

participatory definition of producers needs, which associate the research, support advice and the producers” among its top priorities (MINAGRI, 2004).

Agricultural research is mandated to the “Institut des Sciences Agronomiques du Rwanda” (ISAR), and one of the central pillars of this transformation of the agricultural sector. Like most institutions in Rwanda, ISAR human resources base was adversely affected by the 1994 genocide, which left it with a handful scientists and technicians with low qualification and experience. Since then ISAR defined “*the development of capacity in human and physical resources and in management systems to meet the challenges of the transformation of the research system*” as one of its grand strategies (ISAR, 2009). The Institute has thus regularly recruited young graduates and organized their training at Masters and PhD levels. Today, ISAR has a total permanent staff of 246 employees, of which 103 scientists (56 BSc, 41MSc and 7 PhD). The objective is to boost the scientific level from 0.26 to 0.7 of post graduates to make the expected contribution in the agricultural innovation system. ISAR capacity building rolling plan indicates that eight MSc and three PhD fellowships are required per year to bring the Post-graduates/total scientific staff ratio from 26% to about 67% in 2015.

The program for “Strengthening Capacity for Agricultural Research and Development in Africa (SCARDA)”, an Africa wide initiative funded by DFID (UK) and implemented by the Forum for Agricultural Research in Africa (FARA), is currently one of the main contributors to the capacity strengthening program, alongside Nuffic (Netherlands), Belgium, etc. through MSc degree and short courses trainings for scientists, technicians, research managers, and a mentorship. SCARDA activities started simultaneously with a major reform being by the Government of Rwanda to merge ISAR with its two sister agencies in agricultural extension for crops and animal resources into a single entity, the “Rwanda Agricultural Board (RAB)”. The objective of this paper is therefore to highlight how the SCARDA training programs are backstopping this reform.

2. Approach and methodology

SCARDA innovates by breaking away from traditional approaches to capacity strengthening, and proposes a holistic innovation systems approach, involving multiple partners and experiential learning. ISAR is one of the three Focal Institutions (FIs) participating in SCARDA training programs in the ECA region, alongside ISABU (Burundi) and ARC (Sudan). This program finances 10 MSc degrees for ISAR scientists in regional universities and a series of short courses. These activities are backstopped by the Natural Resources Institute (NRI) of Greenwich University (UK), which provides ISAR and other FIs with assistance in Planning, Monitoring & Evaluation as well as documenting the SCARDA processes and lessons learnt. NRI provides complementary trainings on ISAR demand, jointly with the other regional FIs. Trainings involve also ISAR immediate research

partners, i.e. the extension, and education wings of the agricultural system in Rwanda as well as local farmer organization. The major weakness to the program so far has been the slow start-up, and limited involvement of satellite institutions.

3. Partners and their roles

Partners to this program include ASARECA, RUFORUM, Regional Universities hosting MSc students, Service Providers contracted to deliver the short courses and sister FIs in the ECA region. All activities are coordinated by ASARECA, with which ISAR is a founding member, through the Partnerships and Capacity Development (PCD) Unit. The PCD coordinates the planning, funding and follow-up on the execution of SCARDA activities in ISAR.

RUFORUM, the Lead Service Provider, is responsible for the execution and quality assurance of SCARDA activities. It especially overlooks the progress of MSc trainings, of which 10 ISAR candidates. RUFORUM is also responsible for the selection of Service Providers for the short course trainings. A Project Management Team was set up in the ECA region that provides a forum through which ISAR participates in decision making alongside sister FIs, NRI, ASARECA and RUFORUM on SCARDA activities.

4. Institutional issues

Merging research and extension into RAB

In Rwanda, one of the major hindrances to the appropriation of research technologies by the farmers and other end users remains the weak link between research and extension systems, resulting in shelving research results that would otherwise contribute to improving livelihoods. This weakness is mainly due to the lack of capacity, both in terms of human resources and infrastructure. The PSF assessment and the national skills audit highlighted the lack of technical skills in agriculture as a priority area that needs to be urgently addressed (HIDA, 2009).

This brought the Government of Rwanda (GoR) to envisage merging agricultural research and extension into two autonomous bodies – The Rwanda Agricultural Board (RAB) (merging ISAR, RADA and RARDA) and the National Agricultural Export Board (NAEB) (merging OCIR-Thé, OCIR-Café and RHODA) in order to create synergies in addressing agriculture sector constraints. The law governing the new bodies were passed by the parliament, and job descriptions and requirements are being revised by the Ministry of Labour. RAB's organisation structure is given in Figure 1 (Secretariat) and Figure 2 (Zones).

Figure 1: RAB Organisation Structure (Secretariat)

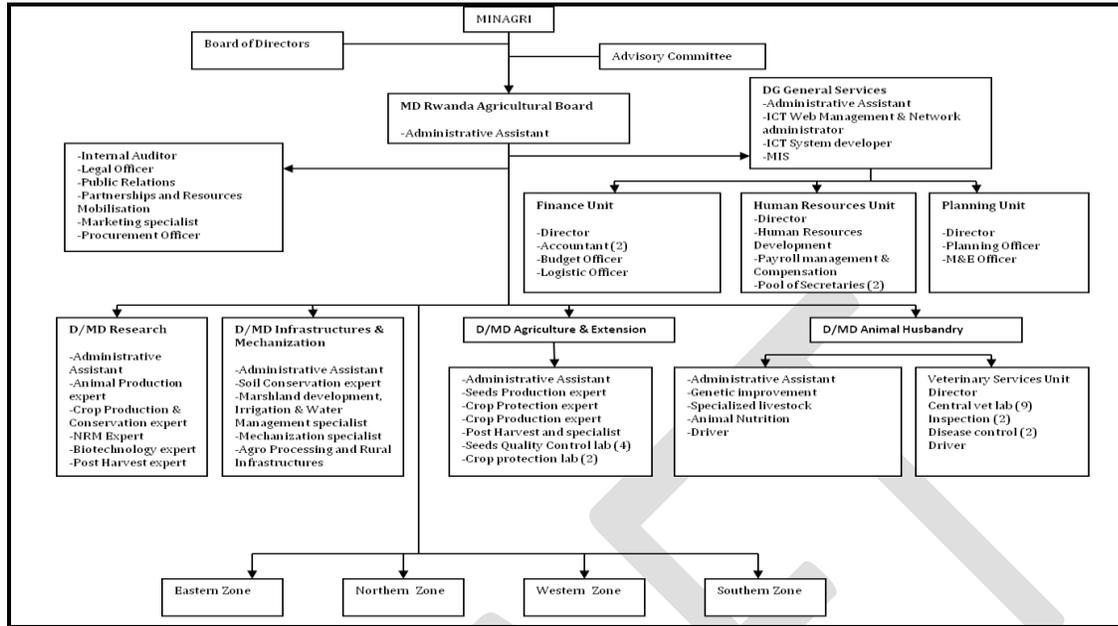
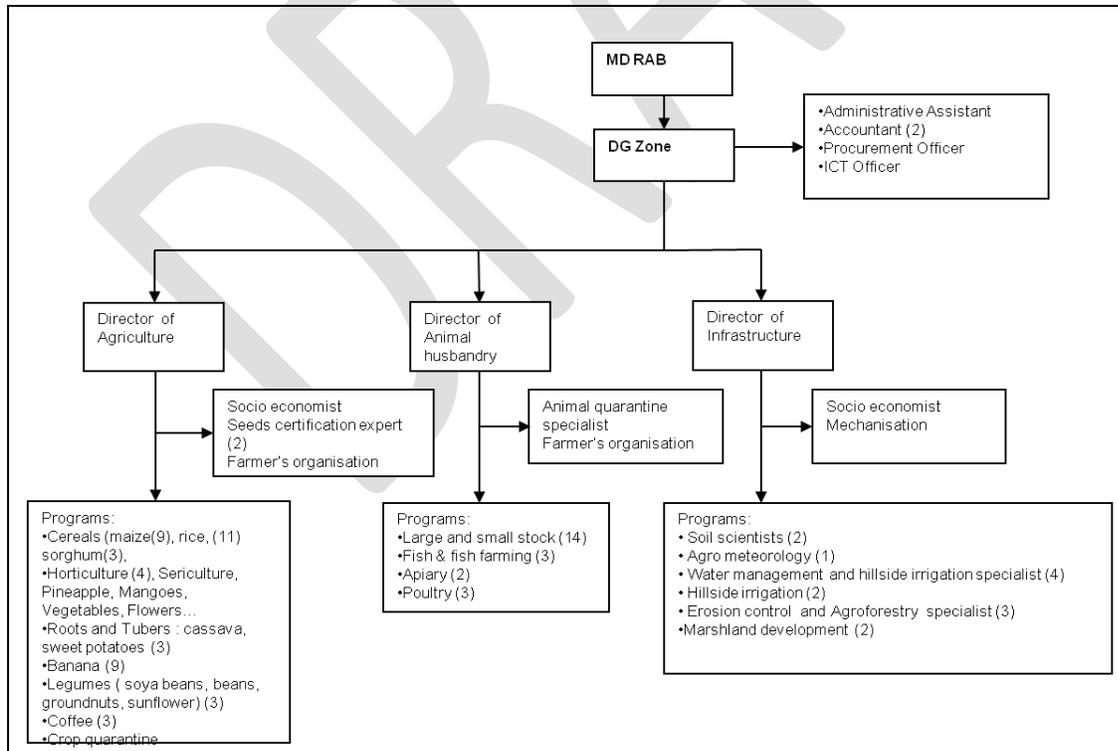


Figure 2: Rwanda Agricultural Board (Zones)



Such institutional changes will solve the problem partially; by bringing together researchers and extensionists under one umbrella, but the issue of capacity and the management of change have involved in such a move will have still to be addressed. This where the SCARDA program input is mainly needed and has began to materialise, through the different short courses targeting managing organisation change and leadership trainings and joint short courses for technicians from both research and extension.

Leading change, SCARDA trainings paving the way

In this context, SCARDA trainings prepare ISAR staff to stand the change pressure, and Pico-Team, the service provider delivering workshops on “Agricultural Research Management, Leadership and Mentorship”, has taken this factor into account and included change management and leadership and communication modules in its trainings. On the other hand, joint short courses for research and extension technicians in (i) Integrated Pest Management, (ii) Planning, Monitoring & Evaluation and Communication (iii) Best laboratory and field practices, etc., allows the trainees not only to acquire necessary knowledge, but also to start learning to work together.

5. Outcomes and impacts of SCARDA trainings

MSC training, equipping RAB with quality staff

SCARDA is training 10 ISAR scientists in regional universities, (Makerere University in Uganda, Egerton University and Nairobi University in Kenya). The areas covered include crop, soil and animal sciences, microbiology and agriculture extension all of which chosen by ISAR. These MSc will immediately reinforce the human capacity of RAB. Shumbusho Damien, a student in Makerere (Uganda), stresses that *“students selected were already working on the areas and topics chosen. They will continue to work on these topics when they return!”* Students and ISAR managers prefer to conduct field research in Rwanda in their research programs for continuity.

Pico-Team workshops, the key to managing institutional changes

Pico-team workshops bring together all managers, from top management to research Programmes. These trainings are meant to equip agricultural managers



Figure 3: Documenting SCARDA processes is essential. Tim of NRI interviewing an MSc student in Egerton University, Kenya

with the necessary knowledge to face management challenges in research. They are highly appreciated by the participants as they provide a forum for scientists and the administration to discuss managerial bottlenecks limiting the organisation's efficacy. Pico-Team learning workshops are fully animated by the trainees, who are brought to unearth their institutional and individual weaknesses, and using learnt managerial tools, to propose relevant solutions. According to participants "they will definitely help to do the jobs more effectively", and increased their confidence that entering RAB will be much easier, equipped with necessary tools. Pico-Team also introduced the concept of Peer learning groups, which are potentially a good way to promote cross-department collaboration.

Short courses, conducting research and extension based on field realities

NaCRRI, the Service Provider for technicians and scientists' short courses, has already trained a first batch of 24 technicians in Namulonge (Uganda), of whom 8 are from ISAR. Such sub-regional trainings were qualified by the participants as "having enabled them to share experiences on best laboratory and field practices with people from different countries". Short courses for scientists are also planned. The major limitation to this thrust is the limited number of participants that can attend due to travel and accommodation costs involved.

NRI trainings

NRI conducted trainings on Integrated Pest Management (IPM) and Monitoring & Evaluation, Communication and Planning. Both trainings took place in Rwanda as country standalone and regional trainings respectively. The training on integrated pest management (IPM) had participants from ISAR and its satellite institutions and was delivered by NRI and ISAR jointly. Participants learned pesticides use, crop pests and diseases identification, etc, and useful guidance and documentation was provided. This training was an example of how research, extension and universities could work together to address the farmer's problems, a typical situation likely to be encountered in RAB.



Figure 4: Jerry Cooper of NRI discussion IPM with trainees in a farmer's field in Musanze, May 2009

6. Lessons, policy and institutional implications for future capacity strengthening initiatives

The major limitations encountered throughout the whole spectrum of SCARDA trainings include (i) language barriers, (ii) unpreparedness of regional universities to accommodate SCARDA specific requirements such as timeliness, and (iii) limited inclusion of satellite institutions in the implementation right from inception. The program is in its early stage to claim for a lasting impact, however the holistic approach adapted, the simultaneity with a major institutional reform and participation of the beneficiary FI in the program management as well as participative training approach introduced by Pico-Team seem to have risen a good momentum on which the program will build to yield more than expected results.

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