultural research and development systems to identify, generate and deliver research outputs that meet the needs of poor people*”. The project was led by the Forum for Agricultural Research in Africa (FARA), tasked by the African Union’s New Partnership for Africa’s Development (NEPAD) to spearhead CAADP’s<sup>1</sup> fourth pillar which addresses Agricultural Research, Technology Dissemination and Adoption.

The Project started in March 2008 and ended in June 2010, and was funded by the Department for International Development (DFID) of the United Kingdom. However, DFID has continued to provide support to the Sub-regional organizations (SROs) to allow the focal institutions (FIs) to complete specific initiated activities of the change management action plans and MSc studentships, as well as to document lessons learned from the project for wider dissemination.

The SCARDA project was conceived with two components:

- A. Strengthening competencies and capacity in agricultural research management and
- B. Strengthening capacity for professional development in agricultural research and development

The components of the project were aligned to four outputs as follows:

1. Agricultural research management systems and managerial competencies to conduct high quality research strengthened in participating NARS.
2. The capacity of participating NARS to undertake quality agricultural research for development strengthened
3. The relevance of training programs in agricultural universities to current market demand established
4. SCARDA approach for capacity strengthening is documented, validated and owned by key stakeholders.

In the Southern Africa Development Community (SADC) region, SCARDA was coordinated by the Food, Agriculture and Natural Resources (FANR) Directorate of the SADC Secretariat, supported by the African Network for Agro-forestry and Education (ANAFE) as the Lead Service Provider. The Natural Resources Institute (NRI) of the United Kingdom provided technical backstopping to the project. It facilitated a number of training workshops on capacity strengthening areas identified by the focal institutions. In SADC-FANR, the project contributed to the Research and Development (R&D) strategy programme, which serves to facilitate the development, dissemination and uptake of improved technologies in agriculture and natural resources management in order to enable resource poor farmers to achieve sustainable production and improvements in their livelihoods. The project was piloted in three SADC Member States, namely Botswana, Lesotho and Zambia. Focal Institutions (FI’s) mandated to conduct agricultural research for agricultural development were selected in the three pilot countries as platforms upon which the capacities of other institutions including the civil and private organizations engaged in research and development can be built.

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<sup>1</sup> Comprehensive Africa Agriculture Development Programme of NEPAD

In Lesotho, the National University of Lesotho (NUL) was the focal institution for SCARDA. As informed by the report of the rapid institutional analysis (Pound, 2007) for focal institutions of SCARDA in the SADC region, NUL is a research and a capacity building institute around which the capacities of other National Agricultural Research Systems (NARS) institutions under the Ministry of Agriculture and Food Security (MAFS) can be built. Building the capacity of the NUL Faculty of Agriculture (NUL-FA) to build capacities of other NARS institutions was considered to have a potential to strengthen all R&D institutions in Lesotho, including civil and private organizations.

Through SCARDA, a Lesotho NARS Change Management Action Plan (CMAP) was elaborated. A major output of the Lesotho CMAP has been the establishment of the Lesotho Centre for Coordination of Agricultural Research and Development (LECCARD). The main functions of the centre are to:

- 1) Coordinate research, dissemination of information and outreach across the Lesotho NARS.
- 2) Establish and operationalise a think tank for agricultural policy development, lobbying and advocacy.
- 3) Create a platform for the development of partnerships, linkages and networking locally, regionally and internationally.
- 4) Mobilize resources for the promotion of agricultural research in Lesotho.

### **3. Rationale for the case study**

The SCARDA project adopted the agricultural innovation systems (AIS) approach as its central approach to agricultural research and development. This approach puts the emphasis on building and maintaining multi-stakeholder partnerships among organizations involved in research and development in order to create efficient, effective and sustainable linkages among NARS stakeholders (especially research, extension, the National University of Lesotho, Lesotho College of Agriculture, NGOs, farmer bodies, private sector service providers and policy makers).

In all SCARDA focal countries the following sequence of interventions was employed: a scoping study followed by one or more rounds of institutional analysis, followed by the development and implementation of a change management action plan, accompanied by review and documentation of the processes.

In Lesotho these processes involved the NARS partners throughout, using a number of interesting tools and methods along the way. A number of tangible outcomes have resulted that have the potential to strengthen and sustain the coordination and relevance of agricultural research and development in Lesotho. It was thus felt that the experience of Lesotho in the form of a case study and a research brief would be useful to donors, FARA, African governments and NARS stakeholders in the elaboration of new capacity development projects and the re-structuring of national research and development systems in sub-Saharan Africa.

In this regard, a case study of the Institutional Analysis and Change Management processes followed by the SCARDA project with the Lesotho NARS is being presented.

The specific objectives of the case study are to:

1. Present the Institutional Analysis approaches and tools used to identify weaknesses and capacity strengthening needs of Lesotho NARS.

2. Document the outcomes of the Change Management Action Plan and significant changes that have occurred to individuals and the various organizations involved in AR4D in Lesotho as a result of the SCARDA intervention.

Expected outputs of the case study are as follows:

1. A synthesis report of the Institutional Analysis process followed by Lesotho NARS to identify weaknesses and capacity strengthening needs of NARS involved in agricultural research and development which led to the development and implementation of the CMAP, as well as the outcomes of the CMAP (this report).
2. A policy brief of Institutional Analysis as a tool to determine if research organizations/institutions effectively and efficiently carry out their mandates including monitoring and evaluation of progress on the performance of the research institutions. The policy brief will be developed from the synthesis report by the Regional Universities Forum for Capacity Building in Agriculture (RUFORUM).

#### **4. Methodology of the case study**

The case study was prepared using reports from the period under review and materials generated during a 2-day workshop of Lesotho NARS stakeholders (NUL-FA, DAR, DFS, DPPA and LAC) facilitated by the SADC-SCARDA focal person and an NRI consultant (Annex I). During the workshop, a time line was constructed to understand the sequence of Institutional Analysis and Change Management activities and the outcomes of each intervention. Testimonies were obtained from individuals who had been involved in a range of different training events. The Most Significant Change method was used to elicit what had been most influential for individuals representing the different NARS stakeholders. Comparison tables were drawn up to illustrate the difference between the situation before SCARDA interventions and after. Analyses were made of the challenges faced in implementing the project and the benefits accrued from the project so as to understand the achievements against the constraints. The case study was written up by the Dean (NUL-FA), the SADC-SCARDA focal person and the NRI consultant.

#### **5. The situation before the Change Management processes began**

The situation in Lesotho was comprehensively described in the SCARDA scoping study for Lesotho carried out in July 2007<sup>2</sup> and further analysed in the first and second Institutional Analysis visits in November 2007 and April 2008. The combined findings of these three interventions were that:

- The agricultural sector in Lesotho is nationally important, but performing weakly (Annex II).
- Increased agricultural productivity in Lesotho rests on the use of improved hybrid seeds and breeds of livestock, added value to agricultural products across the value chain, improved marketing systems and strengthened resources, capacities and integrated systems for research and development as well management practices for sustainable use of natural resources.
- Explicit capacity building and agricultural research policies for the NARS institutions do not exist; however the environment for conducting research and capacity building is provided for in the

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<sup>2</sup> Frempong-Annor, I. (2007) SCARDA scoping study in Lesotho. NUL, Lesotho.

Vision 2020 of 2004, the Lesotho Poverty Reduction Strategy Paper of 2005, the Agricultural Sector Strategy of 2003 and the Lesotho Food Security Policy of 2005.

- Figure 1 presents the key stakeholders in the Lesotho national agricultural innovation system. **Supply side** (research) institutions in Lesotho are the Faculty of Agriculture of the National University of Lesotho (NUL-FA), the Department of Agricultural Research of the Ministry of Agriculture and Food Security, the Institute of Southern African Studies of the NUL and the Lesotho Agricultural College of the MAFS. The majority of staff in these institutions (60%) have sub-degree qualifications. About 14% have Masters degree and only eight percent hold doctoral degrees. A significant number of the staff are below 35 years, and Lesotho does not have gender imbalances in the staff of the NARS institutions, there being slightly more females than males. The overriding problem in Lesotho regarding professional development is the country’s inability to maintain the critical mass of professionals to generate and disseminate research output due to high attrition rates of staff, especially to the Republic of South Africa, linked to relatively poor remuneration and working conditions, and inadequate facilities (laboratories, equipment, internet access, library facilities, and research and teaching materials).

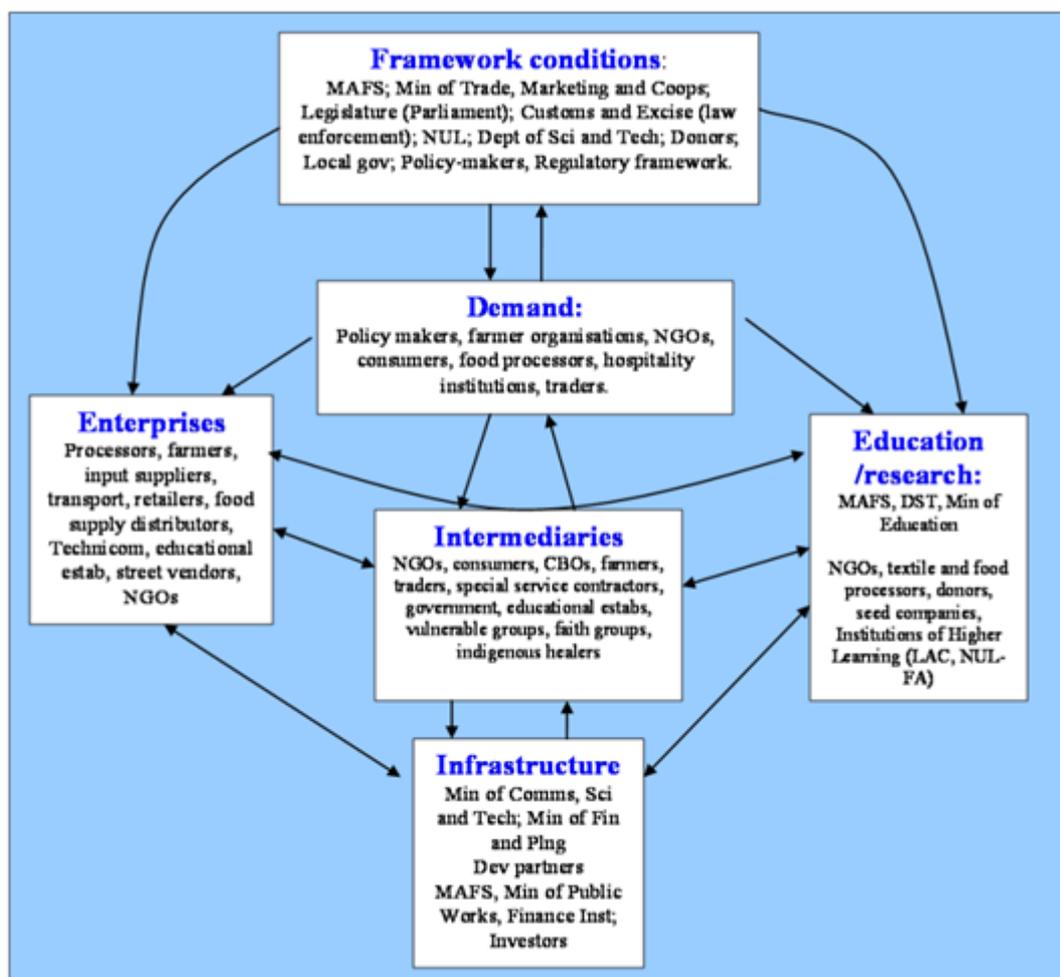


Figure 1: Stakeholder analysis of key stakeholders in the Lesotho national agricultural innovation system (from the Institutional Analysis report, April 2008).

- NUL-FA was chosen as the SCARDA Focal Institute in Lesotho. It is a well organised and respected fulcrum around which the capacities of other NARS institutions can be built. NUL FA is both a research and a capacity-building organisation. NUL is the only University in Lesotho. Building the capacity of NUL FA to build capacities of other NARS institutions will strengthen all R&D institutions in Lesotho, including civil and private organisations. NUL FA has good facilities and linkages. Based on the report of the Scoping Study (2007), NUL FA was in a process of joining RUFORUM to strengthen its capacity to build capacity in Lesotho, advance its post-graduate programmes and ensure high academic standards of its graduates. NUL FA is now a member of RUFORUM. Figure 2 summarises the 2008 situation of NUL-FA and its aspirations for 2013.
- **Demand side** organizations range from large, organized NGOs such as the Lesotho National Wool and Mohair Growers Association (LNWMGA), and pig farmers and poultry farmers associations. The majority are registered members of the Lesotho Council of NGOs with 77 paid-up members.
- **Intermediary institutions** in the conventional linear model facilitate the translation of research outputs into extension messages for farmers. Key institutions include the Departments of Field Services, Crop Services and Livestock Services, the Rural Self-Help Development Association, World Vision and the Lesotho Council of NGOs
- Linkages are weak between demand, supply and intermediate institutions because of lack of coordination, infrequent contacts, and the lack of a shared vision.
- Areas of weakness identified are participatory research priority setting, partnership building, monitoring and evaluation, resource mobilization, scaling-up and scaling-out of innovations and technologies, policy influence, and the skills for engaging effectively with communities.
- A number of critical skills are missing in agriculture graduates in Lesotho, including critical thinking, analytical skills, ICT skills and the soft skills to work with farmers.
- In contrast to some other SCARDA focal countries, Lesotho can relatively easily get funds for postgraduate courses (especially for courses in South Africa). Therefore MSc training was not a prioritized use for SCARDA funding for Lesotho because all its teaching staff already had MSc degrees. **Rather the priorities were for skills, linkages and organizational structures to support the coordination of research across the NARS, and raising the overall capability of NARS supply and intermediate actors to interact effectively with farmers and others in the value chain.**
- The Institutional Analysis in April 2008 identified some of the challenges facing the NARS through a stakeholder workshop. Highlight finding of this workshop were that there is:
  - o Weak research outputs that are not responding to farmer's needs
  - o Weak dissemination of technologies
  - o Lack of research funding
  - o No clear demand-side lobby, and no structure for dialogue between farmers and research
  - o No formal partnership agreements between NARS stakeholders (MoUs)

## 6. Processes used to analyse the current situation and agree on priorities for change

The main processes that were used in analysing capacity needs and developing action plans for strengthening agricultural research management in Lesotho (and other SCARDA focal countries) were Institutional Analysis and a series of Change Management workshops held in the three SCARDA

Focal countries. Figure 3 is a time line showing the different activities chronologically. From this it can be seen that the initial scoping study was followed by two Institutional Analysis activities facilitated by the Natural Resources Institute, and then by the Change Management processes.

The **scoping study** set the trend by consulting with 22 NARS organizations to gain an holistic impression of the situation of the agricultural sector in Lesotho. **The first (rapid) institutional analysis** in 2007 met with the Principal Secretary (Agriculture and Food Security), the Director of the

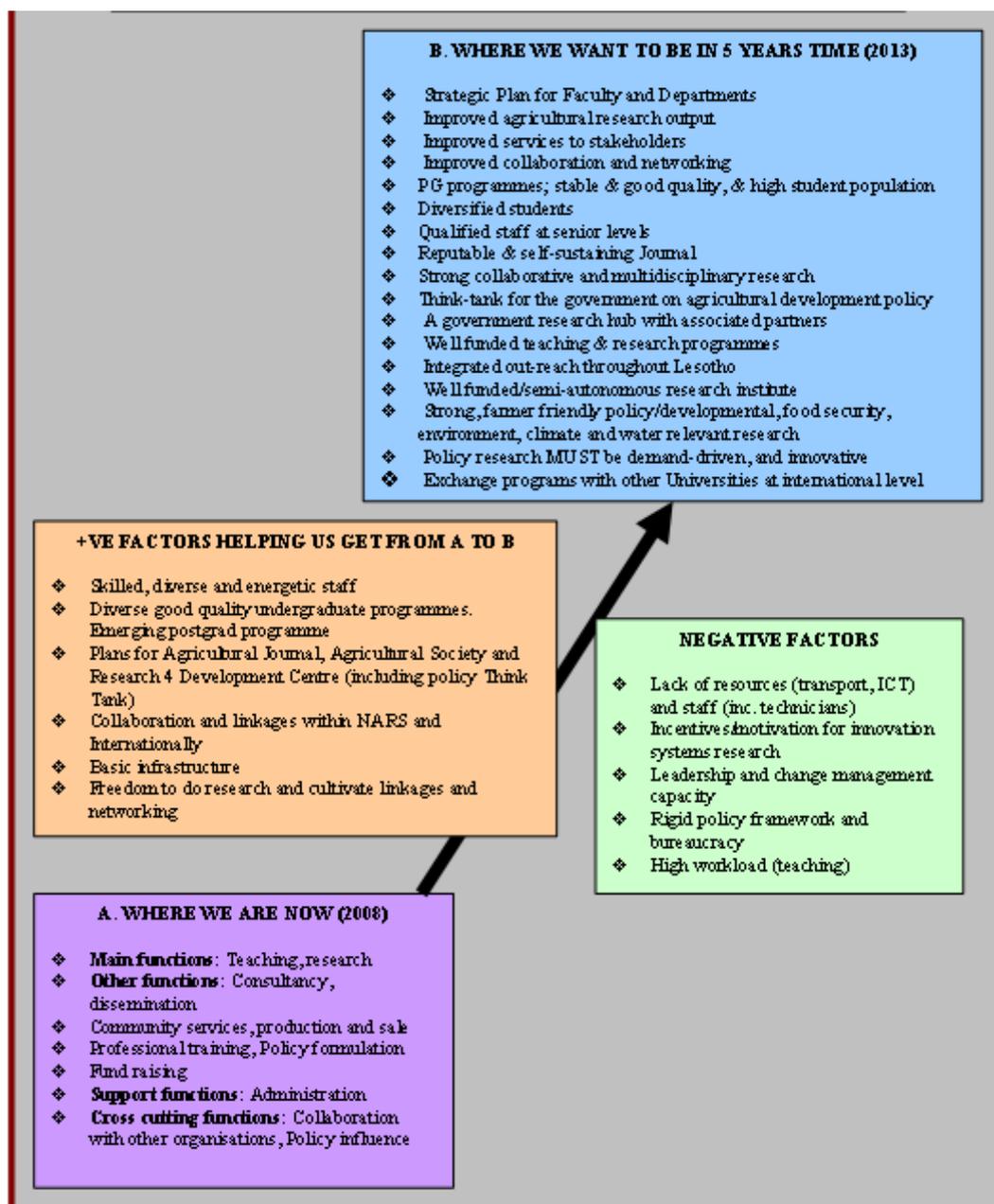


Figure 2: Force-field analysis: Faculty of Agriculture, NUL

Department of Agricultural Research, the Principal of the Lesotho College of Agriculture, the Director of the Department for Science and Technology, the Director of the NGO Rural Self-Help Development Association, the Chairman of the Wool and Mohair Growers association, the Pro-Vice Chancellor of the National University of Lesotho and the Dean and senior staff of the NUL-FA.

This provided a range of perspectives on agricultural research in Lesotho. The second (main) Institutional Analysis study (2008) included a workshop of key NARS actors to analyse the research situation (linkages, resources, capacities, aspirations) using stakeholder analysis, SWOT analysis and Force Field analysis. A needs analysis during this activity led to a set of prioritised activities for support by SCARDA. The situation in the Faculty of Agriculture at the start of the project in 2008 and aspiration of the institute by 2013 is presented in Figure 2. This instrument also take into account both positive and negative factors that can assist the institute to achieve its aspirations.

It was recognised that fundamental changes in research management were unlikely to be brought about by a series of discreet trainings and other activities. Therefore a set of **four agricultural research change management workshops** was designed in which senior representatives from key Lesotho NARS organisations analysed their management limitations and defined a set of integrated actions (the Change Management Action Plan) to address these weaknesses. The **first ARM workshop** (ARM-1) was held in Gaborone, Botswana in October 2009 involving the other two SCARDA focal countries (i.e. Zambia and Botswana). The workshop covered an introduction to the concept of change management, strategic planning and leadership, and led to a draft change management action plan. The **second ARM workshop** was held in January 2010 in Maseru, Lesotho to finalise the change management action plans, prioritise activities given the remaining time of SCARDA, acquire the skills to develop concept notes, and prepare budgets for supporting planned activities. The **third ARM workshop** was held in Johannesburg in December 2010 to provide the FIs with an opportunity to review lessons learnt from implementing the change management action plans. The **fourth ARM workshop** was held in Johannesburg in March 2011 for the FIs to disseminate the outcomes of the change management process to all SADC Member States.

Table 1 lists the tools, concepts and approaches used or introduced during the institutional analysis and change management processes, all of which were chosen to add value and provide different perspectives to the situation analysis and decision-making/prioritisation processes.

The whole process was both inclusive and participatory. A range of NARS stakeholders was invited to each event, although some could not attend for one reason or another. Figure 3 lists the stakeholders who were actually involved. The private sector was under-represented in events, as were farmers (NB the Lesotho Farmer's Union has just been inaugurated in Lesotho - in June 2011).

Senior officials involved from the start included the Principal Secretary of the Ministry of Agriculture, the NUL Pro-Vice Chancellor and the Deans/Directors/Principals of the key NARS stakeholders. This ensured support for the project right up to the July 2011 meeting to endorse the Strategic Business Plan for the Lesotho Centre for the Coordination of Agricultural Research and Development, which was officially opened by the Principal Secretary of the Ministry of Agriculture and Food Security.

A number of difficulties combined to frustrate the smooth implementation of the Institutional Analysis and Change Management processes in the SADC SCARDA countries, as follows:

- The FARA/SADC MoU was not signed until October 2008, some 9-months after the official start date of the project, delaying the implementation of activities until January 2009. There was also a period between February 2009 and early 2010 when nothing happened because of the delay in

**Table 1: Inventory of tools, concepts and approaches introduced by SCARDA Institutional Analysis and Change Management processes in Lesotho**

<b>Tools</b>	<b>Approaches</b>	<b>Concepts</b>
Stakeholder mapping	Farmer Participatory Research	Working with the community
Stakeholder analysis	Agricultural Innovation Systems	NARS as a partnership
Institutional analysis (together with scoping study)		Twinning of NUL with a relevant advanced University/Research Institute in the SADC region. The Agricultural Research Council (ARC) of South Africa was selected. A concept note was initiated by representatives of the Lesotho NARS following the visit to ARC, highlighting thematic areas of research for joint collaboration and sourcing of funding.
SWOT analysis		LECCARD concept for research coordination
Force Field Analysis		Change management
Capacity needs analysis		Value Chains
M&E		Pro-action in seeking funds for research
Participatory Rural Appraisal		
Team Building and sustaining		
Value Chain analysis		

receiving funds from FARA. The project finished officially in June 2010. Thus, although the project was of 3 years duration on paper, the actual implementation time for SCARDA in Lesotho was less than one year.

- The project was complex, with long lines of communication and funding (DFID – FARA – SADC – FI – NARS partners), and the project suffered from a high level of bureaucracy (e.g. the complex SADC tendering process).
- The project did not allow for NUL operational overheads, resulting in the University being reluctant to cover some normal project expenses (e.g. the meeting costs of the project Steering Committee – as a result that Committee never met).
- Transport limitations in government organisations sometimes limited participation of NARS partners in events to which they were invited.

## **7. The Lesotho Agricultural Research Change Management Action Plan**

### ***7.1 Background to the Change Management Action Plan***

The Lesotho Change Management Action Plan evolved out of a series of studies and consultancy reports commissioned by SCARDA over a period of two years (2007-9) and a set of four Agricultural Research Management (ARM1-4) workshops conducted from 2009-11 (the last being for the dissemination of findings and experience to all SADC countries). The action plan is aligned to the NUL Strategic Plan of 2007-2012 to ensure support from the University and to ensure that it contributed to the key objectives of the University, and to the Agriculture Sector Strategy (MAFS 2003) at national level. The NUL Strategic Plan emphasises:

- Building research capacity,
- Increased research publications and the establishment of a forum for the dissemination of research information,
- The establishment of research centres of national relevance,
- Increased involvement in community outreach programmes.

The Agriculture Sector Strategy on the other hand recognised the declining yield of staple food, poor transfer of technology to farmers, poor supply and use of agricultural inputs, and the Strategy calls for research to be relevant to both policy and to farmers. The challenge therefore has been to make agricultural research more farmer-oriented and farmer-driven through the participation of farmers and other stakeholders involved in the agricultural research systems. It was therefore necessary that all agricultural research institutions develop close working relationships with farmers to create feedback mechanisms that are essential for finding appropriate solutions.

### ***7.2 Areas chosen for inclusion in the action plan***

The Lesotho change management action plan was finalised during the second agricultural research management workshop. In this workshop, activities were prioritized and the participants were trained on the development of activity concepts notes which were aligned to activity budgets. The following were chosen as priorities for the Lesotho NARS:

- Establishment of an NUL-FA Outreach strategy
- Establishment of a Lesotho Centre for the Coordination of Agricultural Research and Development

Figure 3. Timeline of SCARDA Activities in Lesotho

YEAR	ACTIVITY	ORGANISATIONS INVOLVED	MAIN FINDINGS/OUTCOMES
2007	First Dean's meeting in Malawi, and second Dean's meeting in Gaborone	SADC FANR, Faculties of Agriculture in SADC.	Understanding of SCARDA
	Meeting in Teyateyaneng in Lesotho.	SADC/ICART/DAR/DFS /NUL-FA/ NGO's	For the concept of NARS and coordination of research.
	Scoping study	DAR/DFS, NUL-FA, NGO's, Farmers groups, DST.	General understanding of NARS, and linkages amongst the NARS, emphasis on SUTRAD (Support Unit for Teaching Research and Agricultural Development)
	Rapid Institution analysis (separate meetings in offices)	PS Agric, DAR, LAC, DST, RSDA, Wool and Mohair Growers association, PVC NUL, NUL-FA-staff	Agreement that NUL will be the focal point Confirm findings of the scoping study. Initial need assessment
2008	Main institutional analysis	NARS stakeholders	Understanding of the concept of NARS and the relationship between NARS stakeholders including the potential for coordination and collaboration. Identification of short and long term activities to be supported by SCARDA. Due to the late start of the project, NUL and other FI's had to prioritise areas for capacity strengthening and some of these were implemented in 2009, 2010 and 2011 Introduction of SCARDA and the relationship of FARA to SROs, then SROs to take over. Discussed work plans, progress and lessons learned, agreed to offer MSc training for M&E to one person from DAR Lesotho. Prioritization of work plans, budget and timeframe
	Inaugural workshop of SCARDA in Accra	SRO and other SCARDA partners including donor.	
	Work planning meeting in Gaborone.	Three SADC focal countries, SADC, ANAFE	
	Work planning meeting at NUL.	NARS stakeholders.	

YEAR	ACTIVITY	ORGANISATIONS INVOLVED	MAIN FINDINGS/OUTCOMES
2009	Farmer Participatory training at 'Melesi Lodge' FPR pilot project initiated	NARS stakeholders NARS stakeholders, Thaba-Bosiu community	Farmers needs assessment done, poultry project decided, project design
	MSc training at University of Greenwich of the United Kingdom	Candidate from DAR	MSc achieved, and back working in DAR
	SCARDA mid-term review in Entebbe	NUL representative,	Concept of multi stakeholders using the LECCARD and FPR Pilot project
	ARM-1 workshop (Gaborone)	Three SADC focal institutions	Introduction on the concept of leadership, managing change, strategic planning, resource mobilization and resource management; elaboration of draft change management action plans
	M & E training in Zambia and Namibia	Focal Institutions	Communication strategy discussed, programme mgt, gender mainstreaming, tool kit for managing research projects
	MSc mentoring	Focal institution and the MSc student	Data collection, analysis, methodology for carrying out the data collection.
2010	ARM-2 workshop	All 3 SADC-SCARDA focal institutions	Finalised the change mgt plans, prioritised activities, acquired skills to develop concept notes, and aligned them to budgets
	AIS training	NARS stakeholders	Understanding of AIS concepts and their application. Stakeholder mapping.
	Team building/leadership workshop	NARS stakeholders	Realised importance of team work among Departments and Policy makers involved in Agriculture.

YEAR	ACTIVITY	ORGANISATIONS INVOLVED	MAIN FINDINGS/OUTCOMES
	<p>Visit to ARC-Irene</p> <p>Development of the strategic business plan for LECCARD</p> <p>Proposal writing workshop</p> <p>ARM-3 workshop</p> <p>Launch of the Lesotho Journal of Agricultural Sciences and the Society</p> <p>Tracer study validation workshop</p> <p>Training on developing and packaging of extension materials</p> <p>Technician training on lab skills</p>	<p>NARS stakeholders (DAR, LAC, DFS, NUL)</p> <p>NARS stakeholders</p> <p>NARS stakeholders</p> <p>SADC-SCARDA focal institutions</p> <p>NARS stakeholders, Private sector, SADC-SCARDA, VC office.</p> <p>NARS stakeholders, ANAFE, SADC-SCARDA</p> <p>DFS, LAC</p> <p>NUL-FA</p>	<p>Exposure visit to research related community projects and how to form collaborations; development of MOU followed. Proposal writing for donor funding. The proposals addressing key thematic areas have not secured funding.</p> <p>A Strategic Plan of LECCARD endorsed by stakeholders</p> <p>Knowledge and skills in developing convincing proposals to be applied in LECCARD</p> <p>Lessons learnt from implementing change mgt action plans.</p> <p>Lesotho Journal of Agricultural Sciences launched, Lesotho Agricultural Sciences Society established. The first Lesotho Journal of Agricultural Sciences was published in 2005.</p> <p>Synthesis study across the three SADC countries with recommendations (policy brief being developed)</p> <p>Now able to provide farmers with relevant information kits. The products currently being produced as a result of the training include production of dairy products such as cheese and yoghurt</p> <p>Acquired lab skills to process products, skills on lab instrumentation</p>

YEAR	ACTIVITY	ORGANISATIONS INVOLVED	MAIN FINDINGS/OUTCOMES
2011	ARM-4 workshop  Endorsement of LECCARD Strategic Business Plan (July 2011)	All 15 SADC Countries  PS Agric, Directors-MAFS, NUL-FA, SADC-SCARDA, NRI, World Vision	<p>Appreciation that:</p> <ul style="list-style-type: none"> <li>a) the project was driven by NARS</li> <li>b) IA analysis is a useful tool for research,</li> <li>c) Innovation systems approach has high potential for driving research involving multi-stakeholder partnerships</li> <li>d) Recommended to institutionalise (AISe) Policy briefs should be produced from key thematic areas of SCARDA</li> <li>f) Recommendation for collaboration between countries using the AIS approach</li> </ul> <p>Adoption of the LECCARD Strategic Business Plan by key stakeholders involved in agricultural research and development.</p>

- Short Courses related to management and technical courses for upgrading of technical skills of scientists (Agricultural Innovation Systems workshop subsequently held in February 2010; Leadership and Team Building workshop held in March 2010; Proposal writing and Business winning workshop held in May 2010; Packaging of Extension Materials held in December 2010).
- Farmer Participatory Research programme (training, mentoring, project planning, monitoring and evaluation).
- Twinning NUL with an international University or Institute to establish a formal mechanism for long term collaborative research with a relevant external research institution that can add value to the Lesotho NARS in implementing its mandate.
- Tracer studies to provide information on knowledge and skills acquired by graduates from tertiary agricultural education systems required by various industry sectors.

## **8. Assessment of outcomes of the agricultural research change management process**

The change process in Lesotho involved the Focal Institute (NUL-FA) and other NARS stakeholders (MAFS Departments<sup>3</sup>, Lesotho College of Agriculture, NGOs<sup>4</sup>, farmer's bodies<sup>5</sup>, private enterprise, and the Department of Science and Technology) in a number of complementary activities, principally:

- Capacity needs assessment (including human, financial and organisational capacity) arising out of institutional analysis of the Focal Institute and its NARS partners
- Training (wide range of training types, including one MSc; one technician training course in laboratory techniques; short courses for multiple institutions in proposal writing; team building and leadership, packaging of extension materials; Farmer Participatory Research, and Agricultural Innovation Systems). Gender was considered in the selection of participants for the training workshops as highlighted in the SADC gender strategy. In the case for Lesotho, in all the training courses and workshop, there were more women participants than men. This is due to population statistics and the fact that there are more educated women than men.
- The development, implementation, review and dissemination of a Change Management Action Plan designed to address key limitations of agricultural research management through a series of four workshops
- Interactions between the three SCARDA focal countries during joint workshops and trainings

### **8.1 Individual testimonials of benefits gained**

As part of this case study, participatory exercises involving representatives of NARS stakeholders were conducted to assess some of the outcomes of these activities, as follows:

- Gathering testimonials from trainees on the most important skills or knowledge acquired from their training, and how these are being applied in their work
- Identifying the changes resulting from SCARDA, and how this was brought about.

Table 2 presents a summary of the results of these two exercises. Most of the individual changes due to SCARDA have arisen from gaining new knowledge or insights into technical, managerial or

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<sup>3</sup>Department of Field Services, Department of Planning and Policy Analysis and Department of Agricultural Research

<sup>4</sup>World Vision, Rural Self-Help Development Association

<sup>5</sup>Wool and Mohair Producers Association

organisational aspects of research management, often to do with improved relationships and partnerships with colleagues, with other institutions and with farming communities.

A deliberate decision was made to use more meaningful and representative words from individuals to articulate the main outcomes of SCARDA training.

### **8.2 Institutional outcomes**

In addition to the above, the main benefits of SCARDA to the NARS as a whole were brainstormed. The results are presented in Table 3, and show a range of ways in which SCARDA has influenced the ways in which NARS stakeholders now work together in partnership. It also points to a new confidence in the use of concepts such as AIS and FPR that enable them to work with communities to identify and address their constraints. In addition some NARS organisations are realising that funding needs to be earned, and now have the skills to write convincing proposals based on farmer needs assessments.

The alignment of the change management action plan to the National University of Lesotho 2007 - 2012 strategic plan and the Agriculture Sector Strategy of 2003 has positioned the change process to be part and parcel of the national agricultural policy implementation process. The wide collaboration across the NARS and strong linkage mechanisms established with partners have helped the focal institute to conduct multi-disciplinary and community-oriented research, and to consult on issues of agricultural policy.

The focal institute has qualified staff that have established trust amongst colleagues and is now collaborating with clients such as farmers and MAFS and the students are doing projects with farmers. A synergy has been established between LECCARD and CAADP as both are promoting integration of key stakeholders for agricultural development. The faculty is now actively involved in the Comprehensive Africa Agriculture Development Programme (CAADP) process as a stakeholder (this outcome is not directly attributable to SCARDA, but is a manifestation of the changed attitudes of the NARS to multi-stakeholder collaboration brought about by SCARDA Change Management processes). The testimonies given above by the NARS stakeholders show that relevant skills have been acquired from the different training workshops conducted through SCARDA funding. Table 4 below highlights the progress made over the last three years.

The establishment of LECCARD by NARS and the endorsement of its strategic objectives by NARS stakeholders opened up an avenue for collaborative policy development platform with a shared vision from across the NARS.

### **8.3 The Lesotho Centre for the Coordination of Agricultural Research and Development**

One of the major priorities of the Lesotho NARS identified by the Institutional Analysis and Change Management processes was to develop a strong mechanism and focus for the coordination of the NARS in Lesotho. Over time this has evolved into the Lesotho Centre for the Coordination of Agricultural Research and Development (LECCARD).

The functions of LECCARD are to:

- 1) Coordinate research, dissemination of information and outreach across the Lesotho NARS.
- 2) Establish and operationalise a think tank for agricultural policy development, lobbying and advocacy.

**Table 2: Examples of the outcomes of SCARDA training and the changes brought about by SCARDA from the perspective of individuals from different NARS organisations**

Testimonies of trainees from different SCARDA trainings	Changes (individual and/or organisational) that have occurred as a result of SCARDA
<p><b>Prof W.O. Odenya (NUL-FA): <u>Team Building workshop</u></b>  <i>"I learnt how to relate to people. I am applying the skills acquired in policy formulation and lobbying for funding as the Acting Director of Research and Graduate studies at NUL."</i></p> <p><b>Ms Matsikoane Motloli &amp; Ms Rethabile Nchee (DAR): <u>Agricultural Innovation Systems training.</u></b> <i>"We learnt skills on stakeholder mapping and analysis including conducting institutional/organizational needs assessments. These skills are essential to guide demand driven research to promote the development of the agricultural sector."</i></p> <p><b>Dr SF Molete (NUL-FA): <u>Change Management workshops.</u></b> <i>"The concept of partnerships among NARS was introduced through SCARDA and led to the launch of the Lesotho Journal and Society of Agricultural Sciences as platforms for sharing information among stakeholders involved in AR4D."</i></p> <p><b>Ms Tsoanelo Molahloa: <u>Technical Training in laboratory techniques.</u></b> <i>"I acquired technical skills in using the proximate analysis procedure to evaluate animal feeds and other techniques to process milk to cheese, yoghurt and ice cream". I apply these skills in laboratory practical training of students in principles of animal nutrition and development of dairy products. NUL has also acquired the needed laboratory equipments for supporting students' practicals in animal nutritions."</i></p> <p><b>Retselisitsoe Francis Khoalenyane: <u>MSc training.</u></b> <i>"As a result of SCARDA, I have learnt skills on conducting farmers' surveys, and conduct cost benefit analysis of research programmes related to maize production in Lesotho. I am applying this in my current work in DAR".</i></p>	<p><b>Puseletso Likoetla (LAC).</b> <i>"I have acquired knowledge and skills to involve communities in conducting research aimed at addressing farming problems through the FPR training. I have also acquired skills in proposal writing for donor funding from a SCARDA short course on proposal writing"</i></p> <p><b>Mookho Shea (MAFS-DPPA).</b> <i>"Through the team building workshop, I have gained insight on the importance for building stronger linkages and partnerships among NARS involved in research and development."</i></p> <p><b>WO Odenya (NUL-FA).</b> <i>"The concept of innovation systems approach in AR4D has been most significant. This came about through the Farmer Participatory Research training workshop."</i></p> <p><b>Rethabile Nchee (DAR).</b> <i>"I am able to work with a diverse group of people through knowledge and skills I acquired from the team building workshop. I have also acquired skills in proposal writing for donor funding"</i></p> <p><b>Dr SF Molete (NUL-FA).</b> <i>"The concept of partnerships has a higher potential to promote collaboration among actors within the Lesotho NARS."</i></p> <p><b>Matsikoane and Letuka Mohapi (DFS).</b> <i>"The most significant change introduced by the project has been the involvement/interaction with farmers in the development of extension materials for farmers. This approach is fundamental for technology uptake by farmers."</i></p> <p><b>Nick Mokhothu (NUL-FA).</b> <i>"The most significant change has been on networking and partnerships. This has led to promoting consultation and communication between the office of the Minister, Principal Secretary and the Dean of the Faculty of Agriculture on issues related to agricultural policy. This has occurred as a result of SCARDA training workshops, such as the ARM, Team building and leadership skills."</i></p>

**Table 3: Examples of benefits attributable to SCARDA that are expected to increase the performance of, and relationships among, NARS members**

<p><b>Change in attitudes</b></p> <ul style="list-style-type: none"> <li>• <i>The Lesotho College of Agriculture has established collaborative programmes with DAR and is now interacting more with farmers in addressing community problems</i></li> <li>• <i>A realisation that food insecurity in the country needs to be tackled through research using approaches introduced by SCARDA (AIS and FPR)</i></li> <li>• <i>Through SCARDA, DAR has recognised the significance of involving different organizations in planning research programmes/ projects. This has occurred through trainings on team building and the developing and packaging of extension materials for farmers' workshops</i></li> <li>• <i>"The University is now being viewed as a "Think Tank" for the agricultural sector, and is becoming more involved in activities of the Ministry such as field visits than before". Quote by the Principal Secretary, MAFS</i></li> <li>• <i>More trust amongst colleagues; greater collaboration with clients such as farmers and MAFS; active involvement in CAADP; students doing projects with farmers</i></li> <li>• <i>NUL-FA is now engaged in more multi-disciplinary research (e.g. Dean has research in crop science, biology and soil science working together; recently held stakeholder workshop on adaptability of farming systems to climate change)</i></li> </ul> <p><b>Organizational change</b></p> <ul style="list-style-type: none"> <li>• <i>Given the skills acquired on proposal writing and team building, NUL propose to establish a national team for preparing proposals for donor funding involving representatives from the various organizations</i></li> <li>• <i>Greatly improved networking across the NARS. "I never knew NUL-FA existed before SCARDA" Quote from the Director of Field Services</i></li> <li>• <i>Following the endorsement of the Strategic Business Plan for LECCARD, it was agreed that a Board is to be formed to take this initiative forward</i></li> <li>• <b><i>Provided funding can be mobilized, LECCARD has the potential to be a major breakthrough in the coordination of agricultural research in Lesotho (see below)</i></b></li> <li>• <i>The Lesotho Society of Agricultural Sciences, the Journal of Agricultural Sciences and the Annual Conference of the LSAS established through SCARDA are platforms for promoting linkages among stakeholders and sharing of information.</i></li> </ul> <p><b>Other Benefits</b></p> <ul style="list-style-type: none"> <li>• <i>Lesotho had only one MSc candidate from the Department of Agricultural Research, who was sponsored by the project to do a Masters programme in monitoring and evaluation at Greenwich University. Through this arrangement linkages between the Focal Institution and the University have been established. These links can be drawn on for future training.</i></li> <li>• <i>Exchanges between NUL-FA and international academic institutions (e.g. with Tennessee University in US (lecturer and student exchange); University of Pretoria PhD student project)</i></li> <li>• <i>Through the different training courses and workshop of activities indicated in the CMAP and visits, the introduction of a range of concepts (particularly AIS and FPR) and tools (stakeholder analysis, stakeholder mapping, force field analysis, SWOT, PRA tools etc).</i></li> </ul>
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**Table 4. 5-year strategic aims as recorded in April 2008 (Force field analysis) compared to the situation in July 2011**

5-year strategic objectives of NUL-FA as expressed in April 2008	Actual situation in July 2011
Strategic Plan for Faculty and Departments	University wanted strategic plan and this was done; plans included some of the SCARDA funded activities
Improved agric research output	Some members promoted to more advanced positions. Submission of more manuscripts for publication
Improved services to stakeholders	More trust amongst colleagues; greater collaboration with clients such as farmers and MAFS; active involvement in CAADP; students doing projects with farmers
Improved collaboration and networking	Greatly improved networking across the NARS. <i>"I never knew FoA existed before SCARDA"</i> Director of Field Services
Post Graduate programmes and a stable, good quality & high student population	Don't have high student population, although quality is good; trying to get PG programmes up and running (e.g. through RUFORUM)
Diversified students	No change to date in terms of students from outside Lesotho, but in terms of programmes, there has been some recognition of farmer needs
Qualified staff at Senior Levels	Some members promoted to more advanced positions
Reputable & self sustaining Journals	Lesotho Journal of Agricultural Sciences launched, but not yet financially sustainable
Strong collaborative and multidisciplinary research	Now engaged in more multi-disciplinary research (e.g. Dean has research in crop science, biology and soil science working together); recently held stakeholder workshop on adaptability of farming systems to climate change
Think-tank for the government on policy & agricultural development	This will be one of the functions of LECCARD. Some FoA members involved with the Ministry Department of Planning and Policy Analysis on policy development (e.g. Dr Matete, head of Agric Economics, FoA)
A government research hub & partners	Not a research hub yet, but are in partnership with other NARS stakeholders –e.g. Minister recently came to talk to students
Well funded teaching & research programmes	Not yet achieved
Integrated out-reach programme throughout Lesotho	Not yet achieved
Well funded/semi-autonomous research institute	LECCARD being established – Strategic Business Plan has been endorsed by NARS stakeholders, including Agricultural PS

<b>5-year strategic objectives of NUL-FA as expressed in April 2008</b>	<b>Actual situation in July 2011</b>
Strong, farmer friendly policy/developmental food security, environment, water relevant research in place	Not yet, but there is a government NRM Committee which FoA is leading
Policy research MUST be demand-driven, and innovative	LECCARD and the revival of the Annual Agricultural Conferences should lead to this
Exchange programmes in place	Exchange with Tennessee University in US (lecturer and student exchange); University of Pretoria PhD student project
<b>Challenges for DAR as at April 2008</b>	<b>Situation in July 2011</b>
Weak research outputs that are not responding to farmer's needs	Recently conducted a FPR needs analysis on Conservation Agriculture to find farmer's research needs
Problem of skills and qualifications of staff	MSc student trained by SCARDA; SCARDA short-term trainings of various types (e.g. FPR, AIS, team building, collaboration, proposal writing, M&E). The graduated MSc student is now applying his knowledge for the benefit of the wider NARS through his position as a researcher in DAR.
Weak dissemination wing	There is now a better communication/collaboration relationship with DFS (e.g. seed multiplication programme between DFS, DAR and farmers)
Lack of research funding	Worse now! But staff are busy with proposal writing to different donors
<b>Challenges for LAC as at April 2008</b>	<b>Situation in July 2011</b>
Demoralised staff (due to low salaries and lack of autonomy)	Many new employees who accept the situation; some old employees have adapted to the conditions and are no longer demoralized
Weak academic programmes	Independently of SCARDA, LAC have reviewed their programmes. LAC was part of the tracer study validation process and made good comments
Weak practical programmes	Reversed; LAC is doing a lot of practical training
Weak affiliation instruments	LAC is affiliated to NUL and the relationship is OK. There have been limitations in the admissions and staff recruitment procedures, but this year's admission procedure has been very strictly adhered to

- 3) Create a platform for the development of partnerships, linkages and networking locally, regionally and internationally.
- 4) Mobilization of resources for the promotion of agricultural research in Lesotho (e.g. financial, technical etc).

One of the activities under the Change Management Action Plan was to develop a Strategic Business Plan for LECCARD (LECCARD, 2010). The key elements of the strategy are to identify critical areas that are to be addressed through research for agricultural development. Capacity strengthening gaps for NARS (at both administrative and professional levels) are identified in order deliver expected research results including dissemination of research to end users. This was presented to a group of key stakeholders including policy makers for ownership, support and commitment of resources during a workshop in July 2011 attended by the Principal Secretary (Ministry of Agriculture and Food Security). During the workshop, the following agreements were made:

- The participants endorsed the document, with the following comments and amendments
- The Centre *coordinates* agricultural research; it does not *conduct* it
- There should be an MoU between the main NARS actors specifying roles, responsibilities, commitments and contributions
- The functions are clear and appropriate
- The Centre name should be “The Lesotho Centre for the Coordination of Agricultural Research and Development (LECCARD)”
- NUL-FA is nominated to lead the process of establishing and operationalising the Centre for an unspecified interim period. The Centre should become autonomous of the Faculty as soon as possible, with the Centre Coordinator answerable to the Board from that point
- For sustainability reasons, the Centre should be aligned/linked to CAADP in Lesotho
- The document should be modified to include the Farmers Union, NGOs and the private sector as key stakeholders
- An action plan for establishing the Board was agreed

#### **8.4 Inter-country interactions**

The ARM workshops were joint events between the three SCARDA SADC focal countries (Lesotho, Botswana and Zambia), and were each held in a different country. This promoted interaction between the three NARS. Benefits arising from this strategy included:

- An exchange visit to the School of Agricultural Sciences in Zambia by representatives from the Botswana College of Agriculture
- Peer review and publication of scientific papers from NUL in the Botswana Journal of Agriculture and Applied Sciences.
- Assistance to NUL from BCA in planning an exchange visit to the Agricultural Research Council, Pretoria, which was supported by SCARDA

### **9. What remains to be done in order to achieve the SCARDA purpose in Lesotho?**

The SCARDA purpose is to “*strengthen the institutional and human capacity of African agricultural research and development systems to identify, generate and deliver research outputs that meet the needs of poor people*”. While the project has been able to start the strengthening process its duration and resources have meant that a lot still remains to be done, both in terms of developing operational competence and confidence in the new tools, approaches and concepts introduced and

in terms of consolidating new organisational arrangements. Specifically, the following are the key issues to work on over the medium term:

- Negotiate and sign an MoU between Lesotho NARS partners that clarifies each partner's roles, responsibilities and contributions
- Establish the governance structures, and mobilise the resources needed, for the operationalisation of LECCARD (possibly by linking it into CAADP process)
- Revitalise the "Lesotho FPR technical steering committee" and define and resource a programme of work with communities
- Define and establish projects/programmes that use and evaluate the Agricultural Innovations System approach to improving commodity value chains

## 10. Conclusion

Institutional Analysis and Change Management processes were successful in raising understanding across the NARS of the limitations in agricultural management within the context of the Lesotho agricultural research system, and in identifying ways to address these limitations. SCARDA has initiated the transformation of the NARS in Lesotho, but this is still in progress and gains are fragile and need further consolidation. The potential of the innovation systems approach, farmer participatory research approaches and the NARS multi-stakeholder partnership approach have been recognised by NARS partners, and there is good will on all sides to adopt and implement these approaches. The deliberate effort by Lesotho NARS to request for support under SCARDA to build strong NARS linkages (rather than spend the resources on individual MSc courses) has contributed to the development of a more integrated approach to research and development.

## 11. Recommendations

- SCARDA was too short (especially with delays and funding hiatus) to expect lasting tangible institutional change. A further period of support is recommended for specific activities (recommendations 2-5) to enable the consolidation, institutionalisation and evaluation of the concepts and processes introduced by SCARDA. Without further input (from government and donors), there is a significant risk that the gains made will be lost.
- LECCARD has been endorsed at a high level, but has no funding at this time. It is important that donors and government support this initiative so that it can be active in its coordination of agricultural research in Lesotho to respond to the needs of farmers, and to provide a clear, agreed research agenda to the Centre for Coordination of Agricultural Research and Development for Southern Africa (CCARDESA) and CAADP.
- LECCARD responds well to Pillar IV of CAADP and should be incorporated into the Lesotho CAADP compact as it evolves (the lead organisation for CAADP in Lesotho is the MAFS).
- Support should be provided to test and evaluate the new methods and approaches (e.g. value chains within an AIS, FPR and integrated NARS partnerships for their implementation) in the Lesotho context.
- An MoU should be developed and signed by the main NARS partners to clarify their roles, responsibilities and commitments in the implementation of agricultural research and development in Lesotho.
- Future projects should be clearly articulated to all partners at their inception (including to the in-country partners), and lines of communication and funding/accounting mechanisms should be explicit, reliable and direct.

## 12. Acknowledgement

This publication draws on the outputs of a 2-day workshop that was attended by representatives of Lesotho NARS organisations. The authors are grateful to the input of the following at that workshop (also see Annex I): Puseletso Likoetla, Rethabile Nchee, Mookho Shea, Matsikoane Sefotho, Sebolelo Molete, Letuka Mohapi, and William Odenya.

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**Annex I****Case study workshop participants; Maseru Sun, Hotel, Lesotho; July 2011****Participant list**

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## **Annex II**

### **The agricultural sector and agricultural policy environment at the start of SCARDA (2007)**

Agriculture makes a direct contribution of 17% to Lesotho's GDP of approximately US\$1 billion, and an indirect contribution through linkages with manufacturing and processing of about 10%. Crops hold a dominant share (50%) of Lesotho's agriculture with livestock constituting about 35% and services accounting for the rest. The dominant staple crop in terms of planted area (50-70% of yearly cultivated area) is maize. Other major crops include sorghum, wheat, peas and beans. The livestock sub-sector consists of cattle (25%), sheep (45%) and goats (30%). Livestock are particularly important to livelihoods in the higher, more remote areas. In general, agriculture in all forms provides 85% of employment in rural areas. Subsistence farming continues to be the most important economic activity in the rural areas. 51% (35% of rural household heads and 16% of adult household members) of household members were found to engage in subsistence farming, with current national unemployment rate at 23.2%. Only 10% of its total land area is arable, and Lesotho produces only 30% of its food requirement. Lesotho's major export commodity, wool and mohair, is in decline.

The 2002/2003 national poverty surveys showed a 56.6 % incidence of poverty, and an increase in ultra poor households. If the MDG of halving poverty by 2015 is to be achieved, it requires a sustained annual growth rate of 7.5%.

Constraints include urbanization and land degradation (c40 million MT of soil/year is estimated to be lost from Lesotho's range and crop land), youth unemployment, retrenchment of mine workers in RSA, heavy losses of livestock due to stock theft, and HIV/AIDS (26% of adult population). These factors combine to present a very narrow livelihood base for many Basotho. The ecosystem is fragile and terrain is challenging to establishing desirable livelihoods.

Land is a major driver to agricultural productivity, and the government's strategy is to facilitate the gradual evolution of commercial farming through market-led mechanisms supported by land reform, with consolidation of fragmented holdings to larger blocks to make it amenable to mechanized farming and other inputs for higher yields.

Water is inadequately distributed spatially and seasonally. Irrigation infrastructure is poor and the weather is often characterized by extreme weather conditions of heavy frost, heavy unexpected rain and drought.

### **Policy situation with regard to agricultural capacity in Lesotho**

The Government of Lesotho (GOL) identifies and understands that strengthening research capacity is a fundamental strategic action to the attainment of three key aspects of its Vision 2020: a) strengthening development management capacity, b) achieving a well established technology and c) a well developed resource base.

The Agricultural Transformation Blue Print of 2005, the National Action Plan for Food Security (NAPFS), has just completed a ten-year plan (2007 -2017) for action and implementation. For all the programmes proposed under this ten year plan, capacity building components for different sub-sectors of the MAFS are outlined. Specifically, the sub-programme 1.4, component 1.4.1 is entirely devoted to the development of Agricultural Research and Extension with capacity building items for the NARIs.

The National Action Plan for Food Security has a proposal for the Department of Agricultural Research of the Ministry of Agriculture and Food Security to strengthen research and extension.