



The need for institutional change in capacity development of tertiary agricultural education

Report from CDI-ICRA-KIT writeshop, October 2013

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Abstract: This paper argues that Dutch-funded capacity development projects in developing countries for tertiary agricultural education organisations *as they are currently carried out* are not able to successfully achieve the *sustained* changes required. That is, changes in how an organisation functions, its cultural norms and rules, and also in how it interacts within wider networks. Rather, long-term *institutional change* is needed. The reasons behind this conclusion, and how the project development process can be strengthened are discussed by the authors of this paper, coming from ICRA (International Centre for Development-oriented Research in Agriculture), KIT (Royal Tropical Institute), and CDI (Centre for Development Innovation - part of Wageningen University & Research centre).

Keywords: capacity development, institutional change, innovation, project management, donor funding

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Executive summary

The Dutch government, with the help of Dutch knowledge and research institutes, supports innovation in agriculture in developing countries through capacity development of tertiary agricultural education organisations. Typically, these projects aim to foster organisational change and involve relevant and concrete activities such as introducing new ideas into curricula, bringing greater creativity into teaching, and stimulating more interactive development processes – both within the organisations and in their interactions with others.

This paper argues that the projects *as they are currently carried out* are not able to successfully achieve the *sustained* changes required. That is, changes in how an organisation functions, its cultural norms and rules, and also in how it interacts within wider networks. In other words, long-term *institutional change* is needed. The reasons behind this conclusion, and how the project development process can be strengthened are discussed by the authors of this paper, coming from ICRA (International Centre for Development-oriented Research in Agriculture), KIT (Royal Tropical Institute), and CDI (Centre for Development Innovation - part of Wageningen University & Research centre).

Based on a collective analysis of their experiences with six capacity development projects implemented with partners at tertiary agricultural education organisations in sub-Saharan Africa and in Afghanistan, the authors generally conclude that more manoeuvring space and time are needed to be able to achieve desired institutional change.

As is the case in almost any development endeavour, the goals, roles, power relations and activities change as the project partners move from the stages of conceptualisation, to design and into actual implementation. Throughout this process, it is necessary to confront the reality of the rules and regulations that govern the different project partners; not to mention the team members' individual motives, habits and power issues; as well as trust within the team, social norms, diversity, cohesion and group pressure dynamics. As projects evolve, the interests and priorities of the partners often need to be renegotiated and the complex arrangement of interdependent project and change teams managed.

Projects often try to initiate a rippling-out effect of change from one or a few individuals to a core team which has the critical mass needed to effect change, mindsets and culture in the broader organisation. In addition to a focus on change within the tertiary educational organisations, practice shows that change is more effectively institutionalised when it is reinforced by and embedded within the organisations' wider context. This requires the tertiary educational organisations to communicate and collaborate more within inter-organisational networks of agricultural education, extension, business and development, the authors argue.

This paper shows that the current project framework should be adjusted in order to achieve lasting institutional change in capacity of tertiary agricultural education organisations. Four concrete necessary conditions for institutional change were identified, which need to be recognised by the project frameworks. Namely that:

1. Team building based on trust and good communication is essential to change processes.
2. Continuity is necessary to keep up the momentum for change.
3. Flexible administrative procedures are crucial for changes to take root.
4. Institutional change is a process that takes a long time.

Based on lessons emerging from the six case studies, the authors elaborate on each of these points, following up with a number of concrete recommendations for projects aiming for institutional change.

In short, it has become clear that if we (capacity development project managers) restrict ourselves to the limited sphere of changing educational instruments, teaching capacity, and (administrative) management practices, we will miss paying enough attention to the underlying mechanisms for ensuring long-term support for such changes. These mechanisms relate to habits, social norms, levels of cohesion, leadership and power, to name a few crucial but less tangible aspects facilitating change. The main take-home lesson is therefore that we must take enough time to explicitly address change-supporting mechanisms in our endeavours to promote innovation in agricultural development, and to develop flexible project frameworks that truly facilitate these efforts.



The long journey needed to achieve Institutional change.

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Foreword

While sustainability of results is one of the expected outcomes of programmes which fund capacity building, many projects face difficulty in demonstrating the lasting effects of their efforts. Achieving sustainable change is a big challenge as many factors play a role in this process. We can only try and improve our capacity building projects by recording and analysing the factors which account for the success or failure of sustainable change and implement the lessons learnt in our next endeavours.

This paper, initiated by the Centre for Development Innovation (CDI), Wageningen UR, is an example of the much desired reflection on our work in capacity building and provides us with informed recommendations on how to improve the sustainability of projects. The purpose of this paper is to contribute to the effectiveness of institutional change of training / knowledge institutes regarding their role and relevance in agriculture-based development processes. Pieter Windmeijer and Nico Rozemeijer, two practitioners from CDI, formulated the challenge of institutional change as one of creating the policy and institutional conditions to allow the co-existence, emergence and evolution of different ways of organising innovation. Their proposal for studying the kind of institutional changes required and capacities associated with this was then taken further by Marlene Roefs (CDI), who mobilised the CDI, ICRA (International Centre for Development-oriented Research in Agriculture), KIT (Royal Tropical Institute) staff to share their experiences together in a write shop.

The result of the collective action by CDI, KIT and ICRA is an insightful paper that brings together diverse perspectives and experiences with six capacity development projects implemented with partners at tertiary agricultural education organisations in sub-Saharan Africa and in Afghanistan. These converge in the identification of four concrete necessary conditions for institutional change: team building based on trust and good communication; continuity of change interventions; flexible administrative procedures; and sufficient time for a long-term process.

This paper appears at an opportune moment in time. Within NUFFIC and the Dutch Ministry of Foreign Affairs, there is currently a reflection taking place on the Netherlands Initiative for Capacity development in Higher Education (NICHE) approach. This is also reflected in the exploratory study we commissioned on modalities of longer-term collaboration within the NICHE programme and which has resulted in the elaboration of an additional modality to support joint initiatives after a NICHE project. This modality is expected to enable the realisation of longer term partnerships and to sustain the results of previous collaboration.

The CDI, KIT, ICRA paper is a welcome contribution to the current efforts in shaping and optimising international collaboration in effecting institutional change in the tertiary agricultural education arena. In this process, it not only provides practical insights into various elements of institutional change; it also forces us to reflect on how we as Dutch academics and development professionals engage in TAE project proposal development and work in multicultural, interdisciplinary and international teams.

I would like to wish you an exciting read.



NUFFIC

ilding Department

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List of abbreviations and acronyms

ACP	African, Caribbean, Pacific states
ACP-S&T	Science & Technology programme for the ACP
ARC	Agricultural Research Council, South Africa
ARD	Agricultural and Rural Development
ASARECA	Association for Strengthening Agricultural Research in Eastern and Central Africa
ATVET	Agricultural Technical and Vocational Education and Training
CAPRI	Cape Programme for Rural Innovation, South Africa
CIAT	Cape Institute for Agricultural Training, South Africa
CDI	Centre for Development Innovation, Wageningen UR, Netherlands
CTA	Technical Centre for Agricultural and Rural Cooperation
DMTVET	Deputy Ministry of Technical and Vocational Education and Training, Afghanistan
ICRA	International Centre for development oriented Research in Agriculture
ILO	International Labour Organisation
KARI	Kenya Agricultural Research Institute
KENFAP	Kenya National Federation of Agricultural Producers
KIT	Royal Tropical Institute, Netherlands
NAADS	National Agricultural Advisory Services
NARO	National Agricultural Research Organisation
NICHE	Netherlands Initiative for Capacity development in Higher Education
NPT	Netherlands Programme for Institutional Strengthening of Post-secondary Education and Training Capacity
NUFFIC	Netherlands organisation for international cooperation in higher education
PIN	People in Need (Czech organisation working in Afghanistan)
RUFORUM	Regional Universities Forum for Capacity Building in Agriculture (Africa)
SADC	Southern African Development Community
SUCAPRI	Strengthening of University Capacity for Promoting, facilitating and teaching Rural Innovation processes, East Africa
TVET	Technical and Vocational Education and Training
VHL	Van Hall Larenstein University of Applied Sciences, Netherlands
WI	Wageningen International, Netherlands
WU	Wageningen University, Netherlands

1 Background to this paper

This paper is based on experiences of working on capacity development projects with tertiary (agricultural) education organisations around the world. Donors start with a broad vision of improving agricultural (rural) development. One strategy for this is to focus on the quality of agricultural education and the capacity of educational organisations to train people to effectively deal with the challenges they are facing, and to bring about the innovations needed. This paper analyses the process of supporting educational organisations to change, through various project activities, such as: introducing new ideas into curricula, bringing greater creativity into teaching, and stimulating more interactive development processes within the organisations and in their interactions with others.

In improving the capacity of educational organisations, each project team faced its own specific challenges. However, the teams have also experienced many issues in common. We (the project implementers working from the Netherlands) observe that, overall, the projects as they are currently conceived and carried out are not able to achieve the changes required. Throughout the project implementation process, we notice that we keep on running into thick walls of resistance to change. Time and again, it is proving to be very difficult to achieve the project aims and visions within the current project framework.

Analysing why this is and what it means for capacity development projects is the subject of this paper. The ideas brought forward in this paper are based on information coming out of six case studies. All of the cases describe experiences of capacity development projects funded by Dutch donors, implemented with partners at tertiary educational organisations in sub-Saharan Africa, and one in Afghanistan. While the cases were written in collaboration with other project partners, the main authors work for ICRA (International Centre for Development-oriented Research in Agriculture), KIT (Royal Tropical Institute), and CDI (Centre for Development Innovation, part of Wageningen University & Research centre). These six authors participated in a Writeshop for three days in October 2013, in order to analyse, discuss, and combine their experiences, resulting in this paper.

This paper was written with two audiences in particular, in mind:

- advisors working for capacity development organisations, both internationally and locally (Please note: we refer to these people as '*external partners*' in this paper – while the actors working from within the tertiary education organisations are referred to as '*local partners*');
- donors of these capacity development projects.

2 Introduction to the cases

2.1 Why capacity development in tertiary education

The capacity development projects described in this paper all seek to improve agricultural growth and development in their countries of focus; by stimulating the skills and professional behaviour of people working in that sector to compete, innovate, and respond to complex social, economic and environmental situations. Since these competences are in most countries built at the level of tertiary education and training, capacity development at this level is of major importance. Tertiary education includes institutes of higher learning, such as universities, colleges, technical and vocational training institutes, community colleges, nursing schools, research laboratories, and distance-learning centres.

2.2 Overview of the cases

This paper describes six case studies on the dynamics of change in tertiary agricultural education projects in sub-Saharan Africa and Afghanistan. An overview of the six cases examined for this paper is found in **Table 1** below (see full case studies in the Appendix). These projects were funded by the Dutch Government through the Ministry of Foreign Affairs and the Ministry of Economic Affairs, and by the European Commission ACP Secretariat.

Table 1
Overview of the six case studies analysed in this paper

Name project	Country & Educational Organisation Partners	Project Implementing partners	Time frame & Funding source	Main objective
GO4IT	Malawi: Lilongwe University Uganda: Makerere University Kenya: Egerton University	RUFORUM (lead), KIT, CTA, ASARECA, FARA, SADC	2009-2012 ACP-S&T programme	To improve the quality and content of education provided, to better respond to the latest trends in development, local needs and demands; by transforming education.
Analysing gender mainstreaming in three Ethiopian NICHE projects (015 : University leadership & management capacity development; 019 : Supporting the development of commercial agriculture at Ethiopian universities 146 : Holeta TVET Agribusiness)	Ethiopia: Higher education strategy centre; and 13 universities	ETH-015 – MSM, ICRA, ESMU	2010 – 2014 <i>on-going</i> NUFFIC-NICHE	To identify and help implement measures to strengthen the position of women in universities; to mainstream gender issues in education and research; and to identify and promote strategies to improve the situation of women in commercial farming.
	Ethiopia: College of Agriculture; and 4 universities	ETH-019 – Q-Point, Aeres Group, RU, Ghent University, DLV Plant B.V., SID Consult	2010 – 2014 <i>on-going</i> NUFFIC-NICHE	
	Ethiopia: Holeta Agricultural TVET College	ETH-146 – ICRA, KIT, CINOP, ILO	2010 – 2016 <i>on-going</i> NUFFIC-NICHE	
SUCAPRI: Strengthening of University Capacity for Promoting, facilitating and teaching Rural Innovation processes	Uganda: Makerere University Kenya: Egerton, University of Nairobi, Jomo Kenyatta University of Agriculture, and Kenyatta University	ICRA, NARO, NAADS, KARI, KENFAP	2007 – 2011 ACP-Edulink	To strengthen the capacity of East African universities to prepare professionals with the competencies needed to promote agricultural and rural innovation processes, and participate in decentralised national agricultural research systems.

Agricultural TVET: Improving Agricultural Education in Afghanistan	Afghanistan: National Agricultural Education College (NAEC); and Agricultural High Schools throughout the country	Afghanistan Deputy Ministry of Technical Vocational Education Training (DMTVET), CDI-Wageningen UR and the Czech Republic's People in Need (PIN)	2011-2016 <i>on-going</i> The Netherlands Ministries of Economic Affairs and of Foreign Affairs	To improve the quality and reach of agricultural technical and vocational education and training in Afghanistan
CAPRI: Cape Programme for Rural Innovation	South Africa: Cape Institute for Agricultural Training (CIAT)	Wageningen International (WI), Van Hall Larenstein (VHL) and Wageningen University (WU)	2005-2009 NUFFIC-NICHE	To set a programme for rural innovation including: curriculum development; research into extension and rural innovation; in-service extension training; design of interactive development of extension policies; and upgrading of CIAT's project management.
ARD: Agricultural Research and development	South Africa: Schools of Agriculture within the Universities of Limpopo (UL), Fort Hare (UFH) and Venda (UNIVEN); and the Agricultural Research Council (ARC)	ICRA, Provincial Departments of Agriculture (PDAs), CDI-Wageningen UR	2006-2009 <i>(ARC leading)</i> 2010-2014 <i>(UL leading)</i> NUFFIC – NICHE – NPT	To strengthen the capacity of South African universities and the ARC training unit to prepare professionals with the competencies needed to deal with the complex agricultural and rural innovation processes.

2.3 Changes envisaged by the projects

Box 1: High ambitions for change in universities in Malawi, Uganda and Kenya (GO4IT project)

We expected universities to be better prepared to train students to be open to other stakeholder ideas, to be good facilitators; better professionals. For this to happen, universities needed to:

- Build stronger linkages with other (innovation systems) stakeholders, among which, farmers and potential future employers of their students;
- See these linkages as "two-way learning avenues". This means teachers and students bring what has been learned to the classroom and take classroom learning points back to the field;
- Establish and support internal university policies that encourage such linkages;
- Establish mechanisms to ensure better fit between stakeholder needs and curriculum offer;
- Promote teaching methods which are more practice-oriented; and
- Work across departments/faculties, create an environment in which such cross-fertilisation was possible and supported

All of the projects described in the case studies had similar (and ambitious – see **Box 1**) change objectives, to improve agricultural educational and training systems, to ultimately further innovation in the agricultural sector in the respective countries. Major changes envisaged by the projects can be summarised in terms of four general areas, as follows:

1. Curriculum development

Designing and implementing new curricula and improving content for actual courses and programmes was a common core activity mentioned in all six cases. New and revised curricula were intended to reflect the latest developments in agricultural/rural development, as well as to respond to the demands of the labour market for graduates. Core groups in the participating tertiary educational organisations therefore needed to be trained in curriculum (re)design. It was also necessary to engage with higher policy-making bodies when seeking accreditation of new curricula.

2. Improvement of teaching practice

One of the envisaged results was the need for the educational organisation partners to re-think their teaching methods. The projects encouraged a shift from traditional methods towards competence-based learning which emphasises a more practical and learner-oriented approach. For this shift to take place, changes are required by *staff*, to start engaging their students through interactive learning; by *students*, to take more responsibility for their learning; and by the *organisation as a whole*, to facilitate changes in learning procedures and facilities, train and support staff, and where possible, to form cohesive research and consultancy teams that encourage synergy between different faculties and departments.

3. Brokering/Management of agricultural innovation processes

All cases describe the need to establish and/or improve the capacity of the educational organisations to stimulate innovation in agricultural (and rural) development (ARD). For most projects, an objective was to enhance the capacity of the organisations to prepare students and staff to facilitate ARD innovations. This calls for raising the awareness of different levels of staff (i.e., teachers, researchers, extensionists, managers and policymakers) on new ways of approaching ARD, education, research, etc.; and to come to a common vision on what these concepts mean for them in their context. Key staff in the organisations further needed coaching in brokering and leadership skills, as well as project management capacity.

In addition, the agricultural education organisations were encouraged to strengthen their *internal* (e.g. multi-disciplinary, cross-faculty/department, management) linkages and cohesion; as well as their *external* linkages (brokering collaboration with other stakeholders in their field of expertise). Partnerships for agricultural and rural innovation included links with (different levels of) government, farmers' organisations, potential employers, service providers, research organisations, agribusiness enterprises, etc.

4. Gender mainstreaming

Most of the projects had as one of their (usually donor-driven) objectives to change the gender balance in agricultural education and incorporate measures to assure gender equity. This objective was approached by implementing measures to strengthen the position of women in the participating tertiary educational organisations, particularly by increasing and facilitating female enrolment and graduation and by formulating, adopting and implementing organisational gender policies.

The different kinds of capacity development activities are summarised in **Box 2** below.

Box 2: Capacity development activities carried out by the projects, to stimulate change

- Providing specific training courses for the main educators or facilitators (teachers, extensionists, researchers, etc.): in-service, mid-career, or higher-level degrees;
- Changing curricula, adding new courses or updating old ones for students attending the tertiary educational institutes;
- Developing teaching and learning resources;
- Organising 'Learning by doing' activities: Assigning practical research studies and exposure to field activities;
- Facilitating student internships;
- Providing team-building workshops;
- Coaching in participatory assessments or policy-making;
- Providing coaching workshops on management capacity;
- Running workshops or annual seminars for stakeholders, to work on strategy/policy-making, or to formulate new projects;
- Facilitating formal inter-organisational communication processes; or helping create 'platforms'.

2.4 Two parallel processes

All of the cases focus on a general development process – i.e., of enhancing change in the tertiary agricultural education organisations. To get an understanding of how the projects develop, it is necessary to distinguish between two processes that run alongside one another, and how they interact in order to stimulate change.

One process concerns the functioning of the relatively short-term **project implementation**. This is being driven by a group of people and their organisations who are very interested in the project meeting its objectives as well as possible within its timeframe. It is mainly from this group that the change ideas and the strategy to get them to take hold are generated, and the project partners must act within the constraints of the culture, rules and norms of the (European) donor organisation.

The other is the ongoing and long-term development process of the **educational organisation** in focus. While teachers and trainers are often the main stakeholders in these projects, opportunities and constraints for their capacity development depend on the functioning of the organisation's administrative, policy and management systems and staff. In many of the projects, the educational organisation in focus is part of a larger institution, such as a university or a wider research & extension division. These larger institutes, in turn, are embedded within the culture, rules and norms of the country in focus and its government system.



Two processes run alongside one another, in the journey to changing educational organisations and how they function.

How these two development processes (and the people involved) function, and how they interact has a great impact on how deeply and successfully the particular changes desired take hold in the educational organisation. The next three chapters describe both of these processes, and different issues encountered in the cases.

3 Project implementation process

3.1 Design and initiation of the projects

Identifying the right entry points for capacity development for change varied for the projects described in the cases. But common to all is that once a potentially promising entry point has been identified (i.e., knowing which educational organisations will be involved, as well as the strategy for introducing and broadening acceptance for particular desired changes), a project team can come together to formulate a project for tendering. Whether the idea to establish a project comes from the Netherlands or from the country in focus, the project outlines are inevitably influenced by the main individuals participating in the early stages. Because these individuals play a key role at the moment when the projects are being designed, they can be considered as 'trend setters': they include certain ideas, concerns, possibilities and people, and exclude others. The negotiations around these filtered programmes form an important part of building the project teams.

The formation of teams, how they interact and function, and deal with upcoming conflicts, is a major theme emerging from the six cases. Common to all is that the project team needs to undergo adjustments in its role and composition, developing from an individual or small team of 'project opportunists' into a project 'design and implementation team' which must develop 'core organisational change teams' which then (hopefully) have the critical mass, ability and influence to effect change at an organisational level. In this process, as will be described in the next section, the interests and priorities of the partners often need to be renegotiated.

3.2 Getting down to business: Continuous renegotiation of project objectives

At the project design and implementation stages, a continuing challenge is the need to progressively renegotiate the objectives with team members. An example of this revolves around the projects setting out to change teaching practices in one way or another. Typically, the project design includes a change agenda promoted by external partner organisations (in this case based in the Netherlands) – calling for a 'systems approach' to learning, 'competency-based learning', 'experiential or interactive learning' and/or 'social learning', to replace traditional classroom textbook- and teacher-centred instructional methods.

However, these concepts may not be fully embraced by the educational organisations where the changes are set to take place. For example, in the CAPRI project, although project partners were aligned 'on paper' during the design stage, it became clear during implementation that individual actors were not all committed to such changes. Similarly, gender equality was an objective emphasised in the Ethiopian and Afghan cases, partly owing to the European donor agenda (e.g. Nuffic policy, as well as organisational and individual interests of the external partners). Having said that, it would be incorrect to claim that the gender equality agenda only comes from the donor, as many organisations, activists and politicians in these countries, as well as other individuals at the educational organisations raise these concerns as well.

While project proposals give the impression that different objectives are coherent, and equally embraced by the different partners involved, the reality is that they are quite messy. Having the flexibility to make shifts in the project design throughout the implementation process – due to continuous renegotiation based on new information, learnings, and the increase and/or changes in project partners – is essential.

The process is further complicated when there are, in effect, several sub-teams on both 'sides' of the project team (i.e., among educational organisation and external partners). Having to manage this complex arrangement of interdependent teams is generally not explicitly mentioned in planned activity schedules. Consequently, problems arise when insufficient time and resources are allocated to the activities. For example, the CAPRI project suffered different setbacks due to team 'issues': halfway through the project's implementation, it had to redefine the internal task distribution among its Dutch consortium partners; it also encountered problems between the consortium and one of the South African partners; and moreover, the project's momentum was hindered by diverging interests and visions within the Project Supervisory Committee .

Beyond the project teams, achieving success also depended on being aware of how the initial project teams fitted into the existing organisational landscape, and in successively broadening these initial project teams into more deeply-rooted organisational change teams.

4 Change processes in the educational organisations

4.1 Identifying individual 'champions' for change

All of the cases stressed the importance of particular individuals or groups who 'championed' change in their organisations and networks. For example, the SUCAPRI case noted that *'the creation of a dynamic, motivated core team of "change champions" was critical, both at project and university levels'*. These 'champions' are committed, dynamic and responsive people, with the power or mobilised critical mass to intervene effectively on different levels and interfaces, leading their organisations into what they consider a better direction.



'Champions' with a vision of change are seen to be critical to being able to bring about change in the organisations.

Change thus begins with key individuals, and as participants in the SUCAPRI project stated: *'change begins with me and radiates to others'*. For these champions to be able to stimulate wider change in their organisations, they need to be respected, trusted and listened to by their peers and managers alike, even if they themselves do not necessarily have the power or mandate to change policy at a strategic level.

Three kinds of champions were identified as being necessary to bring about change in the educational organisation settings: staff, student and gender champions.

Staff Champions

Champions are needed in both management staff and at the level of teaching for any innovative project to flourish. In the CAPRI case, the Assistant extension manager proved to be key to the operationalisation of the project plan, describing her role as: *'Getting there was through establishing trust, practising empathy, making contacts, working 24/7, setting the example, being accountable, capitalising on knowledge and experience, stimulating people to do what they are good at and what makes them tick, and tackling problems once you are aware they are there, instead of "beating around the bush" and pretending they are not there.'* Even though she was promoted into a higher position after the project began, she still kept working long hours as a trainer, because of her commitment to the project. Her input and commitment were ultimately critical to the project's success.

For the GO4IT project to even be recognised and implemented at the three universities, it had to count on champions at both management and teacher levels. In this case, the change came both from the teaching staff in all three universities and from strong support by management – as well as from another external partner in project implementation: RUFORUM, a regional network of agricultural universities committed to change.

Another level of staff champions is found among policy decision-makers, who can be fundamental to promoting innovative practices in education. For example, at one of the DOAs in the CAPRI project, a tremendous boost was provided by the fact that the Department Head and leading managers of the most relevant divisions was in favour of system reform, which eased the introduction, experimentation and consolidation of new practices. In addition, the capacity (or lack thereof) of a champion working at the policy level above the educational organisation itself is quite a decisive factor working in favour or against the level of success the project can achieve. This is discussed further in Section 4.3.

Student Champions

In some cases, championing of changes can come from 'below'. In Afghanistan, some students at the NAEC teachers' college pushed their teachers to embrace the changes after having been introduced to the theory of interactive teaching and more practical methods. According to the teacher training advisor: *'This is the first time the students have been taught in this way: they are very enthusiastic once they get over their initial shyness to participate. In fact, our second year students at NAEC are demanding even more interaction from their teachers now.'* Although it is still too early to say whether these students will successfully become teacher champions themselves who will influence the teaching culture in their future schools, the hope is that they will be able to introduce a more student-centred teaching style in the agricultural high schools, and hence scale out changes.

Nevertheless, students do not always champion change, as seen at Egerton University (SUCAPRI case), where students championed resistance to the changes being promoted by the project. In this case, the students found that the new interactive methods required them to put too much effort into the class.

Gender Champions

In the case study on the three Ethiopian gender projects, the presence of gender champions was an important factor for bringing about changed attitudes and gender policies. Gender officers were put in place in all the universities, to initiate changes and new policies. Their effectiveness depended on their personal influence and perseverance. Among the gender officers in different universities, some were well accepted and some not; this had a major impact on the outcomes, even though all the

universities had comparable resources. In two universities, the Gender officers were true ‘champions’: well-respected and able to galvanise support to get resources for workshops that led to formulating a new gender policy in their universities. In this case, their effectiveness therefore depended more on their personal influence and motivation, and less on whether they had formal implementation power.

In the Afghan case, nurturing of gender champions is also part of the strategy to bring about changed attitudes. The group of six (highly qualified) female faculty members at the NAEC teachers’ college in Kabul, as well as the 19 girls who became its first group of female students, can be considered to be gender champions. After attending a preparatory course to catch up on agricultural knowledge, these 19 students passed NAEC’s entrance examination with a much higher average mark than the boys; this fact impressed the male faculty members and students.

4.2 Stimulating a critical mass to champion change

To stimulate change in the educational organisations, individual champions are not enough. These change agents need to grow to a critical mass to be able to effect change, mindsets and culture in the broader organisation. This is not as simple as it sounds, and different strategies were followed by the projects in order to ‘grow’ a critical mass within the organisations, as presented below.

4.2.1 Building teams of change champions

Getting a strong team of change champions together to run the activities, and then building a big enough base of support for the changes at the educational organisation was a strategy followed by all the projects described. Finding these champions of change and nurturing them through project support (e.g. through courses or offering higher study scholarships) can help to stimulate organisational change by garnering a critical mass around these key individuals. How big a group of champions needs to be to make a difference appears to depend on how powerful the champions are - both at the individual level and as a group. In the ARD case, for example, having at least one champion per organisation was considered to be a prerequisite for change, and then committees were formed around these individuals.

Ultimately, change achieved at the level of the organisation depends on the momentum of this critical mass of committed people (see for example **Box 3**). In all cases, the project design specifically included measures to establish groups of teaching and managerial staff to champion improvements. These groups have different labels, such as: ‘teams’ (GO4IT), ‘core groups’, ‘communities of practice’ (SUCAPRI), or ‘in-house committees’ (ARD). Whatever the degree of formality accorded to these groups, a main factor in their ability and willingness to press for change, as well as their eventual effectiveness, is that these champions know each other, meet regularly, and share challenges and successes.

Box 3: Growing a critical mass for change through core teams (SUCAPRI)

Core teams of change agents were formed, which were both visible within and without the university, and with improved skills and confidence for communication and collaboration. These teams gained increasing recognition for facilitation skills in workshops and meetings locally and internationally. Staff members in these core groups were also recognised internally through promotions, to senior lecturers, associate professors and deputy principals of constituent colleges.

In many cases, organisational change teams formed as a result of (group) training programmes that included capacity building skills in line with the changes sought by the project. In the Afghanistan project, a group of Afghan students was offered a Master’s degree in the Netherlands, with the understanding that they would help establish the new NAEC teachers’ college upon graduation; half of these students now form the core members of the faculty. In the case of the ARD project, group training was offered by ICRA and Wageningen University; and in the case of the SUCAPRI Kenyan universities, a series of workshops was offered internally.

The content of the training programmes is critical, when there is a goal of creating teams of change agents. Personal and team development, training in self-discovery, communication and collaboration skills to be able to work with multiple stakeholders are examples of the kind of content that helps to stimulate team building. These 'soft skills' were seen by project staff at Egerton University as key to developing change teams and then influencing the broader university. The training within SUCAPRI led to increased confidence, greater interaction between faculties, and a shift towards a more student-centred teaching practice. In both the SUCAPRI and CAPRI cases, newly gained attitudes and skills were furthermore useful for project management and for acquiring new (national and international) projects.

4.2.2 Finding the right entry point for introducing change ideas

The challenge for the projects was to find a good entry point to create the awareness that things need to be done differently, and to catalyse these changes. For example, see **Box 4**. Go4It started the project by implementing training of multi-stakeholder groups or facilitators (mid-career professionals – extensionists, researchers, NGO staff, etc.), about how to bring different stakeholders together to facilitate innovation. Based on the maxim: *'if you want to learn about something, try teaching it'*, the project partners believed that teaching these skills would lead to professionals who are better prepared to act as brokers in their own work, and to therefore become more effective in bringing about change in rural areas. This approach was fairly successful because the project managed to involve enough staff to form the critical mass needed to have an impact at the organisational level.

Box 4: Taking the 'Trojan horse' approach in the GO4IT case: start small

The project partners jointly decided to take what was dubbed as a 'Trojan horse' approach to the envisaged transformation process. The basic idea was that in order to change the way universities work we need to start small - with a concrete project that seemed confined to specific activities, but one that that would slowly influence the way people act and the way the organisation 'thinks'.

Similarly, the Ethiopian projects took the entry point of performing participatory gender assessments at all the educational organisations to immediately raise awareness on gender equality issues. The results of these assessments fed into policy workshops, and led to the validation and development of action plans.

4.2.3 Stepwise progression of activities

Introducing activities in stages, and stimulating a slow build-up was found to be a good strategy. For example, the ARD project's capacity development programme provided a phased training process rather than one-off short courses. This was found to be necessary because the emphasis of the training was not only on ARD skills building but it also focused on attitude and mindset change which require a longer time. In addition to this, the project was preceded by another step as the facilitators involved had all attended previous training by ICRA. The Afghan and Ethiopian projects also deliberately took a phased approach to build awareness and mindset changes about gender. For the Afghan project, a stepwise approach has been taken for the entire project, of planning in short time periods, and having the possibility of regularly changing direction due to the uncertain context.

4.2.4 Moving beyond Affirmative action

Clearly, changing cultural attitudes and mindsets requires a long, drawn-out process. Take for example the cases dealing specifically with changing attitudes about gender equality in Ethiopia and Afghanistan. In Ethiopia, it was found that although affirmative action programmes were in place, this seemed to only be a small step towards reaching full institutional change in gender. According to a gender champion in Ethiopia, *'Affirmative action is good, but it also has its challenges for us. It can maybe make women dependent and it can have a psychological effect on us - that we are not here because of our competences, but because of affirmative action. It is equally or even more important to*

create opportunities for women, and to compensate for the barriers they face. I want to explore my potential and compete with the guys. So maybe affirmative action is not the only necessity, but also support is needed to become competitive. It is not enough to get women to the gate, we have to also show them the way.'

Shifting from increasing enrolment to equality of outcome implies a complex, multidimensional and long-term process of gender mainstreaming. In Ethiopia, organisational management structures are often male-dominated and operate through informal and discretionary decision-making processes that lack transparency. As female members of staff are generally not part of the inner circle of decision making, their interests are largely ignored.

4.3 Getting change into broader and higher levels of the organisation

For changes to really take root in an organisation, they need to also take place at higher levels of the organisation. For example, one department or faculty in a university will have a hard time bringing about change across the university on its own; and projects working within one department or faculty face the risk of being seen as imposing changes of relevance only to them and not to the broader organisation.

Most of the projects described included the assumption that having people from different disciplines working together to solve a particular problem is key to rural development. It is therefore ironic that tertiary educational organisations themselves are infamous for creating departmental or faculty 'silos' that impede working in interdisciplinary ways to implement such projects. Project activities therefore attempted to draw the core groups of change agents from different departments and/or faculties, to promote collaboration across them. In the case of SUCAPRI, for example, it appeared that the momentum for change and success in some of the participating universities was greater when such linkages were formed and specifically nurtured, and significantly less when they were not. In addition, synergies were able to be created between the SUCAPRI and Go4IT projects because Egerton University participated in them both.

4.3.1 Changing policies

For changes to take root in an organisation, policies must also support them. For example, project performance assessment criteria such as development of partnerships, teaching methods employed (and student satisfaction with them), community outreach and impact of research at the farm level – all need to be integrated into the promotion and incentive systems at the policy level of the organisation. Moreover, these factors can rarely be effective if part of the organisation acts alone. For example, the curriculum accreditation procedures of the broader organisation can always put a brake on curriculum change in a department.

In projects where curriculum development is an objective, academic accreditation inevitably becomes an important issue. In some organisations (e.g. universities involved in the SUCAPRI and Go4IT projects), accreditation is largely an internal process – albeit one which can take months or even years if new courses are designed which offer significantly different material from existing programmes. In South Africa, new curricula need to be certified by the South Africa Qualifications Authority (SAQA), which has its own formula based on standard units. Innovative new curricula, based around multidisciplinary team work and experiential learning – such as those developed for new BSc and MSc programmes within the ARD project – do not always fit into the standard models, making accreditation difficult. Staff in these universities has therefore opted for the easier route of gradually introducing innovative training modules into existing, more 'traditional' courses to avoid the need for lengthy and often complicated formal accreditation processes.

Problems can also come up from policy conflicts when projects encourage diversion from standard teaching practices. In the SUCAPRI case, for example, teachers were discouraged from experimenting

with how they assessed students, as they had to keep following generally accepted student assessment methods.

The standard system of staff incentives is another feature of the enabling environment which was found to constrain innovation in higher education practice, such as that proposed in the ARD projects (see **Box 5**). National and even international promotion and incentive systems at the universities (as well as in the research system) are still largely based on formal publications and teaching experience, and do not yet encourage experiential learning methods of teams in rural real-life situations and their value in education.

Box 5: When staff incentives do not encourage organisational change (ARD)

Within the Historically Disadvantaged Universities (HDUs) in South Africa, criteria such as the development of partnerships, teaching methods employed and student satisfaction with them, community outreach, and impacts of joint work at the farmer level, were not integrated into their promotion and incentive systems. Therefore, these kinds of organisational changes did not take place.

4.3.2 Change policy first or change practice first?

Some of the projects described in the cases took the strategy of trying to change policies first, others by changing practice first, and yet others tried to do both at the same time. How best to go about triggering change depends on the specific context. Starting from policy change has the advantage of ensuring immediate management support - but this can involve a lengthy and bureaucratic process. It can also fail to make real progress and 'get lost' in implementation if staff members are not behind the initiative. On the other hand, starting by changing practice certainly has advantages. For one, by practising change first, teachers (or facilitators) will quickly see the difference they make by acting and teaching differently. This therefore ensures staff ownership. However, if these staff members do not have the necessary clout, this approach can generate friction between teaching and management staff, which in turn leads to delay in project implementation and wasted time and energy. Doing both – changing policy and practice simultaneously – also has advantages. In principle, this combined strategy helps teachers be able to convince management early on that the changes are positive, thereby ensuring internal commitment and support.

4.4 Changing the way organisations interact with the wider context

All the cases described the challenge of reaching beyond the organisation level, to stimulate change in the broader context. Most projects had an objective of promoting inter-organisational collaboration or networks, but ended up running out of time before this was able to adequately come off the ground. Also, it was challenging to find the right way to do it, for various reasons.

4.4.1 Inter-organisational frameworks

In order to implement the project, the organisations involved need to perform within a collaborative framework. These inter-organisational frameworks do not always function as intended. In the CAPRI project, for example, the different components were designed to be dealt with in an integrated way; and all of the partners had clear roles. However, it did not work out that way in practice, as can be seen in **Box 6**. In short, after achieving the project funding, all entities involved operated as much as possible within what they considered to be their mandate area, minimising interference with each other while maximising the utility of the project for the objectives of their own organisation. To be able to run the project, more frequent short-term communication between the project partners was found to be necessary.

Box 6: Examples of how different components in the CAPRI project partners did not work in an integrated way

CIAT was in charge of project coordination in South Africa, but it did not manage the project funds itself; these were managed by the Western Cape Department of Agriculture (DoA). CIAT also lacked effective authority to convene the Project Steering Committee, and the mandate to allocate the new MSc/PhD graduates to strategic positions within the sector. The DoA in the Eastern Cape committed itself to the in-service training component, but without support of Fort Hare University and Fort Cox College. Interactive policy-making was limited to organising a yearly seminar to reflect on project progress.

Other projects experienced similar challenges, and with limited success. For example, the ARD project (see **Box 7**), also in South Africa, initially achieved the establishment of a broadly based National ARD Task Team (NARDTT) to advance project objectives, including representatives from government and universities. The objective of the NARDTT was to enable collective learning between these different organisations, and to reassess curriculum development needs within the context of the 'Second Economy'. The NARDTT successfully managed to facilitate and coordinate interactions between the organisations during the project lifetime. However, in hindsight, the ARD project did not manage to sufficiently promote the inter-organisational linkages required at a national level. Given the lack of incentives and enabling environment, the NARDTT was ultimately not sustainable beyond the project lifetime, and its intended successor CINSa (Collective Innovation Network of South Africa) failed to become active. This also raises questions about the attention paid to the design and implementation of a project's exit strategy.

Box 7: The value of inter-organisation linkages (ARD)

When a team of professionals from different organisations and disciplines manage to communicate effectively, agree in broad terms about a problem, and tackle this as a collective; the synergy can result in an output far more valuable than with a regular consultancy.

These two examples show that project inter-organisational frameworks such as the NARDTT and CIAT should have been linked or better entrenched in national or regional policy and planning (including budgetary processes), and/or based on broader stakeholder activities beyond the organisations themselves.

4.4.2 Inter-organisational platforms

A national network can act as a platform for deciding strategic direction, capacity and curriculum development; whilst on an implementation level local partners and relevant stakeholders decide what is done. The local platforms then result in concrete research and development activities. Some authors noted that a strategic-level platform is a prerequisite for collaboration on implementing changes, to create the structure, incentives and environment for different experts and organisations to be able to productively engage with each other. The mandate of inter-organisational platforms needs to align with the mandate of the organisations involved, to result in sustained participation.

4.4.3 Alumni (inter-organisational/international) networks of support

Another linkage mechanism to support individual faculty staff or core groups that might feel isolated within their own educational organisations is to encourage links with similar individuals in other organisations through alumni networks. These are particularly helpful in environments where those who have been trained go back to their own context, in which they are a minority from an ideological point of view and may have difficulty in promoting 'new' practices. In the ARD case, for example, an extensive network from among 150 alumni, resulting from training in the Netherlands and South Africa supported by ICRA, allowed individuals from different organisations to exchange ideas and support each other.

5 Observations from the cases

These six cases bring together rich experiences that show the complexity of achieving agricultural development change through capacity development projects in tertiary (agricultural) education organisations. In fact, we conclude that the projects *as they are currently carried out* are not able to achieve the *sustained* changes required. By this, we mean changes in how an organisation functions, its cultural norms and rules, and also in how it interacts within wider networks. In other words, we find that more fundamental *institutional change* is needed.

Institutional change refers to changes in policy, rules and regulations, as well as in the way organisations and people collaborate and work with each other¹. It refers to both actors and systems and therefore relates to personal, organisational and inter-organisational responsibility, as well as the capacity to connect, learn and adapt. It also relates to individual mindsets, and to the way organisations work and operate. Institutional change includes societal/cultural beliefs and values, team actions, organisational policies and practices, as well as inter-organisational collaborations (or the lack thereof).

An analysis of the projects described in the six case studies has allowed us to better understand why these kinds of projects can only contribute to, but not bring about long-term institutional change. We conclude that certain conditions are necessary for project frameworks to be able to achieve sustainable institutional change. These we narrow down to four necessary conditions, as described below.

5.1 Team building based on trust and good communication is essential to change processes

Chapters 3 and 4 describe two development processes that very much depend on the functionality of both the project team as well as the various core teams that are being built up to get a critical mass behind the changes. Many problems that came up were the result of the fact that the team members underestimate the level of communication needed and therefore fail to communicate (well) enough (see examples in **Box 8**) – and in the case of the implementation teams, particularly between the internal and external partners (or sub-teams).

Box 8: Examples of dysfunctional teams causing problems for the projects

- There was a lack of understanding of university partner dynamics in project design, which led to interest groups competing. (SUCAPRI)
- Poor communication was a factor hindering change in our project. Specifically, the university project partners were unwilling to discuss problems. (GO4IT)
- The consortium partners were hesitant in keeping each other on track about changes. Schedules and terms were often altered, without discussion or corrective action, and the original project design was distorted in a negative way (CAPRI)

Trust is a key component for success (see for example **Box 9**). Without good, regular communication and a certain degree of openness between team members, building trust within the team is much harder work.

¹ Based on Mur R. and S. Nederlof. 2012. *Innovation for fashion or action? Building Innovation Capacity. Learning from Research Into Use in Africa* (1). KIT Publishers. Amsterdam.



Trust within the team, strengthened by regular communication –and made easier by proximity– keeps change teams on track.

Box 9: Trust is key to good collaboration in Afghanistan

The trust that has been built between the executing agency and the donor has facilitated a more open-ended approach. This is based on developing personal relationships and being very honest about what is and what isn't possible in terms of expectations. Since the project has based CDI staff in Kabul, directly advising the National Agricultural Education College, this has perhaps made it easier to build relationships. At the same time, the Dutch embassy in Kabul supervises the project, and the staff there have a very good appreciation of the context, allowing for greater flexibility.

Communication is easier when team members come into daily contact with each other, and communicate face-to-face. However, for project implementation teams, which have internal and external project sub-teams that are effectively separated by geography –with only periodic and short-term visits by one group to the domain of the other– good communication is a major challenge. In the case of the two EU-ACP supported projects (Go4It and SUCAPRI), having multiple educational organisation partners in different countries has also added to the communication difficulties.

In some cases, the physical separation of the two sub-teams caused problems that were not easily overcome. One (originally unplanned) measure that was found helpful in the CAPRI case was for one of the external advisors within the project implementation team, to collaborate on-site and in direct contact with the project team at the educational organisation in South Africa, for a five-month period. The daily interaction during that period allowed for more informal exchanges and an increased understanding of the respective organisational contexts, leading to greater trust between the two sub-teams. For the Afghanistan project, having external advisors based in Kabul for extended periods of time has also meant that geographic separation does not hinder team communication and trust-building processes.

Box 10: Cohesive team helps the project

In Makerere University, the team was composed of people who had already worked together, had had prior exposure to innovation concepts and were keen to make a difference through the project. In Egerton, people were also able to work together very well despite not having collaborated before, and by the end of the project had formed a cohesive team. Team members being from the same generation perhaps helped build this cohesion.

For the GO4IT project, good team cohesion (and therefore solid trust and communication) were evident within the educational organisations for different reasons (see **Box 10**). However, core teams established by the projects in the educational organisations are not necessarily homogeneous, which makes it more difficult to build trust within the team.

Trust between the project implementers and the funding agency was also a factor. In the Afghanistan case, for example, the trust established between CDI/Wageningen UR and the donor allowed for an honest appraisal of expectations and flexibility in project planning. **Box 11** provides an example from Ethiopia of how the opposite situation hampered the project.

Box 11: Weak teams lead to poor results

In Ethiopia, projects have established different sub-teams that focus on specific dimensions of the project. For the gender component, this was an important point, because the external gender advisor, as well as the gender change agents in the educational organisation, were not well-placed in the project planning and implementation teams. Given the limited resources and time, it was important to try and build a team of champions (gender officers and advisors), and then facilitate a conversation between this team, the constituency (female staff and students), and organisational and project management. Nevertheless, the poor integration of gender champions within the overall project, and the difficulty of developing teams around them with sufficient critical mass to effect organisational change, ultimately resulted in slow and small gains in the Ethiopia case.

Finally - and somewhat inevitably - transparency in management of resources is also important for building trust in projects involving several partners. In some of the cases (as well as other projects in which case authors have been involved), the sharing of information concerning budgets, financial reports, etc. was not common practice among the project partners. And this refers to communications between sub-teams as well as across the internal-external 'divide' within the project team.

5.2 Continuity is necessary to keep up the momentum for change

The SUCAPRI and ARD case studies explain how the projects were largely built around initial inter-organisational teams largely formed under previous projects. This shows the importance of continuity and also the need for long-term engagement.

All of the case authors argued that the changes the projects managed to put in place depended on a few committed individual change champions. Again, it is the interpersonal relations or connections between a few key people that can make the difference. However, this is in fact not a sustainable situation, as observed by many authors: when a project leans too heavily on a few committed individuals, and these leave for new positions or the project ends, then the change process slows down or can even come to a full stop.



Issues such as high staff turnover and departure of key champions can bring major setbacks into the change process.

Staff training is an important component in the projects. High staff turnover rates are a recurring issue, and become a problem if the newly trained staff, or key champions in management, leave the organisation before the desired changes have been achieved (see for example **Box 12**). These kinds of setbacks are likely to be even more detrimental in the early phases of a project, before the desired changes are effectively accepted and actively supported at policy and strategy levels.

Box 12: The danger of depending too much on the strengths of individuals

In the CAPRI case, in the Western Cape Province, two people left the project just after having undergone the training of trainers course in the Netherlands, and having contributed to the lift-off of the project in year 1 - one due to promotion, and the other to retirement.

In the Eastern Cape Province, an important training champion was promoted and so became less involved in the project in her new position as extension manager. Luckily however, she remained interested in the project and actively sought to continue her involvement through the new Human Resource Development unit that was founded. This partly compensated her reduced availability and the commitment of other co-trainers also softened the blow.

Ways of avoiding such high turnover include careful staff selection or 'bonding agreements' (i.e. where the staff member agrees to stay on as a condition of training). In practice, however, these kinds of problems remain difficult to avoid. Again in the CAPRI case, a number of MSc graduates did not get appointed within the sector in spite of agreements on which the project was based and funding granted. In the Afghanistan case, as well, the students attending Masters training in Holland were expected to get jobs within the Deputy Ministry for TVET after graduation; however, the posts did not materialise in time, so more than half of this 'critical mass' was lost to other opportunities.

Another way of avoiding the problems of staff turnover is to spread the risks by creating groups of committed individuals. At least some of these are likely to stay while others go on to fill influential managerial positions.

5.3 Flexible administrative procedures are crucial for changes to take root

A major stumbling block for change is found in the pervasiveness of inflexible administrative procedures. This problem is not only common within educational organisations themselves, but is also due to policies and bureaucratic rules imposed by their governments and also by the European donors. Management problems were common to all the organisations, and many projects consequently invested in capacity development in management skills.

Not only have the administrative inefficiencies of the project partners and the donors caused delays in fund transfer and implementation of different activities, it also creates irritation among partners because of the considerable time and energy it takes to move forward. For example, this kind of inflexibility had an impact on how much the projects could change curricula and introduce new courses at the educational organisations. See for example **Box 13**. In the ARD case, unforeseen major restructuring of the main project partner, the Agricultural Research Council (ARC), imposed uncertainty and delays that greatly affected the extent of the project's change impact.

Box 13: Lengthy administrative procedures hamper change

The lengthy procedures followed by the universities to get permission to make significant changes need to be endorsed by senior academic staff at the faculty, school and senate. As a consequence, many of the projects avoided the long process of formal accreditations by staying within the 20-30% limit of changing curriculum content permitted without having to go through formal processes.

Inflexible donor norms also affected the projects. For example, **Box 14** describes how conditions imposed by the Brussels-based donor Edulink harmed the impact of the SUCAPRI project.

Box 14: Edulink norms too inflexible

Besides the problems caused by inflexible accounting procedures, the momentum of the SUCAPRI project was harmed by particular rules around payment of 'associate partners', including the Kenyan National Federation of Agricultural Producers. These stakeholders were expected to provide the key external linkages required to identify labour market needs to feed into graduate profiles and curriculum changes, as well as the research and development needs to be addressed by the university 'full partners'. But under the Edulink programme mechanism and administrative rules, 'associate partners' are not eligible to receive remuneration for time inputs, which undoubtedly affected these external linkages.

On the other hand, projects that could bring flexibility into their implementation process were able to build greater momentum. In Afghanistan, for instance, the uncertainty of the fragile state context of the project convinced the Dutch donors that a stepwise implementation process was necessary (see **Box 15**).



A major stumbling block for change is found in the pervasiveness of inflexible administrative procedures – coming from both the local context and the project donor.

Box 15: Stepwise implementation process supports difficult conditions of Afghanistan

The donors approved a project proposal in which project objectives were fixed, but the way to execute them was permitted to be left open and flexible. In this way, adjustments can be made as conditions change. For example, the donors at first agreed to only a 3-year timeframe – but were willing to extend to 10 years, on condition that the project keeps progressing in the right direction.

In the CAPRI case, NUFFIC was flexible enough to agree to a temporary 5-month placement of an external advisor in South Africa, to get a better understanding of the situation of CIAT, the main internal partner of the project. NUFFIC's flexibility also allowed for a budget-neutral extension which added a year to more than one project, giving more time for the implementation process to run its course.

5.4 Institutional change is a process that takes a long time

Our experience shows that capacity development projects do not address institutional change as a requirement from the outset, and advisors and practitioners only come to the realisation of the need for institutional change when reaching a mid-term review or even later in the process when it is too late to create space and time for more fundamental change.

Furthermore, change involves an evolving, non-linear and 'messy' process. It does not always happen as anticipated or planned, and emerging opportunities for change need to be seized as they occur. For example, building the required teams or coalitions of interest and then getting them to the level that they can function well enough to complete the list of planned activities, always takes longer than anticipated. And this certainly requires more than the 3-4 years of a standard project framework.

Change also does not happen quickly, and the fundamental changes we seek require a long time to take hold. We are dealing with complex social, economic, political and environmental contexts. To achieve changes in organisations beyond the time of the project calls for changes in norms, values, formal and informal rules of the game – and requires the support of the policy-makers as well. Getting these kinds of deep changes to take root requires a great investment of time and effort. They also require a project framework that allows for adaptations as the project learns what works and what does not in that particular context.

The design of projects must therefore also be flexible, describing a central objective, with perhaps less focus on specific results or activities – especially at the early stages. These sorts of projects require a phased approach, such as that provided by the case from Afghanistan, one that allows for changing directions (planned outcomes and targets) if necessary, based on trusted and regular communication processes. In addition, these projects require a long inception period to be able to understand the institutional contexts and needs and to construct more effective coalitions or teams.

Work on building trust, communicating well, allowing for all the obstacles that come with working within inflexible bureaucratic systems, asking underpaid staff to change and grasp new concepts, building linkages within and between organisations, training and lobbying for responsive project managers and policy-making, getting mainstreaming of gender equality or other big mindset changes involves a long and gradual process.

Table 2 below provides a short-list of specific recommendations coming out of the six case studies. For more detail, refer to the longer cases in the Appendix.

Table 2

Main recommendations from the six case studies for designing projects striving for institutional change

1. In contrast to linear project management procedures, the reality is that the implementers must be able to cope with messy, complex and unpredictable project contexts. Therefore, allow for more time and flexibility in the project framework.
 2. Start small and establish a phased approach.
 3. Ownership already begins at project design stage: Involve education partners early on. And do not forget to forge an effective exit strategy.
 4. Invest in regular, open communications to promote team building. External partners must spend quality time in the educational organisation contexts to build understanding and trust.
 5. For continuity, be sure to work with a group of change agents rather than a few key individuals.
 6. Invest in multi-stakeholder field training and 'soft skills' development (i.e., personal and team development, trust-building, communications, interactive and multi-disciplinary process facilitation, etc.).
 7. Ensure regular monitoring and follow-up actions.
 8. Strengthen inter-organisational links and make the most of synergies between all these groups.
 9. Be sure to go to the policy level to effect institutional change. Effective lobbying is a key factor.
 10. Invest in building networks in the government on both sides of the spectrum: within the donor and the country of focus.
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6 Conclusion

Demands for change in higher education in the South often focus on tangible results like improved curricula, more interactive teaching practices, better qualified staff, etc. In this paper we analysed six tertiary education projects, to show that a much broader and longer process of change is required for capacity development in tertiary education organisations to lead to real agricultural development in the field. In other words, a focus on institutional change processes: changes in policy, rules and regulations as well as the way people and organisations collaborate and work with each other.

The approach taken by the projects was to first stimulate organisational change with (project) support, bringing a rippling-out effect of change from one or a few individuals; to a core team (or a 'community of practice') which has the critical mass needed to effect change in the mindsets and culture of the broader organisation; that is institutional change at the organisational level. However, we realise that the tertiary educational organisations must collaborate and communicate more within inter-organisational networks of agricultural education, extension, business and development, in order to truly achieve institutional change, and be able to improve agricultural developments in the country.



The long journey needed to achieve Institutional change.

The cases described difficulties in reaching institutional change at the organisational and inter-organisational level within the project framework currently being practised. Common obstacles encountered were lack of trust, poor communication and therefore difficulties in building teams within the project partners, as well as within and between organisations in the country of focus itself. There were also problems in insufficient continuity due to staff turnover, and in terms of the lack of a long-term change perspective within the project. Also, inflexible administrative procedures hampered the projects – both from the donor side as well as within the educational organisations themselves and in their wider bureaucratic context. All of these issues carried delays, and within a short-term project framework, these hampered being able to reach change objectives.

The clear message we would like to convey is that institutional change, while necessary, is a long-term process that requires greater flexibility in different ways. To enhance institutional change in tertiary education projects, more manoeuvring space for the unexpected is needed. The outcomes of activities designed to challenge the status quo – whether seemingly innocuous ‘Trojan horses’ or bold policy changes – were not always as predictable as we wanted them to be. We learned that some discomfort is part and parcel of institutional change.

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See further references under the cases.

Appendix: Six supporting case studies

List of the case studies included in this study

Case study 1:

SUCAPRI (Strengthening of University CApacity for Promoting, facilitating and teaching Rural Innovation processes) in East Africa (by Richard Hawkins, ICRA; Mary Lopokoiyit, Egerton University; Charles Muyanja, Makerere University; Christine Onyango, Jomo Kenyatta University of Agriculture and Technology)

Case study 2:

Institutionalising ARD: Strengthening capacity for facilitated experiential collective innovation at the Agricultural Research Council (ARC) and 3 Historically Disadvantaged Universities (HDUs) of South Africa (by Driek Enserink (ICRA), Aart-Jan Verschoor (ARC), David Norris (UL), Ajuruchukwu Obi (UFH), Nelson Raidimi (UNIVEN), Thembi Ngcobo (ARC), Colletah Chitsike (ICRA) and Carin Vijfhuizen (Nuffic))

Case study 3:

A 'Trojan Horse' approach to change: The case of GO4IT (by Mariana Wongtschowski (KIT), Willem Heemskerk (KIT), Washington Ochola (RUFORUM))

Case study 4:

Gender mainstreaming in higher education institutes in Ethiopia (by Anouka van Eerdewijk and Franz Wong, KIT)

Case study 5:

CAPRI South Africa agricultural education change project (by R.J.Ludemann, CDI-Wageningen UR)

Case study 6:

Learning about institutional change in fragile states from the ATVET project in Afghanistan (by Mundie Salm and Hans van Otterloo, CDI-Wageningen UR)

Case study 1: SUCAPRI (Strengthening of University Capacity for Promoting, facilitating and teaching Rural Innovation processes) in East Africa

Written by Richard Hawkins, ICRA; Mary Lopokoityit, Egerton University; Charles Muyanja, Makerere University; Christine Onyango, Jomo Kenyatta University of Agriculture and Technology.

a. Case introduction

The SUCAPRI project resulted from ICRA initiatives to promote IAR4D (integrated agricultural research for development) in Kenya and Uganda, which had involved universities, agricultural research organisations and other stakeholder groups in both countries. As a result of these efforts it was realised that universities were not producing graduates with the requisite skills to promote innovation processes, and not sufficiently engaging with non-university partners in IAR4D. The project provided funds for five universities in Uganda and Kenya seeking ways to improve professional capacity for rural innovation. This involved training of staff in more interactive teaching and research methods, agricultural curriculum development, and development of learning resources.

Table 3: Fact sheet of the project

Countries	Uganda, Kenya
Tertiary educational institution	Makerere University,(lead); Egerton University, University of Nairobi (UoN), Jomo Kenyatta University of Agriculture and Technology (JKUAT), and Kenyatta University
Time frame	05/01/2007-31/12/2011 (including 1-yr no-cost extension)
Funding source	ACP-Edulink
Partners involved in implementation	ICRA (International Centre for development oriented Research in Agriculture, The Netherlands; <i>Associate partners:</i> National Agricultural Research Organisation (NARO), Uganda; National Agricultural Advisory Services (NAADS), Uganda; Kenya Agricultural Research Institute (KARI); Kenya National Federation of Agricultural Producers (KENFAP).
Main stakeholders	Teaching and managerial staff at each participating university, and Pilot 'innovation groups' selected from major R&D programmes in Kenya and Uganda. <i>Ultimately:</i> Future students of participating Universities and agricultural and rural development professionals <u>and</u> the rural population receiving services from agricultural R&D professionals.

b. Changes envisaged by this project

The overall objective of this project was to strengthen the capacity of East African universities to prepare professionals with the competences needed to promote agricultural and rural innovation processes and participate in decentralised national agricultural research systems. Specifically, the project set out to form 'communities of practice' of teaching and managerial staff in five universities that actively improve teaching practice, facilitate rural innovation processes and develop teaching programmes in rural innovation.

The main activities envisaged were as follows:

1. Initial planning workshop to refine the action plan, select key participants and resource persons; followed by 6-monthly steering group meetings;
2. University-based 'learning cycle' in Kenya: five workshops of 5-7 days each and associated skills implementation, to form 'core teaching innovation groups' within four participating Kenyan universities;
3. Multi-stakeholder (learning) programmes (series of integrated workshops and associated mentoring of 'innovation groups' from priority national R&D programmes);
4. Analysis/review of agricultural curricula and design of new/modified and accredited agricultural degree programmes and associated staff management/incentive systems;
5. Development of learning resources; and
6. International workshop to exchange and diffuse experiences, and finalise continuing institutional action plans by each participating university.

c. Changes achieved

Five of the six activities were implemented to varying degrees: The first activity was achieved satisfactorily. For the 'learning cycle' workshops, four workshops were implemented in Kenya. In Uganda, four multi-stakeholder (learning) workshops were implemented; while two of four planned workshops were held in Kenya. Activities 4 and 5 were only partially achieved; and the international workshop was not completed. Reasons for lack of implementation included delays in accounting and disbursement, bureaucratic processes on the side of the universities, lack of clarity and poor coordination due to changes in personnel. Nevertheless, many changes did take place, as seen below. While many of these changes can be considered as within the general type of change hoped for as a result of the project, they had not all been specifically identified as expected results of the project.

Communities of practice

The main institutional change expected was the establishment of 'communities of practice' (CoP) of teaching and managerial staff in each of the five universities. These CoP were expected to spearhead improvements in teaching practice, facilitate rural innovation processes and develop teaching programmes in rural innovation.

While some impact resulted at each of the participating universities, there were marked differences between them. The project probably had most impact in Egerton University, where there was interaction and synergy with other concurrent projects there also focussing on rural innovation processes (e.g. 'Go4IT' [see Case Study 3] and the ARIS PhD development projects, both supported by the EU funded Science and Technology programme of the EU Africa, Caribbean and Pacific Secretariat (ACP S&T programme) , and coordinated through RUFORUM). At the same time, this interaction between projects makes it difficult to attribute outcomes to one or the other individual projects. While therefore not solely responsible, the project certainly contributed to a number of the changes within the participating universities.

Formation of core teams of change agents (at Egerton, JKUAT, UoN)

These were both visible within and outside the university, and with improved skills and confidence for communication and collaboration. These teams gained increasing recognition for facilitation skills in workshops and meetings locally and internationally (Egerton). Staff in these core groups were also recognised internally through promotions (e.g. to senior lecturers, associate professors and deputy principals of constituent colleges).

Curriculum development

New courses and content areas at Egerton included in the Diploma and Undergraduate curriculum were agricultural communication skills; adult education; educational technology; extension methods. Team building and systems thinking were included as a common unit for all Masters level courses offered by the School of Agriculture and Enterprise Development at Kenyatta University. New Master's and PhD (ARIS) programmes at Egerton included greater lecturer-student interaction and content areas in: systems thinking, networking, personal development and communication. Enhanced participatory development of new programmes (e.g. agribusiness management, NRM, food service,

hospitality management, nutrition and dietetics) was achieved at JKUAT. In Makerere, the curriculum of the new Master of Science in Integrated Watershed Management in the College of Agriculture and Environmental Sciences was influenced by the project.

Teachers' practices: changed emphasis from teaching to learning

Teaching practice changes included greater team/ collaborative teaching; more varied teaching methods (more focus on facilitation rather than lecturing, group work; improved quality of individual and group assignments; debates; field visits; pictures; videos use of games; energisers, etc.); more concern for holistic development of students; (knowledge, skills, attitudes), improved student assessment through peer assessment; use of higher order questions in exams, etc. (Egerton). The core group at Egerton University introduced these concepts and facilitated annual pedagogy workshops for lecturers to improve the teaching skills in the Faculty of Education and Community Studies.

Internal linkages and collaboration between faculties strengthened

At Egerton especially, linkages were strengthened between the faculties of Agriculture; Environment and Resource Development; Education; Arts and Social Sciences. The Egerton core team was also subsequently involved in forming cohesive research and consultancy teams, and active on university committees and assignments. Knowledge management/sharing and soft skills gained in the training enhanced internal and external networking for the success of other activities unrelated to the project, and increased personal effectiveness.

Strengthened external linkages

The Egerton core group bid for and won three training consultancies; their success was due to their facilitation skills enhanced through the project. JKUAT developed public – private partnerships, with increased success in proposal applications such as UNIBRAIN. During the SUCAPRI project, contacts made with the 'Private Sector Development in Agriculture' (PSDA) Programme of the Ministry of Agriculture, with the intention of facilitating multi-stakeholder groups within that programme as part of the project, lead to reciprocal training of (the Kenyan) university staff in value chain concepts and approaches through an existing partnership with the GIZ. Five SUCAPRI team members from Egerton, UoN and JKUAT were trained further to be 'trainers of trainers' in value chain development. This led to another project to mainstream value chains in the curriculum in the universities.

d. Institutional change process dynamics

Factors facilitating change

Having a core team of dynamic, motivated 'change champions': The continuity and success that SUCAPRI did achieve, in the face of difficulties encountered, were probably due to the inter-university linkages developed in previous projects and team activities (these bonds helped overcome the inter-communal violence that occurred after the 2008 elections at the beginning of the project). Within individual universities, activities such as the 'learning cycle' in the Kenyan universities created the team spirit and common vision necessary to achieve organisational change in the universities involved.

Giving this core group of change agents the time and space to reflect upon their own practice and attitudes, and to focus on improving communication across departmental and faculty boundaries was key to the successes.

Factors constraining change

Administrative delays, affecting project momentum and partner motivation: The main factors that (negatively) affected the implementation of the project as envisaged were mainly administrative – particularly the difficulties faced by the participating universities in adjusting to EU procedures (e.g. in accounting for time inputs), and in communication between the lead university and the Edulink project management unit in Brussels. Delays at all stages (from the Kenyan universities to the Uganda lead partner, and from the lead partner to Edulink, and vice-versa), meant that the second and third planned disbursements were progressively delayed, causing disruptions in project activities, loss of momentum in activities, and loss of motivation among partners and associates. Even after a 1-year

(no cost) extension, not all the planned activities were completed, and the projected Edulink grant was not fully utilised.

Bureaucratic procedures in the universities themselves also caused delays. For example, the lengthy procedures followed by the universities, where any significant change in the curriculum has to be endorsed by senior academic staff at the faculty, school and senate. All involved have to be convinced of the value of the change before making decisions on the curriculum.

Lack of understanding of university partner dynamics in project design: A second factor that adversely affected the project was the lack of a good understanding (at planning and proposal stage) of the internal dynamics and interests of the university partners in the project design. The European partner (ICRA) did much of the project design and proposal writing. Perhaps inevitably, contacts at the project design stage were limited to individuals and departments with whom ICRA had previously collaborated (e.g. through the NFP/KEN/04/101/620 project, which had similar overall objectives and involved the same four Kenyan partner universities of Edulink), and the expected support during implementation from other departments within the SUCAPRI universities did not always occur to the degree expected. In some of the partner universities, the expected 'community of practice' did not achieve momentum because of competing interest/project groups (e.g. between the Dept. of Soil Science and the Dept. of Extension and Innovation Studies in Makerere, which was implementing the similar Go4It project described in Case Study 3 in this publication; although there was good collaboration between the same two project groups in Egerton). The project design also heavily reflected ICRA's own interests (e.g. deepening organisational relationships previously established under the previous Nuffic project), its vision of the changes needed in tertiary agricultural education, and how these could be achieved (e.g. through involving university staff in facilitating multi-stakeholder groups).

Difficulty in creating equal partnerships due to European Donor policies: The SUCAPRI project included as Associate Partners research, advisory services and the Kenyan National Federation of Agricultural Producers. These stakeholders were expected to provide the key external linkages required to identify labour market needs and hence improved graduate profiles, curriculum changes needed, etc., as well as research and development needs that could be addressed by the partner universities. But under the Edulink programme mechanism and administrative rules, such non-university organisations cannot be considered as full project 'partners' (and therefore be eligible to receive remuneration for time inputs), which undoubtedly affected these key external linkages. Edulink policy thus appears counter-productive - given that almost all observers agree that linkages between universities and the labour market are one of the most fundamental problems of the tertiary agricultural education sector.

Resistance to change by students: Perhaps unexpectedly, there was in at least one of the universities (Egerton), resistance to change from students themselves. While the assumption was that students will benefit from new teaching methods, they did not always easily accept taking more responsibility for learning, more assignments and activities than 'traditional' classes. Part of the resistance may be explained by the assessment procedures (scoring remained at 30% for continuous assessment and 70% for exams), which are often beyond the control of the university teachers themselves, being determined by national or even international quality assurance standards.

e. Lessons learned

With hindsight, the main lessons learned from SUCAPRI are:

1. **Involve university partners much more during the project design.** This point is not new – it has been made repeatedly for several decades in the development community – but it is still difficult to achieve in the typical world of project proposal development with short deadlines and limited budgets (time, funds) typically available for project preparation. In this case, more effort should have been made to involve more senior management (e.g. faculty deans) during preparation, to avoid the type of problems of internal linkages and departmental 'politics' encountered, but that would have required increased up-front investment by project partners.
2. **Do not underestimate the difficulties, capacities and time needed for effective project management and administration.** External donors such as the EU have detailed procedures that often differ significantly from those of Southern organisations such as the partner universities in this case. The problem is further exacerbated when organisations from a number of countries

are involved. Strengthening administrative capacity to deal with donor procedures is therefore needed.

3. **Stimulate the creation of a dynamic, motivated core team of 'change champions'.** This was critical to any successes, both at the project and university levels.
4. **Put sustained effort into developing 'soft skills' in change champions** (understanding of personal development, communication, teamwork, personalities, power and influence). This was key to the success of this project, leading to a recognition that 'change begins with me and radiates to others' – a change that required commitment and persistence (in Egerton: 'the learning cycle took 18 months to change us').
5. **Organisational change takes time as it requires attitudinal and value change at the personal and institutional level.** Given the time required for such change, projects should have the flexibility – or phased structure - in their design, to build and consolidate on gains and to complete and address emerging challenges not anticipated in the initial design.
6. At the same time, it is not always easy to predict everything beforehand. **External (project) efforts need to be flexible and well-integrated with other currents of change in the organisation** (which ideally would imply less reliance on 'logframe thinking' by funders).
7. **Identify key players and the space for manoeuvre as early as possible.** Knowing who can change what, and how to influence them is key. For example, course content can typically only be changed to a limited degree (e.g. 20%), without formal resubmission to faculty/senate committees, or even to national qualification boards (which again can depend on regional or cross-border agreements).
8. **Effective lobbying is key.** Once change champions are in place, and knowing who can influence the changes required, effective lobbying to and support from university administration was key to changing the university organisations. Participation of Deans, Chairpersons in key learning events, such as pedagogy workshops was important in SUCAPRI.
9. **Make the most of synergy between different project groups.** As the experience at Egerton showed this synergy was based on good interdepartmental and inter-faculty communication. Organising collective activities between (like-minded) projects made forming work teams easier and improved work culture, leading to greater overall impact. Given the size of the project, and spread over five universities in two countries, it is doubtful that a project of SUCAPRI's size would have had significant impact without such synergy, or if it had regarded each project as a separate or personal activity domain (as is often the case with universities and projects).
10. **Impact only becomes visible years later.** Many project impacts (intended and unintended) were only visible several years after the SUCAPRI project was completed. TAE impact studies therefore ought to be carried out five years after project completion to investigate offshoots and unintended benefits or problems created by the project.

Case study 2: Institutionalising ARD: Strengthening capacity for facilitated experiential collective innovation at the Agricultural Research Council (ARC) and 3 Historically Disadvantaged Universities (HDUs) of South Africa

Written by Driek Enserink (ICRA), Aart-Jan Verschoor (ARC), David Norris (UL), Ajuruchukwu Obi (UFH), Nelson Raidimi (UNIVEN), Thembi Ngcobo (ARC), Colletah Chitsike (ICRA) and Carin Vijfhuizen (Nuffic)

a. Case introduction

Due to historic inequalities, black people in South Africa have experienced severe limitations in participating, not only in the agricultural sector but also in other sectors. The education and support service sectors were mainly oriented towards servicing the white population (previously called the 1st economy). The disciplinary and commodity orientations of the educational, research and extension organisations in the agricultural sector were strongly developed to meet technology development and transfer needs of mainly the white commercial farmers.

Although the development of the resource-poor farmers, (previously called 2nd economy) has become a national priority since the early 1990s, agricultural educational and other support services (e.g. Agricultural Research Council (ARC) and other national and provincial departments of agriculture – providing extension services) clearly lacked the skills to deal with the priorities of the resource-poor farmers. This new clientele differs fundamentally from the traditional commercial client group. Educational staff and service providers lacked the required insight into resource-poor agriculture and their complex livelihood systems. National-level policies guided the educational and support services into an organisational change process; for example, the ARC in the late 1990s created the ‘Sustainable Rural Livelihoods (SRL)’ division with provincial coordinators to improve linkages among research and other rural development stakeholders.

This changed direction called for a new approach to agricultural sector staff education and to research for development efforts. The skills necessary to effectively engage with the resource-poor producer, to achieve collaboration with other stakeholders in agricultural development, and to collectively develop R&D options were urgently required. To overcome these shortcomings, the ARC brought several institutes together to work on strengthening capacity for ARD (Agricultural Research for Development). This collaboration resulted in the formation of the National ARD Task Team (NARDTT), with among others representatives of the newly set-up ARC Sustainable Rural Livelihood (SRL) division, five Provincial Departments of Agriculture (PDAs), and five universities (three of which are Historically Disadvantaged Universities, or HDUs).

The NARDTT members realised that neither the Research & Development (R&D) nor the post-secondary education and training organisations in South Africa had established capacity for this new approach. Similar findings elsewhere in South Africa led to the development of new national policies for the sector. This in turn provided the programme objectives for NPT and NICHE identified by Nuffic/Netherlands Embassy donors. Key organisations that fulfilled the role of change agents (e.g. the SRL division of the ARC) were subsequently invited to present project outlines.

This opportunity was seized by the NARDTT (its secretariat was run by the SRL division of the ARC) who then requested assistance to address the capacity building issues which resulted in the formulation and implementation of the NPT project. When this project ended in 2009, the three Historically Disadvantaged Universities (HDUs), mentioned above, were identified to draft another project outline which led to the continuation of Nuffic support to further strengthen the approach in their own institutional environments. This led to the formulation and implementation of the NICHE project. One of the aims of this project was to integrate teaching, action research and community engagement. In this project the ARC training unit and the PDAs are important partners.

This paper refers to the efforts in South Africa by the NARDTT and the 3 HDUs to engage post-secondary education and training organisations in ARD capacity building efforts.

Table 4: Fact sheet of the two projects

Project names	Institutionalising ARD in Post-Secondary Education and Training : Multi-stakeholder capacity building in service of the 2nd economy in South Africa- NPT ZAF 166/195 Capacity strengthening in teaching and facilitated experiential collective innovation at three HDUs in South Africa- NICHE ZAF 012
Country	South Africa
Tertiary educational organisations in SA	Schools of Agriculture within the Universities of Limpopo (UL), Fort Hare (UFH) and Venda (UNIVEN); and Agricultural Research Council (ARC training unit)
Time frame	NPT ZAF 166/195: 2006-2009 (led by ARC) with follow-on NICHE ZAF 012: 2010-2014 (led by UL)
Funding sources	Nuffic (NPT and NICHE); and National ARD Task Team (NARDTT) member organisations: Provincial Departments of Agriculture (PDAs), ARC, Historically Disadvantaged Universities (HDUs)
Partners involved in implementation	ICRA (International Centre for development oriented Research in Agriculture – leading the Dutch consortia) Associate partners: PDAs, Wageningen University & Research -Centre for Development Innovation (CDI-Wageningen UR), Maastricht School of Management (MSM)
Main stakeholders in South Africa	Teaching and managerial staff at each of the participating universities and training units; and Pilot 'ARD innovation teams' selected to jointly implement R&D programmes in the various provinces of South Africa. And: Students of participating universities and agricultural and rural development professionals And ultimately: Resource-poor farmers in South Africa

b. Changes envisioned by NARDTT through the projects

In its first concept note on the national strategy to build the required capacity, the NARDTT defined Agricultural Research for Development (ARD) as an umbrella concept for a range of approaches to collective rural innovation that:

- respond to the needs of stakeholders and resource-poor farmers;
- contribute to wider development objectives, such as poverty reduction, sustainable use of natural resources, food security and competitiveness of small and medium farming enterprises and businesses; and
- use participatory and systems approaches to integrate the diverse perspectives of different stakeholders, and facilitate teamwork across disciplines and organisations.

ARD thus demands strong partnerships between organisations in the agricultural sector that work toward sustainable rural development. 'Mainstreaming' this approach within the South African education and R&D systems required the following changes:

- New and innovative forms of inter-organisational collaboration between e.g. ARC, PDAs and other stakeholders, that create a level playing field and an enabling environment for interactive learning and collective action to address complex issues in rural innovation in the '2nd economy'.
- Research and development professionals in these organisations with new skills and mindsets needed to resolve complex issues by team work.
- Application of new and innovative approaches to learning to acquire these new skills and mindsets; this joint action learning is based on real rural life issues and engagement with diverse stakeholders.

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- New ways for the post-secondary education and training organisations to engage with rural innovation processes in the 2nd economy and with R&D organisations; to both increase the teaching staff's experience in ARD and create the real-world learning environments that students need to acquire the required new knowledge, skills and mindsets.

The **overall objective** of these projects was to strengthen the capacity of South African universities and the ARC training unit to prepare professionals with the competences needed to deal with the complex agricultural and rural innovation processes in the former homelands and other areas involving resource-poor farmers, to develop and participate in decentralised provincial agricultural R&D programmes.

The more **specific objective** was to form 'communities of practice' of teaching and managerial staff in three universities and at the ARC to actively improve teaching, facilitate rural innovation and develop experiential learning programmes based on actual problem-oriented rural issues (e.g. land reform) in collaboration with communities and PDAs.

c. Changes achieved thus far

In general, the projects were efficient (also due to additional ICRA and ARC contributions) in their capacity development efforts; performed well in curriculum development in three universities; but performed relatively poorly in terms of strengthening inter-organisational linkages.

*The activities that took place under the **NPT project (2006-2009)** led to the following changes:*

From improving linkages...

The NARDTT was strengthened through engagement of decision makers at participating organisations; a secretariat was established at the ARC and a strategic plan developed, formalising the NARDTT as a decision-making platform. A major achievement for this project has been the formation of In-House Committees (IHCs) in each of the participating universities, to spearhead change within universities. Although participation of IHC members has been variable across universities, the IHCs have had substantial success in organising the curriculum audit, student selection and integrating ARD into existing modules. In response to the need for relevant training material, an ARD Resource Book was jointly produced.

to strengthening partnerships and organisational structures...

Four levels of partnerships and organisational structures were successfully strengthened under the NPT project: the NARDTT; the project implementation committee; the provincial hub bringing stakeholders together at provincial level for action-research implementation; and IHCs at each of the universities with the responsibility for organising curriculum audits, selecting students for training and driving curriculum change within their universities.

From building ARD capacity....

An ARD development plan was developed at NARDTT organisations, based on weak and missing competences. These resulted in a number of selected staff attending courses. In addition, a series of coaching workshops were facilitated. Groups of roughly 20 trainers and lecturers from the NARDTT organisations were coached annually in ARD programme design and implementation. Fourteen members completed short courses at CDI-Wageningen UR and three teams each consisting of six NARDTT members (18 in total) completed the 5-month post-graduate ARD courses with ICRA, followed by field studies in South Africa, commissioned by a province and resulting in published reports. Six students from these teams completed a combined ARD-MSc training stint with Wageningen UR; their research was carried out in South Africa and was co-supervised by universities there and linked to the earlier ARD training. In preparing their theses, students interacted within small teams, to complement their work. A specific coaching activity was an eight-week consultancy assignment by a team of MSc students at Wageningen UR, commissioned by the NARDTT. The output was a training module dealing with land reform. This analysis of approaches to land reform and case studies was used in the curricula of universities and was integrated into the ARD Resource Book.

to changing the curriculum....

One of the major achievements for the project is that it managed to get universities through a multi-stakeholder partnership to invest in changing curricula. Workshops and focus-group discussions at NARDTT member organisations were followed by a national curriculum review workshop, and development of a curriculum audit matrix. Inter-university workshops were held to consolidate results of curriculum assessment at the universities; and a roll-out plan for the inclusion of ARD into curricula. The University of Venda decided to integrate ARD modules into extension courses at undergraduate, Honours and Master's levels. At the University of Limpopo, interdisciplinary post-graduate research and lectures on ARD elements for post-graduate students were introduced across the agricultural faculty. At Fort Hare, ARD has been integrated into courses dealing with agricultural market analysis; development planning; and post-graduate pasture science. Lesson plans for ARD infused approved modules were designed, and implementation started in 2010 at Venda, Limpopo and Fort Hare. Learning notes and aids have been developed. However, although initial thinking was that inclusion of ARD topics in the curricula would suffice, it became clear that a wider change process was needed.

And then developing a new outline for a NICHE follow-up project

Considering the progress made and the importance of the theme in South Africa, the three HDUs were identified for a follow-up project under NICHE. This HDU-led project is tackling three critical result areas within the Schools of Agriculture, to strengthen: a) their action-research capacity and embedment; b) their curriculum development capacity; c) their brokering and leadership capacity to sustain the action-research and curriculum development.

*The activities that took place under the **NICHE project (2010-2014)** led to the following changes:*

From developing action-research capacity and embedment....

Three 7-8 week tailor-made ARD capacity strengthening programmes were implemented over three years in South Africa. These programmes were executed by the ARC training unit and ICRA within the framework of resource-poor oriented R&D programmes and community outreach projects. A total of 56 participants (over 50% female) were involved, resulting in ten field study reports addressing issues relevant to the 2nd economy. Resource persons were drawn from the growing pool of ARD alumni in South Africa. Specific innovation topics identified that required further exploration (e.g. multi-stakeholder processes; value chain analysis) were addressed in 1-week short courses by CDI-Wageningen UR. Specific issues encountered during the field studies requiring more in-depth research were followed-up by MSc research studies of students and staff of participating HDUs and PDAs. In addition, three PhD candidates started their studies at Wageningen UR and UFH on topics relevant to the resource-poor in South Africa.

to reviewing courses on improving teaching and and learning methods....

A series of short in-house courses for lecturers are being implemented to review their courses (on relevancy of content and learned skills for the 2nd economy) and to design new and innovative teaching and learning methods. The first course for 16 participants focussed on innovative teaching and learning methods. The second course will focus on facilitating interactive learning; it will be organised in 2014 in collaboration with the Teaching and Learning Centres at each university. In addition, 18 staff members attended a 3-week course on developing interactive learning competence for rural innovation in higher education, organised by ICRA in the Netherlands. Through the building up of a critical mass and the involvement of the Teaching and Learning Centres, it is anticipated that there will be continued capacity and skills transfer beyond the life of the project.

to strengthening of brokering, gender and leadership capacities...

The HDUs, and the agricultural schools in particular, are supported to develop brokering, gender and leadership capacities. After the implementation of a gender audit at each HDU School of Agriculture, gender workshops were held in which follow-up activities were planned. A leadership programme is being offered by Maastricht School of Management (MSM) to management and staff 'champions' of agricultural schools, to nurture organisational change in support of action-research and community engagement, to improve visibility of these initiatives, and to strengthen their joint capacity to participate in and provide leadership for coordinated university-wide community engagement programmes. Care is taken to ensure the creation of effective gender-balanced capacities (e.g. in ARD, on community engagement).

and ultimately to mindset changes

It is too early to conclude on the effectiveness of the concept on the ultimate stakeholders (i.e., resource-poor farmers), as trained alumni have not yet graduated in high numbers. Indirectly, the projects have contributed to a change in the National Agricultural R&D Strategy. Over 150 ARD alumni have however changed their attitudes and mindsets, in favour of openness to collaboration and interaction with communities.

d. Institutional change process dynamics**Factors facilitating change**

High commitment of the partners: especially with those that had an earlier engagement in the ARD process: A pool of people acted as ARD champions within their organisations. This was especially so for the ARC and the universities of Venda, Limpopo, and Fort Hare. The NARDTT secretariat and project host (SRL division of the ARC) was committed to the ARD process before the project. Finally, the vibrant IHCs (In-House Committees) with active members proved to be of paramount importance for changes in the curriculum at the participating universities to take place.

Effective partnerships brought momentum into project activities: A positive example of effective partnership existed in Limpopo with the Universities of Venda and Limpopo collaborating with the ARC and PDA in a provincial ARD hub which facilitated field studies and interacted in ARD curriculum development. Hence, the projects were successful in establishing links to allow a well-implemented capacity development strategy. Although strongly underway at both ARC and three universities, the curriculum development strategy is not yet turning out large numbers of ARD trained graduates.

Good strategy for building capacity in stages: The concept of capacity building versus training has been well conceptualised; through the use of a phased training rather than one-off short courses. Emphasis was on skills building as well as attitude and mindset change. The most mentioned changes by alumni as a result of the ARD training were team-building skills and ability to work with stakeholders as well as self-discovery leading to mindset change and change in attitudes. All participating organisations had staff trained in ARD either through ICRA, or in the ARD service courses led by the ARC.

Factors constraining change

Influence and effectiveness weakened by relatively poor inter-organisational linkages: A link between NARDTT and other national level stakeholders and organisations such as the Department of Agriculture, Forestry and Fisheries (DAFF) and the National Research Foundation (NRF) and the Ministry of Higher Education would have given the NARDTT more credibility and influence beyond the boundaries of the projects. With hindsight, inter-organisational collaboration at the policy level was not promoted sufficiently and not sustainably established. In addition, a broader awareness at the executive management level of the organisations involved is also necessary. Apart from improving the curriculum at agricultural faculties, the capacity to teach such a curriculum and facilitate experiential learning is not fully established at participating universities. Also limited is the ability and attitude to set up an effective collective action programme with stakeholders and to develop interactive learning material.

Organisational restructuring process at ARC harmed partnerships and advocacy power: Halfway through the NPT project, the ARC (hosting the NARDTT secretariat within its SRL division) underwent a period of uncertainty during a major organisational restructuring process, which affected project activities, staff and partner morale. Probably due to this situation, the ARC executive was reluctant to formally support the project by signing the MoU. This inhibited the national partnership and relationship between the NARDTT and IHCs. As a result, the NARDTT remained a coordination and implementation committee; however, it had little status on policy level issues. To strengthen the national linkages the NARDTT was later (at the end of the NPT project) transformed into the Collective Innovation Network of South Africa (CINSA). CINSA was established to lobby for the integration of ARD into the national policies. Unfortunately, CINSA (to be based at the National Research Foundation) missed the necessary resources and committed secretariat to keep up the momentum of the network. Currently, the network is dormant and has not implemented any relevant activities.

Lack of organisational support after the courses ended: During the ARC reorganisation process, the SRL division was abolished; some of its more effective activities were mainstreamed into the new 'Technology Transfer' division of the ARC (e.g. the Training Unit). The project secretariat (project manager, training coordinator) and the ICRA team kept project activities going; however, alumni of ARD courses expressed concerns over the lack of organisational support to implement the skills learned or to transfer these skills to others within the organisation. After the restructuring, the new leadership of the ARC fully supported the project objectives again and this even resulted in the institutionalisation of an in-service ARD training within the ARC.

Cumbersome bureaucratic processes hampered accreditation of new curricula. The universities opted for a gradual change of existing modules (e.g. on extension, research methods and agribusiness), which aims at developing a particular competence, by infusing ARD principles and skills development and mindset change through learning-by-doing programmes. This strategy was chosen as it requires only internal review and approval at the universities, thus avoiding a cumbersome accreditation process; and the conviction that ARD principles should not be marginalised into a separate module, but needed to be mainstreamed in all modules.

The ARC made an effort to submit the ARD in-service training course for accreditation to the Agricultural Sector Educational Training Authority (Agri-SETA) which would allow the use of official in-service course certificates and career development on the basis of acquired ARD competences. However, because the course modules and material have been developed for post-graduate courses (more on analytical and conceptual thinking than on skill development) the ARC was advised to present the course to the Council of Higher Education (CHE). When the ARC followed this advice, the CHE reacted by invoking a non-eligibility clause as the ARC is not accredited as a Higher Educational Training Institution. The ARC was advised to seek collaboration with a university in order to make accreditation by the CHE possible, which will bring back the accreditation issues mentioned before for universities.

e. Lessons learned

- 1. Establish strategic inter-organisational linkages at implementation and policy levels (e.g. through setting up Stakeholder platforms).** Whilst policy encourages inter-organisational collaboration, incentives and the enabling environment required are still often absent at organisations in the agricultural sector. The inter-organisational 'space' for collective innovation is not adequately filled. In order to fill this void, stakeholder platforms are required at two levels: at the strategic or policy level (as with the NARDTT/CINSA) and at the implementation level (like the ARD hub in Limpopo). The national network should act as a platform for strategic direction and vision, capacity, and curriculum development; whilst at an implementation level, local partners and relevant stakeholders should decide what can be done and is needed. Typically, this should result in action-research by an inter-organisational team and consequent research and development activities, based on research results. A strategic level platform is a prerequisite for implementation-level collaboration, to create the structure, incentives and environment for the disciplinary level experts to engage each other productively. The mandate of inter-organisational platforms has to align with the mandates of the organisations involved, to result in sustained participation. A broader awareness and 'buy-in' at the executive management level of the organisations involved is also necessary.
- 2. Support the development of 'champions' as they are a critical prerequisite to institutional change.** Inter-organisational collaboration works well if a functional steering body is established; and champions, at least one per organisation, take up the challenge to facilitate the collective learning process at the implementation level. The major role of such a champion is to facilitate the interaction between scientists from different disciplines, and other stakeholders and rural households. When a team of champions from different organisations and disciplines manage to communicate effectively, agree in broad terms about a problem, and tackle this as a collective, the synergy can result in an output far more valuable than with a regular consultancy.
- 3. Set up incentive systems to support mindset change (in this case, on ARD principles).** Promotion and incentive systems at the universities as well as in research have not changed to embrace ARD principles and their value in education and in research. Promotion is still based on

publication and teaching experience which, while important, leaves out ARD-related incentives that would motivate people to apply these principles. Criteria such as development of partnerships, teaching methods employed and student satisfaction with them, community outreach and impacts of researchers work at farmer level, need to be integrated in the promotion and incentive systems for organisational change to happen.

4. **Support and give time for the development of a strong and consistent coordinating and implementing committee.** The NARDTT functioned successfully in this role. It provided a stimulating environment for 'individual ARD champions' that represented various organisations engaged in the 2nd economy. The participatory formulation and implementation of the ARD action-oriented field studies especially created and continue to create a context in which all stakeholders (including the PDAs) are enthusiastic and willing to contribute as all have a stake and are winning.
5. **Adopt a gradual process of curriculum development.** As described above, broad changes requiring formal accreditation take a lot of time and effort.

Case study 3: A 'Trojan Horse' approach to change: The case of GO4IT²

Written by Mariana Wongtschowski (KIT), Willem Heemskerk (KIT), Washington Ochola (RUFORUM)

a. Case introduction

The project, *Graduate Opportunities for Innovation and Transformation* (or GO4IT – see Table below) was based on the realisation that universities in Africa could improve their student training programmes, to bring change to these countries' rural realities. To do this, the universities needed to improve the quality and content of their agricultural education programmes, to better respond to the latest trends in development, local needs and demands. This would be possible by undergoing a process of organisational transformation. The project was initiated by the Regional Universities Forum for Capacity Building in Agriculture (RUFORUM), the Royal Tropical Institute (KIT) and three universities (Makerere in Uganda, Egerton in Kenya and LUANAR in Malawi).

As a partner and service provider to RUFORUM and the three universities, KIT played a key role in bringing the main concepts and strategy for this change process on board. Also, KIT together with RUFORUM led the joint analysis of the project and supported university staff to make the institutional changes they achieved clearer to them and their organisations.

Table 5: Fact sheet of the GO4IT project

Country/Region	Africa: Malawi, Uganda, Kenya
Tertiary educational organisation	<i>Malawi:</i> Lilongwe University of Agriculture and Natural Resources (LUANAR – previously Bunda College). Departments of Natural resources, and Agricultural Education and Development Communication <i>Kenya:</i> Egerton University. Faculties of Agriculture, Education and community studies, Health Sciences, and Environment and Resource Development. <i>Uganda:</i> Makerere University, college of Agricultural and Environmental Sciences. Department of Agricultural Extension and Innovation Studies
Time Frame	2009-2012
Funding sources	ACP-S&T programme (EU), own contribution of all partners and DGIS
Other partners involved in implementation	The Regional Universities Forum for Capacity Building in Agriculture -RUFORUM (lead), KIT <i>Associated partners:</i> CTA, ASARECA, FARA, SADC
Main stakeholders	Universities' staff, postgraduate students mid-career professionals and their employers (ministries, NGOs, private sector)

b. Changes envisaged by the project

The transformation envisaged entailed institutional change at the university level – a change in systems, policies, attitudes, behaviour, and way of relating to other stakeholders.

² The book Ochola, W., Heemskerk, W. and Wongtschowski, M. (Eds). 2013. *Changing Agricultural Education from within: Lessons and challenges from the GO4IT programme* brings a full account of the project implementation, challenges, lessons and opportunities for lasting changes in University lead training, research and development from the points of view of both course participants and teachers. This case study draws heavily on that publication.

Aiming high...

Specifically, the project implementation team expected universities to be better prepared to train students to be open to other stakeholder ideas, to be good facilitators, and better professionals in general. For this to happen, universities needed to:

1. Build stronger linkages with other (innovation system) stakeholders, among which, farmers and potential future employers of their students;
2. See these linkages as 'two-way learning avenues'. This means that teachers and students bring what has been learned to the classroom and take classroom learning points back to the field;
3. Establish and support internal university policies that encourage such linkages;
4. Establish mechanisms to ensure better fit between stakeholder needs and curriculum offer;
5. Promote teaching methods which are more practice-oriented; and
6. Work across departments/faculties, create an environment in which such cross-fertilisation was possible and supported.

... by starting small

The project partners jointly decided to take what was dubbed as a 'Trojan horse approach' to the envisaged transformation process. The basic idea behind it was that – in order to change the way universities work – we need to start small, with a concrete project that seemed confined to its activities; but that slowly influences the way people act and the organisation 'thinks'.

The project's main activity was the establishment of mid-career short courses (for extensionists, researchers, NGO staff, etc.) on how to bring stakeholders together to facilitate innovation. It was the belief of the partners in this project that this was important for making professionals better prepared to act as brokers in their own work – being more effective at bringing about change in the rural areas.



Professionals sharing experiences during a GO4IT course at Makerere University, Uganda (photo: Prossy Isubikalu)

Demand analysis and skills gap studies were conducted in all the three countries, to establish gaps between university curricula and stakeholder demands. The findings were used to design the mid-career course and to engage with non-university actors in addressing demands of, and participation in the mid-career course.

The project partners, led by KIT, developed, peer-reviewed, and tested a set of training modules organised around four blocks. Through training-of-trainer courses, a core group of lecturers was prepared to conduct the mid-career course, and train other lecturers and post-graduate students within the three universities. This initial core group of lecturers was envisaged to include only 3-4 teachers per university, but - mostly due to the enthusiasm the themes generated – it ended up being composed of 10-15 teachers per university. These lecturers acted as ‘champions’ within their university, removing barriers where needed and engaging others so that the project could be successfully implemented.

In the first mid-career professionals’ training course, a total cohort of 71 professionals from government ministries, the private sector, civil society and universities were trained. Although there were variations in the timing and duration of the course, it was guided by an action-learning framework that contained practical assignments – that took place during two-month learning intervals – in between one-week theoretical training blocks.

A second cohort was trained in Uganda, and, in addition, MSc and PhD students were trained in Uganda and Kenya using the same curriculum.

The mid-career course was used as a tool to introduce new practices into universities through participating mid-career professionals and their employers. It also served as a tool to bring university staff into ‘real life’ situations, through the supervision of course participants, who would be involved in concrete assignments in their working environment during learning intervals.

c. Changes achieved in the project

The project’s mid-career courses led to a large number of changes, including:

- *Changes at the individual university staff level:* These related to competences acquired to work together with students and employers in a more practice-based, student-centred manner. The fact that the teachers supervised the mid-career trainees on the ground played a key role in this process. It brought the teachers both to see ‘with their own eyes’ the realities in which their students work, and to directly engage with employers.
- *Changes at the level of course participants and their organisations:* These included the way the trainees work with other stakeholders (research, extension, farmers, local traders, etc.), and the way they define their role as local brokers/facilitators. The most significant change at this level is a change in attitude of these mid-career professionals. Instead of considering themselves as ‘those who bring about change’ (for example, by bringing a new seed or technology to farmers), most of them now see the importance of understanding the ambitions, needs and interests of different stakeholders. Many course participants say that they started listening more carefully to farmers, for example.

At the level of institutional change, some concrete examples are given below:

Partnership with employers

In the three universities, the strengthened relationship with employers meant that the latter could be called upon to be guest lecturers – bringing reality a step closer to students in the classroom.

The experience of Egerton University provides a good example (see Box 1) of a clear (intended) change taking place at the institutional level as a result of GO4IT; that is, change in how the university deals with its external partners, and in being recognised for its role in building the capacity of students who are directly supporting employers in the field.

Box 16: Institutional change at Egerton University, Kenya

Since the GO4IT project started with a stakeholder needs assessment, relations were built with a large variety of graduate employers. Lecturers were convinced of the importance of the new mid-career course, and took the initiative to market it. Their enthusiasm impressed the Ministry of Agriculture, Livestock and Fisheries Development, which then recommended the nine-month course to its staff, even before the first course had been completed. Egerton staff invested heavily in relations with employers. They organised feedback sessions with the mid-career course participants and their employers, to share results of the work done by the former. Formalising the partnerships with employers is yet to take place, but these informal partnerships can still be considered as an outcome of the project. The field work was supervised by university staff, together with the employer. These working relationships have also led to a series of possible internship options.

Increased cross-disciplinary activities

The implementation of the GO4IT project involved various individuals and departments from across different disciplines. For example, at LUANAR, the implementing team comprised staff from the Departments of Agriculture Education and Development Communication, and Natural Resources. In Egerton, departments involved included Agricultural Education and Extension, and Human Nutrition. By contrast, the team at Makerere University came from a single department (DEIS), but with diverse expertise, including sociological and innovation approaches, and with staff who also taught courses outside social sciences and agriculture.

University-level team formation

Each partner university worked with a team of trained GO4IT mid-career course facilitators, who acted as 'champions' within the project. The team members provided peer support, and the social cohesion of these teams became important. In Makerere, the team was composed of people who had already worked together, had had prior exposure to innovation concepts and were keen to make a difference through the project. In Egerton, people were also able to work together very well despite not having worked together before, and by the end of the project had formed a cohesive team. Team members showed personal interest and self-motivation, maintaining momentum as they worked progressively towards a common goal.

Teaching methods

The course stimulated university staff to re-think their teaching methods. GO4IT showed lecturers that a more action-oriented, learner-centred, self-discovery approach, and open interaction with students, was possible and desirable. The course exposed teachers to facilitation skills and working methods (such as working on case studies in small groups) that could be – and were – applied to their own teaching situation, often in large groups in an auditorium. The interactive learning contributed to enhanced creativity and critical thinking among students, most of whom were enthusiastic about the new way classes were given.

Curriculum change at the three universities

Formally changing universities' curricula is a lengthy process, often requiring (re-)accreditation. Nevertheless, 20-30% of the curriculum contents can be changed without having to go through formal processes. The project partners made creative use of this opportunity, integrating GO4IT course elements into their curricula.

In LUANAR, for example, departments integrated innovation issues (e.g. stakeholder mapping, facilitation, innovation systems thinking) in curricula beginning shortly after the commencement of the mid-career course. Makerere University introduced a Bachelor of Agriculture and Rural Innovation; and more innovative practical and interactive sessions (such as stakeholder analysis, partnership and communication) are included in the University Agricultural Research Institute courses. A new post-graduate Diploma programme and a MSc in Rural Agri-enterprise Development have also been launched at Egerton, drawing on lessons from GO4IT and its initial gap analysis.

Student Internships

Also somewhat unexpectedly, the universities saw a change in the way internships were organised and supervised, as a result of GO4IT courses. Unlike the usual internships where students only 'observed', students were directly engaged in practice and learned by implementing things themselves. Those in charge of arranging internships within the universities have also learned from the experience.

The change in emphasis in internships also had organisational consequences for the universities, which now need to use different criteria for selecting possible internships and supervising students in the field. Egerton, for example, now engages private partners in assessing students during their internship periods; previously, assessments were only made by lecturers.

d. Institutional change process dynamics

Factors facilitating change

Commitment of staff ('champions'): A considerable number of university staff participating in the project were open-minded and eager to learn and change; and able to establish contacts with other stakeholders (employers). At Egerton and Makerere, in particular, staff members had already been involved in similar projects (e.g. see SUCAPRI case study) and were familiar with the concepts presented by GO4IT. People worked well in teams, and maintained momentum as they worked progressively towards a common goal. It helped that team members were of the same generation, as they shared similar points of view and understanding.



Fertiliser pre-application meeting with farmers of West Mateka, Kenya (photo: Elias Muga Ochieng)

Support of top university management level: Much effort was taken to invest in dialogue with top management and stakeholders in order to get institutional 'buy in' for the project. Seminars for top management and university staff were conducted in each participating university. Together with bilateral networking, these efforts ensured financial and moral support to the university teams. For example, in LUANAR the management pre-financed the first cycle of training. At Egerton University, the management provided moral support as well as funds for procuring a project vehicle. At Makerere University, the management was fully committed to supporting the lead department of the project. An important factor, to allow this buy-in to happen, was university staff involved had the necessary clout at the university level to convince the university administration. RUFORUM, as a regional network, also played an important role here by, at times, advocating in favour of the project with university administration.

The time was right: At Makerere, the fact that the department involved (DEIS) had just gone through a reorganisation process and was willing to embrace projects that brought staff together in a concrete project, was an important factor.

Exposure of teachers to field activities: The fact that teachers from the three universities were often involved in the implementation of development projects on the ground provided them with good learning material. They not only taught the course participants to work differently, but the teachers also incorporated those teachings in their own work in the field. In addition, the teachers were involved in supervising course participants' work on the ground. Through both, they saw clear results of putting this new way of working into practice.

Factors constraining change

University hierarchical structures: These often meant that teachers had to go to great lengths to convince their superiors of the importance of the work being done – and why the university should commit (financial and human) resources to it. Though they finally managed to do so, this process consumed practically one year of the project's implementation time. Most of the project partners (and the donor) function as inefficient bureaucracies. This has caused delays in fund transfer and implementation of the project – besides creating irritation among partners that took considerable time and energy to resolve.

Diverging views and understanding: Whilst the majority of individuals showed interest in facilitating training, some individuals found it challenging to conceptualise innovation systems or put the thinking into practice in their disciplines (particularly those in 'hard' sciences), and hence lost interest. The need to reduce the number of drop-outs raises the need for other strategies to better engage individuals with a negative mindset towards innovation systems thinking. This may include, for example, asking these individuals to co-supervise students as a way to engage them directly in field work; or to change the 'language' of the training of trainers' material to become more concrete and (hopefully) therefore more appealing to those who are not social scientists.

Unwillingness to openly discuss what went wrong: The difficulty of taking responsibility for things going wrong, and openly discussing the reasons for problems, both within the universities and between project partners have - at times - stood in the path towards improving the project and the mid-career course.

e. Lessons learned

1. **A combination of both bottom-up (through students and teachers) and top-down (strong support and push by management) efforts is necessary.** For innovative projects at tertiary institutes to flourish, champions are needed at both levels (teachers and management).
2. **Change practice first, and through practice influence the way universities' policies are made and operationalised.** It is easier to trigger change in (part of the) curricula and teachers' practices than to start by changing university policy. There is often less resistance, and is a less bureaucratic process.
3. **Have university staff work together on something practical and preferably in the field,** rather than only meeting or having theoretical discussions together. This is key to changing perceptions and attitudes, related to how staff sees the role of universities and how staff members relate to each other.
4. **Involve a diversity of staff** (i.e., from different departments and/or from different disciplines) to achieve a stronger entry point for organisational level change. This project benefited from having encouraged lecturers from a broad group of disciplines to be involved. The future value of the GO4IT course will be greatly enhanced if departments inform their staff about the new modules on innovation. These can then be integrated into their teaching, both in terms of content and methodology.
5. **Regularly engage with employers** (including employers of extension staff, such as ministries and NGOs), in order to gain insights on job demands for university graduates. Egerton is currently

the only university (of the three) in which engaging with employers is mandatory for curriculum review. Nevertheless, such engagement is still often restricted to soliciting views on a curriculum already developed by the subject specialists within departments and faculties.

6. **Strengthen the links between universities.** Promoting greater interaction between participating universities would have, ensured cross-learning and increases the chance that such learning will continue to take place after the project.
7. **Be sure to use terminology that people on the ground clearly understand.** For example, the word 'innovation' remains confusing. Many still refer to innovation as technology, whereas the course was designed to introduce the concept of innovation as a process which may lead to new technologies, but also to new ways of organising work, policies or relations with partners. Using another word or expression to explain the concept (for example, 'change') may help. This shows that KIT and RUFORUM, in particular, were at times eager to press on concepts that are highly abstract, without properly appreciating the 'language' and realities of other partners involved.
8. **Take time to involve project partners (universities) and stakeholders (e.g. teachers) in the design and adaptation of training materials.** They need to feel ownership to be able to change them according to their own needs and realities.
9. **Do not place too much emphasis on setting up innovation platforms, at the expense of other tools to promote interaction.** Bilateral discussions with key actors, joint experimentation, choosing promising ideas and trying them out with one partner, are all means towards the same end: to bring about change. Often, these activities are more appropriate than creating innovation platforms. Future curricula therefore need to build in flexibility in approaches.
10. **Strengthen contact between trainees.** GO4IT course participants also observed that joint supervision by the university and employers was appreciated, and led to joint learning. But they also called for interaction between trainees during the practical learning intervals - and after the course - to be improved. Malawi set up a Facebook group to improve that, for example. The three universities are, at the moment, playing with the idea of establishing some sort of alumni organisations.
11. **Accept that change and grasping of new concepts (like 'innovation') takes time. Do not be too ambitious in your expectations of change from a project.** Implementing project partners were fairly ambitious when it came to changes we wanted to see. We truly thought we could change the way lecturers and course participants looked at innovation – at change as a process that needs different stakeholders to happen. However, we saw that more often than not, this message is still difficult to grasp on the ground. Instead of clutching this (from our perspective, core, 'revolutionary') message, teachers and course participants learned other things. Teachers made use of the new teaching methods they picked up from the project. Course participants made use of new ideas such as involving other stakeholders, when deciding upon the focus of a project on the ground. These smaller changes (made by course participants) are often not revolutionary or very new from an academic point of view, but already make a huge difference in how these teachers impart their lectures and mid-career professionals carry out their own projects.

f. References

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Case study 4: Gender mainstreaming in higher education institutes in Ethiopia

Written by Anouka van Eerdewijk and Franz Wong³, KIT staff members

a. Introduction to this case

We write this case from the perspective of external consultants that are not part of the project management team in the tertiary education institutes. The case is based on experiences with the mainstreaming of gender in capacity development projects in agricultural colleges and universities in Ethiopia. It draws on three different projects, which together cover 17 institutions of tertiary education. As Table 1 below indicates, the three projects differ in terms of the number and type of institutes involved. The ETH-015 engages with thirteen different new 'public universities', while ETH-146 focuses on one agricultural TVET college. The ETH-019 project works with four universities and is linked to four 'new' universities as well. The three projects differ in terms of the composition and size of the consortia; these consortia are mainly Dutch partners, but in some cases also include Ethiopian partners or institutes based elsewhere. What these projects have in common is that they are all part of the framework of Nuffic's NICHE programme, the Netherlands Initiative to support Capacity development in Higher Education.

Table 6: Fact sheet of three Ethiopian tertiary education projects included in this case study

Project	Institutions	Time frame	Involved project partners	Main stakeholders/ Requesting Partner
ETH-015	1. Axum University 2. Ambo University 3. Debre Berhan University 4. Debre Markos University 5. Dilla University 6. Dire Dawa University 7. Jigjiga University 8. Mada Walabu University 9. Mizan Tepi University 10. Semera University 11. Wolaita Sodo University 12. Wollega University 13. Wolo University	August 2010 – July 2014	– MSM – ICRA – ESMU – KIT	Higher Education Strategy Centre
ETH-019	1. Jimma University College of Agriculture and Veterinary Medicine 2. Haramaya University: College of Agriculture and Environmental Economics 3. Hawassa University: College of Agriculture 4. Ambo University: College of Agriculture	September 2010 – August 2014	– Q-Point – Aeres Group – Radboud University Nijmegen – Ghent University – DLV Plant B.V. – SID Consult	College of Agriculture of these four universities.
ETH-146	Holeta Agricultural TVET College	September 2012 – August 2016	– ICRA – KIT – CINOP – ILO	Holeta Agricultural TVET College

³ We are grateful for the cooperation with Lenasil Asfaw, Ejigayehu Teffera and Feteny Bekele in the different projects on which this paper is based. The lessons described here are strongly informed by their experience and inputs in the projects.

b. Changes envisaged by the project

Commonly identified gaps concern the quality of the educational curricula, the weak links with the labour market and private industry, and the qualifications of academic and teaching staff. The aim is basically to improve the curricula, teaching methodologies and qualifications of the teaching staff so that these tertiary education institutions deliver highly trained and skilled graduates that are required by the labour market. The projects for instance aim to 'contribute to a vibrant and sustainable commercial agriculture sector in Ethiopia', more specifically to 'strengthen the universities' capacity to serve the commercial sector by delivering graduates with the needed competencies, effectively implementing jointly formulated research agendas, and actively involving in both education and research of the sector' (NICHE-ETH-019, inception report, p. 9). Another one aims to 'contribute to the commercialisation of the Ethiopian agricultural sector by strengthening Holeta ATVET College to deliver quality, gender sensitive, and demand driven education, training and applied research, in the field of commercial agricultural' (Holeta, inception report, p. 5).

All projects have been encouraged by Nuffic NICHE to come up with gender objectives. These are formulated as aiming to 'mainstream gender issues in the training and in the college' (Holeta, inception report, p. 5). Or more elaborately as the objective to 'identify and help implement measures to strengthen the position of women in the participating faculties and universities; to mainstream gender issues in education and research; and to identify and promote strategies to improve the situation of women in commercial farming' (NICHE-ETH-019, inception report, p. 9). The gender results that the NICHE projects are usually looking for are: (1) to increase female student enrolment, and increase their performance and graduation rates, and (2) to formulate, adopt and implement a gender policy.

Although it is certainly true that Nuffic pushes the gender equality agenda, it would be incorrect to claim that this comes only from Nuffic, as many women's organisations, activists, politicians in Ethiopia, as well as gender directors and officers, female staff and students raise concerns about gender inequalities in society and tertiary education.

In Ethiopia, female student enrolment has rapidly increased in the last few years, in part due to government policy. For example, the Ethiopian Higher Education Proclamation (FDRE, 2003) focused on affirmative action for female students. Ethiopia has committed itself to promoting women's rights in general, by being a signatory to various international conventions (such as CEDAW) and agreements, passing national legislation such as the constitution (which upholds non-discrimination principles and promotes affirmative action) as well as the National Policy on Ethiopian Women (1993) and the Education and Training Policy (1994).

It is important to note that the three projects are not specific gender projects as such, and that the gender objectives, activities and results are one part of the overall project goals and interventions. This affects the amount of resources and time which are available to realise objectives. It also means that the project context has to be taken into account because it affects the realisation of the gender objectives.

Promoting gender equality in tertiary education

The projects seek to ensure that graduates, both women and men, have required skills and knowledge to enter the labour market: getting women into education is one issue; that they remain, complete and achieve it are another. It implies a shift from framing gender equality in terms of *access* to education to understanding gender issues as *equality of outcome*. The focus on equality of outcome changes the emphasis from enrolment of women students to the employable skills and knowledge women and men students actually gain that will allow them to gain employment.

With respect to access, Ethiopian students are assigned to colleges and universities by respective government authorities. With the government's emphasis on increasing enrolment of female students, the proportion of women assigned to a particular institution has multiplied within a short period. This was partly realised by lowering entrance criteria for women student applicants. In the case of Holeta A-TVET College, for example, female enrolment jumped from 36% in 2009 to 50% in 2011]. This surge in female students has highlighted problems in a system that is not fully prepared for them (see list of concerns below). Increasing the number of female students in higher education institutes seems a simple result, but once you look carefully at how this affects requirements at the colleges, it

becomes an institutional change as the institutes need a new mindset and to start doing things differently.

Shifting from increasing enrolment to equality of outcome actually implies a complex, multidimensional and long-term institutional change of gender mainstreaming. This is well captured in the words of a female academic staff member in one of the university colleges:

'Affirmative action is good, but also has its challenges for us. It can maybe make women dependent and can have a psychological effect that you are not here because of your competences, but because of affirmative action.'

'It is equally or even more important to create opportunities for women, and to compensate for the barriers they face. I want to explore my potential and compete with the guys. So maybe affirmative action is not the only necessity, but also support is needed to become competitive. It is not enough to get women to the gate, but we have to also show them the way.'

This quote points to the need for change in the way the tertiary educational institutes operate. Although the assessment and activities in the three projects all followed their own rationale and approaches, seven common concerns and trends regarding gender equality in tertiary educational institutions can be identified:

1. *Position of female students full of challenges:* some women students, who enter with lower qualifications due to affirmative action policies, require extra tutorials and guidance to deal with challenges they face due to being female (e.g. security, harassment, etc.).
2. *Lower potential advancement possibilities for female staff:* female staff generally have lower advanced educational qualifications and less professional experience than male counterparts and can face discrimination and 'family-unfriendly' policies (e.g. maternity leave, etc.) that challenge their professional advancement.
3. *Decision-making male-dominated and unresponsive to needs and interests of women:* As women staff are generally not part of the (often non-transparent) inner circle of decision making, their interests (e.g. for scholarships to attain higher degrees) are ignored.
4. *Weak gender infrastructure* (such as establishing, capacitating and supporting Gender Affairs Offices): these are often under-staffed and under-financed to advocate for addressing of gender issues.
5. *Gender unaware pedagogical practices and educational curricula:* teaching practice and curricula often perpetuate gender stereotypes that privilege male students and constrain female students.
6. *Gender-neutral research issues and processes:* in general, research does not take gender issues into account, focus on male activities and issues, and lack disaggregated data that would help to make gender analyses.
7. *Outreach and extension positions and issues are male-dominated:* outreach and extension services are often male-dominated, with few women working as extension officers and few services explicitly taking gender dimensions into account.

c. Changes relating to gender mainstreaming achieved by the project

The above list of key elements points to the scope of a comprehensive gender policy and reveals that such a policy pursues different types of gender objectives. It also requires a wide range of staff ranging from university president, college deans, research coordinators, administrative heads, but also teaching and support staff, to act differently. The comprehensive scope of a gender policy as well as the required change in a broad range of stakeholders means that the expectations of what can change as a result of the projects' interventions have to be realistic. For the projects in this case, several changes can be reported. New gender policies and strategies have been developed, gender infrastructure where it previously did not exist is being considered, gender guidelines for research proposals have been introduced and awards for high-performing female students have been established.

Nevertheless, actual changes are mixed, and might be highly uneven, and often fragmented. Most institutes are still in the process of developing and adopting a comprehensive gender policy. In the cases where policies are in place, their implementation tends to be scattered. The activities taken up tend to be the 'low hanging fruit' (i.e., easily organised), and those that can be put in place by individuals. These tend to be from the Gender Affairs Office, where staff has the commitment and perseverance to do so. In other words, the more difficult and highly political issues, such as those entailing more equitable sharing of resources, for example scholarships provided to faculty by the projects, are harder to address.

Gender assessments

All three projects carried out a gender assessment that allowed for an overview of the various gender concerns at stake in the institutions. The assessments assisted in identifying opportunities, existing activities that can be further strengthened, but also bottlenecks, challenges and gaps. The assessments were conducted by the external Ethiopian and Dutch gender advisors, who visited the respective educational institutes and talked to a range of staff. These included college deans and management, educational programme and/or research coordinators, lecturers including those teaching gender courses, female academic and administrative staff, female students, representatives of gender/girls clubs; as well as leaders at the university level, including university presidents, vice-presidents on academic affairs, and directors of research, postgraduate training, and gender affairs.

Gender mainstreaming policy or strategy

The next step was to organise a workshop to support the formulation of a gender mainstreaming policy or strategy. The aim of the workshop was for the participants of the educational institutes to identify gender concerns in their institutes, formulate shared objectives and carve out a policy or strategy of how to engage with them. The largest part of the workshop consisted of working group sessions in which teams of the universities or colleges work on specific aspects of the gender policy. This working group was supported by three inputs discussed at the beginning of the workshop: a report on the findings of the assessments; the national and international policy context and the policy and strategy initiatives of the Ethiopian government on gender equality; and concepts of gender and gender mainstreaming, that were further clarified and presented as a lens through which participants can look at their own institutes. At the end of the workshop, participants drafted the framework of a gender policy or strategy, and started formulating action plans. They also decided what follow-up steps they will take in their respective institutes, and how the project can further support these steps.

In NICHE-146 this workshop took place in the college, and with 25-30 college staff. In NICHE-015 and NICHE-019 this workshop took place at the 'project level', meaning that it was a workshop with teams from the different universities coming together. For NICHE-019 for instance, four university teams of four staff members each participated. The advantage of having the workshop within the institutes itself is that a larger group of people can be involved in the conversation; the advantage of bringing different university teams together in a workshop is that they are exposed to and can learn from each other experiences.

Establishment of gender infrastructure in educational institutes

Especially in the NICHE-146 project, the establishment of a gender infrastructure was part of the project activities. The first step in this was the establishment of a so-called gender domain group, in which five staff members of the college participated. The second step was to appoint a gender advisor, who would assist the gender domain group and the college management in formulating and implementing a gender strategy. The external project advisors have a coaching role vis-à-vis the college management and the gender advisor.

d. Institutional change process dynamics

Factors facilitating change

The gender-equality objective did not start from zero in the Ethiopian policy arena

The projects' gender activities and results are not operating in a vacuum. In most of the institutes, prior to the project, actions were already being taken (with respect to the position of female students,

for example); a gender infrastructure or parts of it already existed (for instance the presence of gender officers in colleges, or gender directors at the university level); and steps have been taken in policy formulation (gender policies are in the process of being drafted, anti-harassment strategies adopted and under implementation). The gender-focused activities in the projects hence do not start from zero, but land in already on-going processes of previously initiated activities and strategies which have been initiated by stakeholders in the colleges or universities. Moreover, changes are taking place, of which the most visible ones are the increase in female students, and the growing numbers of female academic staff.

Small changes can help to promote other changes

This increase in students also pushes organisations to address gender issues. For example, the ETH-015 supported a scan of the various efforts by 13 New Public Universities (NPU) to address gender issues within their institutes that became more visible with the rapid increase of female students. What became most apparent was that the NPUs had already been taking active steps, albeit to varying degrees. For those already with established gender mainstreaming structures and activities, the scan served as way to consolidate their efforts and identify strategic areas to build upon. For those NPUs whose gender mainstreaming efforts were less evolved, they were able to learn from the successes as well as challenges from sister NPUs.

Mixed teams of internal change agents and external advisors can effectively open up space

External gender advisors can help open doors that might otherwise remain shut. It is also key to work with a mixed team of Ethiopian and Dutch gender advisors; the Ethiopian advisors bring in valuable knowledge and insights into the local context, and when combined with the external gaze of Dutch advisors, they can generate new insights and identify new opportunities for institutional change. It is partly because they are external agents, and because gender is pushed by the project funder that these external agents can access staff and decision-makers at different management levels, and open the conversations on gender issues in the institutes.

Factors hindering change

Gender equality is a contentious issue for some

Part of the existing gender dynamics is also that gender issues are or have become contentious. There are considerable differences in how willing people are to recognise, question and reshape gender dynamics. Some people do not acknowledge gender inequalities, others voice specific concerns and barriers women face as students or staff. In Ethiopian institutes, conversations on gender issues often go into discussions about affirmative action and the importance of merit in appointing and promoting students and staff. These discussions point to the existence of different perspectives on and concepts of gender and gender equality. The way such conversations frame gender concerns (e.g. providing access to women through affirmative action goes against competition and achievement on basis of merit, and might lead to lowering levels of quality) also affect the acceptance of addressing those concerns, and opportunities for change. A specific concern in this respect is that a focus on affirmative action risks pushing institutional factors that affect women in academic institutes out of sight.

The short timeframe and low resources given to gender mainstreaming in NICHE projects

One reason for the changes being slow and small, concerns the short time the NICHE projects have been operating. A second reason is the disproportionate resources allocated to gender mainstreaming despite the prominence given to the strategy in the projects as well as by Nuffic. For example, in one of the projects, gender mainstreaming comprises one of three project outcomes but accounts for only 7.3% of the implementing budget.

The lack of clout of both the internal and external gender change agents

The gender officers/directors and female staff as internal change agents do not necessarily have the institutional mandate, resources and decision-making power to effectuate change. The gender coordinators in the projects themselves are often not involved in the strategic planning and decision-making meeting on project planning and allocation of resources. The external gender advisors are in all three cases not the project coordinators or leaders, and their control over project planning as well as the budget allocated for gender activities and results differs.

In some universities, gender infrastructures have been established, with for instance a Gender Directorate at the university level, but there are considerable differences in how strong this directorate

is, in terms of staffing, gender capacity of that staff, resources, and mandate. In some universities, gender offices have also been established at college levels, but the strength of the gender officers varies strongly, also in their position vis-à-vis college management, their control over budgets (usually not), and their mandate vis-à-vis other staff at different levels of university or college management.

College and university institutes have limited sphere of influence

With respect to placement of students or recruitment of staff, actual decisions are taken at the level of the Ministry of Education. For example, allocation of students and the subject areas assigned to them are decided by relevant educational authorities. In some cases, staffing and organisational structure are also decided by such authorities. This means, for example, that Holeta college is unable to assign a gender officer as its staffing composition is not within its sphere of control. The required change of educational curricula and teaching methodologies is not in full control of the colleges, because curricula are designed at the national level. The lack of clear budget lines from the Ministry of Education on gender objectives also undermines the effectiveness of the gender offices, as well as the financing of tutorials, for instance. Changes are underway in this respect, and the MoE is working on a gender budget line.

Most of the tertiary education organisations are still at an early stage of wider institutional transformation

Many of the organisations in these projects are in the process of striving to become relevant educational institutions. They are also in the process of adopting new government policies and procedures, such as the introduction of new national Employment Occupational Standards and a certification system for technical colleges, or new financial policies geared towards being more financially independent. The challenges organisations face in promoting gender equality are thus embedded in wider organisational change processes that are complex and can be highly politicised. Such processes, however, also provide a major opportunity in that they require institutional analysis - and a gender analysis can be integral to that process. Momentum can be created for an in-depth gender assessment of the institutional structure and processes, which can serve as an important input into the formulation, adoption and implementation of a gender mainstreaming policy for the institution.

e. Lessons learned

- 1. Institutional change or mainstreaming of gender equality is a long-term process, and often fragmented and unevenly implemented.**
- 2. A comprehensive policy framework is necessary** for upscaling, consolidating and deepening gender initiatives.
- 3. When designing projects, look at the gender implications of their objectives.** For example, when labour market oriented curricula are aimed for in a project, consider the gender dimensions of the market, and actively integrate them in the curriculum design. When a project contributes to promoting commercial agriculture or liberal economic policies, recognise that these risk favouring male-owned large farms while relegating women to informal labour roles. Moreover, policies that rely on farmers recovering costs from their own income generating activities favour better-off farmers who can afford extension services while excluding others, such as female-headed household subsistence farmers.
- 4. Recognise that small changes can also be meaningful.** A simple evaluation looking at graduation rates of female students, and the adoption and implementation of gender policies would most likely lead to the conclusion that nothing big had happened in these institutes, but such an evaluation would not do justice to the different meaningful changes that did occur in the differently situated colleges. Moreover, big or small changes create new opportunities for taking next steps.
- 5. Think of gender mainstreaming and institutional change as a two-level game.** One challenge is to work on policy formulation and adoption level; the other is changing practices.

Unlike conventional wisdom that policy guides practice, activities also occur without formal policies or administrative frameworks, such as guidelines, being adopted. They do so because 'gender' decisions are being made on a daily basis and in big and small ways. The assessment and workshop can actually affect both. In some cases, the gender officers/directors used the workshop to draft a new version of the gender policy, with some new university colleagues now included in the core-drafting group. In other cases, the college or university has not yet reached the point of drafting a comprehensive gender policy, but the conversations, assessment and gender lens did contribute to the set-up of a gender office, the identification of new activities, etcetera. Moreover, the conversations on gender can affect decisions in the institutes, for instance on granting Masters and PhD scholarships to female and male staff, on deciding to reserve scholarships for undergraduate degrees, on decisions whether pregnant graduates can or cannot sit for certification exams out of fear for their safety, or on whether women can do the practicals on artificial insemination in animals, due to the sexual connotations.

6. **Establish participatory process-oriented gender assessments** as well as initiatives that foster commitment and inspire. Gender assessments and workshops can help build awareness/change mindsets, or put on a 'gender lens'. Apart from the workshop programme set-up, the combination of different kinds of participants is important to (1) broaden the group of staff engaged with and responsible for gender change, and (2) to have the institutional dialogue. In all cases, a specific mix of participants was sought, bringing together the gender officers/directors (that is the gender infrastructure, the internal change agent, push factor), female staff (the voices), and 'mainstream' staff (college management and educational and research coordinators).
7. **Make use of gender champions at different levels.** For the 'implementation' of a required institutional change, the gender directors and officers are key players. Yet, because they are not the key university of college managers, their potential to effectuate the required changes is limited. Two other groups of internal agents are important for strengthening the capacity to effectuate change.

A second important group of important internal change agents is female staff (both academic and administrative), and female students. Some of these are highly appreciative of opportunities to voice their concerns and to question the way their institutes operate and how that affects their opportunities. Many of them experience little space and opportunities to voice such concerns within existing platforms and spaces. Active reaching out to them is important for deepening the constituency that the gender officers represent, and for making their lived realities in the institutes visible. A third important group of change agents are managers who are receptive towards or supportive of gender. They are important potential allies to open up more space, gain support for organising gender assessments and workshops, and following up the outcomes in the colleges and universities. A fully developed gender mainstreaming policy actually requires those office holders and managers to carry out their office differently. The implementation of gender mainstreaming has to a large extent be done by them.

8. **The position of internal change agents/ allies or 'champions' has a major impact on project success.**
9. **External gender consultants can help open doors.** Mixed teams of national and international gender advisors offer a strong basis for bringing together an external gaze and experience with contextualised knowledge. It is partly because they are external agents, and because gender is pushed by project funder that these external agents can access office holders and open the conversations on gender issues in the institutes.

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Case study 5: CAPRI South Africa agricultural education change project

Written by R.J. Ludemann⁴

a. Case introduction

This case is situated in South Africa and the changes aimed at by the project described take place in a wider institutional setting which in itself is subjected to far bigger changes, given the particular evolution of history in South African society. Since Nelson Mandela assumed presidency about twenty years ago, a whole new generation of South Africans has been brought up in the post-apartheid era; however, many of the social, economic, political, juridical, and cultural institutions are still heavily influenced by the heritage of the past. All sectors, including the agricultural and educational sectors bear evidence of this phenomenon.



Rural communities can greatly benefit from proper training and speeding up of the Land Reform process (photo: Ruud Ludemann)

In the agricultural sector, the national government is pursuing a reform policy to restructure its property base towards a situation in which the proportion of land and farm enterprises owned and exploited by previously disadvantaged people – a typically South-African expression for non-white people – is in tune with the general composition of the population. This reform process heavily depends on the proper functioning of the national programme for Land Reform, a programme combining land restitution, redistribution and reform of tenure rights. It also depends on how farm land is being exploited, before, during and after the reform measures have taken effect. Which is, in its turn, heavily dependent on the choices these people make in using their skills, knowledge and experience and assets they can acquire through the Land Reform policies, the national program for

⁴ Based on intensive collaboration with the entire crew that gave birth to the Big-5 extension training course, the field extension workers, extension managers, staff from the Provincial Departments of agriculture in the Eastern, Northern and Western Cape Provinces, and last but not least staff from the Cape Institute for Agricultural Training.

Black Economic Empowerment in Agriculture (Agri-BEE), the Comprehensive Agricultural Support Programme (CASP) and other support programmes.

In the agricultural education sector, a host of challenges, obstacles and constraints negatively affecting the performance and quality of the programmes the institutes for Higher Education (HE) and Further Education & Training (FET) in agriculture. This is due to a variety of reasons, including scarcity of competent staff, lack of proper incentive structures, career perspectives and secure funding, and a quite general inconsistency of political vision and support for their role in society. While the government is struggling to formulate, elaborate and implement an overall national policy on HE & FET, individual colleges, technikons, universities and training institutes are making an effort to provide relevant educational programmes in order to build, complement or upgrade the competence of future and existing staff and practitioners in the agricultural sector.

Table 1 shows the fact sheet of this project. The project team consists of two main partners in South Africa and three in the Netherlands. These partners are briefly described below.

Table 7: Fact sheet of the CAPRI project

Project name	Cape Agricultural Programme for Rural Innovation (CAPRI) ZAF112/174
Country	South Africa (in the Northern, Eastern & Western Cape Provinces)
Tertiary educational institutions	Provincial Departments of Agriculture (Provincial DoAs) and the Cape Institute for Agricultural Training (CIAT)
Time frame	2005-2009
Funding sources	NUFFIC, GoSA
Partners involved in implementation	<u>Holland</u> : CDI-Wageningen UR, SSG, VHL <u>South Africa</u> : CIAT, Provincial DoAs
Main stakeholders	CIAT management and its teaching and lecturing staff; Agricultural extension staff and HRM section at Provincial DoAs

At the national level, the Department of Agriculture, Forestry and Fisheries (DAFF) is in charge of policy-making for the agricultural sector, while the provincial Departments of Agriculture (DoA) have the task to elaborate the national policy guidelines, taking into account the specific needs and potential of the sector in their provinces. For all DoAs, human resource development is one of the areas of major emphasis. In the Eastern, Northern and Western Cape provinces this led to a request to NUFFIC to develop a programme to build capacity and strengthen agricultural extension education and training. The Cape Institute for Agricultural Training (CIAT) was chosen to be the lead institute to coordinate the overall project activities, and project implementation in the Northern and Western Cape, whilst in the Eastern Cape Province the DoA would organise, implement and supervise such activities, assisted by the University of Fort Hare and the Fort Cox Agricultural Training Centre. CIAT provides Diploma courses, Higher Certificate courses, education at the Bachelor of Agriculture level and short-term FET (Further Education and Training) modules. CIAT has about 30 teaching and lecturing staff. The last couple of years, the average number of higher education (HE) students is around 360 – 420, most of whom are housed on the premises of the college itself, while the FET serves some 1500 trainees per year.

b. Changes envisaged by the project

The Cape Agricultural Programme for Rural Innovation (CAPRI) project aimed to improve the capacity of agricultural education for agricultural and rural development to better respond to the needs of existing smallholder and emerging farmers, as well as beneficiaries of the Land Reform programme. CAPRI comprised 5 inter-related project components:

1. *Curriculum development*: development and accreditation of new courses on agricultural extension.
2. *Research into extension and rural innovation*: financing of higher education degrees at institutions in South Africa and the Netherlands, with research component in South Africa on topics directly related to the agricultural sector and rural development.
3. *In-service training for extension field staff*

4. *Development of extension policies in an interactive way*
5. *Upgrading CIAT's project management capacity*

c. Changes achieved by the project

Curriculum development on agricultural extension

CIAT is offering a Bachelor of Agriculture degree in Extension, and a renewed Diploma course in extension. Informed by a labour market survey, the development of this course and its implementation were used as an instrument to create a core group of extension master trainers and provide training of field extension workers.

Research into extension and rural innovation

Under this component, nine students attended a MSc course at Wageningen University, and two started their studies to obtain a PhD under joint supervision from Wageningen University, the West Cape University and Rhodes University. All students conducted research in South Africa on topics directly related to the agricultural sector and rural development.

All of these MSc and PhD graduates are now employed at strategic positions within the sector contributing to agricultural and rural development.

In-service training for extension field staff

CIAT and the DoAs operate a core team of extension trainers and run the Big-5 extension training course (see details in Box 16). Over 400 field extension workers and extension managers have been trained in this course. The DoA EC has already organised a follow-up to the four project Big-5 training cycles held at CAPRI. This initiative, together with UFH, Fort Cox and the ARC led to the present NICHE/ZAF123 project (2012-2015) which acquired accreditation of the Big-5 course and formal qualification of the group of ten core trainers as facilitators, and expansion of this group, training of more extension trainers and another batch of 400 extension field staff on its agenda. The extension field staff who attended the five training cycles have enhanced assertiveness, developed professional pride and gained direction.

Box 16: The Big-5 extension training course

The course consists of five modules tailored to five action domains of essential importance for successful extension performance, hence its name: the "Big-5 course". A full Big-5 training cycle consists of the five training modules spread over a period of 4 to 5 months as follows:

- Modules 1 & 2 (Livelihoods, Rural Development & Farm Economics) in block #1,
- Modules 3 & 4 (Interpersonal communication & Group dynamics) in block #2 , and
- Module 5 (Extension management) in block #3.

These modules are highly participatory, based on experiential learning. Trainee groups count 20 -24 participants and training is provided by two co-trainers. During the 8- to 9-week intervals between the blocks, the trainees have to elaborate task assignments designed in a way to facilitate the extension workers' daily tasks, instead of being an add-on. Their content and the training methodology generated considerable enthusiasm among the trainees, trainers, extension managers and policy decision-makers within the provincial DoAs. The course slotted in with the launch of the national Extension Recovery Plan, a programme in support of upgrading the extension advisory services for agricultural and rural development in South Africa.

An unexpected positive result of this project was that the DoA EC created a Unit for Human & Institutional Strengthening to institutionalise in-service training for Human Resource Development (HRD).

Development of extension policies

The project introduced and consolidated the habit of organising a yearly seminar for the participating DoAs and other stakeholders to exchange information, discuss and reflect on the progress of CAPRI's implementation, research findings, and experiences accumulated in the preceding year.

This activity was successful in that the DoA decision-makers and extension field staff now practise interactive policy-making. This has even moved into other areas as the DoA EC has now adopted the yearly reflection seminars for exchange and consolidation of experiences.

Upgrading CIAT's project management capacity

CIAT have gained and successfully apply project management competence to acquire and run (inter)-national projects. However, with the wisdom of hindsight, this project component got insufficient attention. Somehow the implementing partners did not in a timely way manage to identify the characteristics, constraints and potential of the existing practices and procedures, and tackle the deficiencies adequately. According to the design of the project, the various components should feed into one another. During the five years of its implementation the project components varied a lot in rate of development and therefore such mutual reinforcement was weak.

To increase the synergy originally intended and to solve some persistent problems in the various action domains, a CDI staff member was temporarily stationed at CIAT, a move that also enabled CDI to get a deeper understanding of institutional intricacies and daily chores. This greatly facilitated coaching, networking and identification of areas where assistance could be most effective. Although only to a slight degree, this also contributed to improving the component of policy design.

An unexpected change during the life of the project was that CIAT's administrative structure was changed. Two deputy-directors were assigned to CIAT for HE and for FET. However, mandates and tasks were not defined and this sparked territorial disputes which were in no way resolved during the lifetime of CAPRI.



Rich picture exercise during a workshop of extension workers (photo: Ruud Ludemann)

The design and implementation process of the Big-5 extension training course and the establishment of the core group of extension trainers has, by far, had the most extended impact of all the CAPRI project activities. For example:

- several departments of the Eastern Cape (EC) DoA filed requests for similar in-service training courses;
- EC DoA took the initiative to accredit the Big-5 extension course;
- EC DoA incorporated the in-service training in its annual work plans, personal performance plans, in its management function, and promoted most of the trainers from the core group
- field extension workers in all three Cape Provinces are eager to attend the training, and similar courses;

-
- Northern Cape DoA asked to be kept in the loop of the continued Big-5 activities in the Eastern Cape Province; and
 - The B.Agric curriculum was derived from the Big-5 course, and also the Diploma course in extension heavily draws on the course materials of the Big-5.

d. Institutional change process dynamics

Factors facilitating change

A good basic project design

The quality of the original project design can be a great help in project implementation. It serves as a basic road map with clear indications of the route to be followed, and also provides information on the surroundings, so that temporary deviations can be corrected. Travelling in uncharted territories is always a lot more difficult than travelling unknown territories, but possessing a good map.

Full engagement by project implementation team, core groups of trainers and other staff members

Getting there was through establishing trust, practising empathy, making contacts, working 24/7, setting the example, being accountable, capitalize on knowledge and experience, stimulating people to do what they are good at and what makes them tick, and tackle problems once you are aware they are there, instead of “beating around the bush” and pretending they are not there.

The group of core trainers was trained through their full engagement in the design, elaboration and application of the course curriculum (Learning by doing, applying what they learned assisted by intensive coaching). The same can be said about the core extension management staff participating in this project. Their enthusiasm and willingness to participate, and their flexibility helped to make the project successful. Finally, the readiness of policy-makers within the DoAs to give full support to project implementation facilitated the process greatly.

Alignment with national policy directives

This helped the project in the Ministry of Agriculture’s promotion of the “Extension Recovery Plan”.

Expertise of the project team and their connection to decision-makers

The project’s successes were greatly facilitated by the project team’s thorough knowledge and experience with the subject matter at hand, their local experience, connectivity and commitment. Also important was the project team’s strategic understanding of the institutional context in which to operate, and their good rapport with individuals involved in pivotal positions.

Flexibility of donor

NUFFIC’s flexibility in agreeing to a budget neutral extension added a year to the project, which was important to booking successes. NUFFIC also agreed to a temporary 6-month placement of an external advisor in South Africa, to get a better understanding of the situation of the local partner.

Factors constraining change

Insufficient research in some elements of the project design

In the baseline study insufficient attention was paid to the managerial capacity of CIAT. Had there been a better overview, the project may have been better prepared to deal with gaps in its ability to manage this project.

Lack of continuity in staffing

Staff retirement, high turnover, and the promotion of key individuals all contributed to slowing the pace of administrative procedures, having an impact on the project’s ability to implement its activities on time.

Lack of managerial capacity in project implementation procedures

After funding was secured and the project was launched, the Project Steering Committee formed by representatives from the provincial DoAs and headed by the CIAT director, did not function properly. Unfortunately, the implementing organisations paid insufficient attention to the systems and procedures for project management, administration and finances at an early stage in project implementation.

Not enough attention to monitoring

CIAT's project management could have more effectively been enhanced if structurally more attention had been spent on monitoring that particular project component. Also, through more intensive monitoring a higher success rate in positioning the MSc and PhD graduates could have been achieved.

Not enough time/flexibility to deal with unexpected changes

An unexpected change came in the second year of implementation: the managerial set-up at CIAT was changed, without clear definitions of mandates and division of tasks. This negatively influenced CAPRI. One way that this problem was dealt with was to redistribute consortium tasks, when one partner could not provide the services required for the Curriculum Development component.

Lack of communication and trust between project team partners

The partnering organisations unfortunately did not manage to create an atmosphere of togetherness and trust that allows open communication; they rather behaved as a temporary coalition of project partners all "doing their thing" and closing shop after the assignment expired. One reason for this problem could relate to the fact that deeply rooted attitudes and expectations concerning roles and responsibilities in international support projects were not adequately dealt with.

The consortium partners were hesitant in keeping each other on track of changes. Schedules and terms were often altered, without discussion or corrective action, and the original project design was distorted in a negative way (e.g.: recruitment and selection of MSC/PhD students caused at least 1 year delay in project component 2, in curriculum development a mismatch of approaches caused a 2 year's delay; under component 3 only 2 MSc graduates were employed placed within the sector, instead of 9).

This lack of communication meant that many opportunities were lost. For example, the consortium partners did not provide assistance in the organisational upheaval caused by the restructuring of the management structure of CIAT. The consortium partners also held back when it became clear that the Project Steering Committee did not function as projected in the project design, and doing so lost leverage to foster direct contact with the decision-makers inside the provincial DoAs.

This situation led to the temporary stationing of one of the project implementation team's Dutch members, in order to strengthen CIAT's project management in a sustainable way. However, this temporary stationing came at a very late stage in the project, and much time was lost.

e. Lessons learned

1. **At the start of the project, jointly verify the results of the situation analysis** presented by the host organisation because they can be of significant importance for the results to be achieved. Temporary delegation of a permanent staff member for some longer time at the project's start on either side of the partner organisations can be very helpful in this respect; intensive contact between project implementing partners pays off most profitably if it is practised during the earlier stages of the project.
2. **Three essential conditions for successful project implementation:** Create, enhance and consolidate **staff commitment**; periodically **monitor** with adequate follow-up; and create or finding an effective **enabling environment**. This is clearly illustrated by the results achieved by the DoA in the Eastern Cape province. In case any of the aforementioned conditions is lacking, results that can be achieved in capacity building are minimal, as illustrated by CIAT outsourcing vital project activities to temporary staff.
3. **Foster open and direct communication among all project partners, and build a commonly shared database, right from the start.** Identify and discuss problems instead of evading them. Sharing information on affairs that curtail the organisation's management capacity is the first step towards solving bottlenecks.
4. **Ensure regular monitoring and follow-up actions.** If major elements in a project's design are altered during implementation, or when major changes in the project's environment or its institutional set-up occur, the project management team and the supervising entities should

systematically review the implications of such changes for the project's set-up and implementation, and take effective action for adequate adjustment of the project.

5. **Keep the mandates for operational and strategic project management separate.** Staff in charge of those action domains should have sufficient time and be properly positioned to deploy their functions.
6. **(Jointly) connect with strategically important parties and align with national policy priorities.** Partnering organisations should be duly introduced to each other's strategically important institutional parties for the benefit of the programme/project at stake, and they should help each other in the effort to lobby and network for political support. If necessary, assist partner organisations in lobbying for institutional embedding. Pro-active and sustained policy support are necessary for a project to be institutionally embedded.
7. **Ensure project staff quality and continuity.** The partnering organisations should employ staff with solid expertise in the project, guarantee their availability during project implementation and provide adequate organisational back-up and support.
8. Successful project management requires the **serious commitment of the executives of the leading (consortium) organisations.**
9. Right from the start, the organisations in charge of project implementation should **zoom in on the scope for institutional change** inside and among the requesting organisation(s), the actual situation, competences, motivations and the resources, constraints, potential and opportunities at hand.
10. In project design, formulate a strategy to **link capacity building of individuals to their post-studies contributions and performance** in their organisation or network.
11. **Practise what you preach.** Organisations providing support in processes of institutional change should play an exemplary role, embodying the advice and support they provide.
12. **Go beyond changes in organisations to the policy level in order to bring real institutional change.** Institutional change cannot be brought about by a single Agricultural College, or whatever educational institute: it can only implement decisions in this regard taken by the MoA. A single college can only bring about internal organisational changes, but to be able to do so, its managerial staff should have the competence, experience, mandate and clout to pull that off.

Case study 6: Learning about institutional change in fragile states from the ATVET project in Afghanistan

Written by Mundie Salm and Hans van Otterloo, CDI staff members

a. Case introduction

A fragile state such as that of Afghanistan provides a context that is filled with uncertainty, instability, insecurity, a fractured sense of nation, and also corruption. Unemployment is high at 40%, with the number of unskilled young people estimated at 3 million. Agriculture is the most important sector in Afghanistan, and thus agricultural and rural development is an important priority for the government.

Although this project was initiated in 2011, it has a longer history. In the pre-phase of the project, a total of 30 Afghan students were financed to in two groups undertake Masters' training at Van Hall Larenstein (VHL) University of Applied Sciences in Wageningen, Netherlands. About half of these graduates were eventually hired as Faculty lecturers and managers for the newly established National Agricultural Education College (NAEC). Since 2011, the Centre for Development Innovation (CDI), Wageningen UR has taken the lead in designing and executing this project. CDI has two hired advisors from Holland working on this project, based in Kabul. These external advisors first had offices in NAEC, but are from this year (2013) gradually handing over to two Afghan faculty members, and working more from offices at the national counterpart Deputy Ministry of TVET.

Table 8: Fact sheet of the project

Project name	Agricultural TVET: Improving Agricultural Education in Afghanistan
Country	Afghanistan
Tertiary educational institution	National Agricultural Education College (NAEC) - and Agricultural High Schools throughout the country
Time frame	2011-2016
Funding sources	The Netherlands Ministry of Economic Affairs, Agriculture and Innovation; and the Netherlands Ministry of Foreign Affairs
Partners involved in implementation	Afghanistan Deputy Ministry of Technical Vocational Education Training (DMTVET), Wageningen UR's Centre for Development Innovation (CDI) and the Czech Republic's People in Need (PIN)
Main stakeholders	Staff at the DMTVET, Faculty of NAEC, student teachers at NAEC, and teachers at AHSs – and ultimately students at the AHSs throughout Afghanistan

b. Changes envisaged by this project

With the government's general objective to improve agricultural and rural development throughout Afghanistan, agricultural education is an important way of making far-reaching changes in this sector. Traditionally, education in Afghanistan has been regionally based. However, following three decades of instability, the national government decided to centralise this sector. A national curriculum has advantages, including stimulating national cohesion and consensus. It also facilitates a unified approach for improving and updating educational curricula and teaching methods.

The specific aim of this project is to improve the quality and reach of agricultural vocational education in Afghanistan. It sets out to do this by:

1. Improving teacher training through establishment of the National Agricultural Education College (NAEC) in Kabul;
2. Updating and improving the level of curricula, teaching quality (in-field training) and materials at Agricultural High Schools (AHSs - grades 10-12) - and originally also the Agricultural Institutes (grades 13-14) - throughout the country.

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3. Providing direct support to AHSs where equipment and other supplies are needed.

c. Changes achieved thus far

AHS and AIs have grown from a handful in 2009 and close to 100 throughout the country by the end of 2012. This growth was stimulated by the Afghan government, though many schools opened before they have acquired the basic facilities (chairs, tables, land, equipment...) needed. The improvements have therefore become increasingly urgent.



Students and teachers helping establish the learning fields at NAEC, Kabul (photo: Hans van Otterloo)

The Agricultural TVET (Technical Vocational Education & Training) project, running since 2011 is still very 'young' and therefore has a long way to go before it can claim to have reached institutional change. In improving the quality of ATVET in Afghanistan, several issues have needed attention within the education system as a whole. Two years from project initiation, four main **institutional change themes** have emerged, and are still on-going:

ATVET Curriculum development (CD)

Improving the contents and quality of the curriculum has been a top priority from the beginning of the project. The curricula currently in use are very outdated, with course material full of mistakes and irrelevant content. And for the NAEC teachers' college, the curriculum and course material needed to be developed from scratch. Finding the right process to develop a relevant and high quality curriculum has proven to be a challenge in this project. For the NAEC curriculum, project advisors from Van Hall Larenstein (and later CDI) in collaboration with the NAEC faculty members trained in Holland took the lead on this.

The curriculum for the agricultural high schools and institutes had already been determined in workshops in 2007-8 which included the Ministry of Education (including TVET), lecturers from University of Kabul, school teachers, as well as different international NGOs. This curriculum reflected the idea that agricultural development should be more commercial and use high tech methods. Being vocational education, the course material also needed to be linked to agricultural developments and the labour market. However, in Afghanistan, the labour market is very informal, and so it is difficult to get a good grip on it. At first, the teachers' materials for the curriculum were developed by Purdue University, and funded by USAID. However, Dutch Foreign Affairs took the project initiative over in 2009/10 because the Netherlands is the member of the donor community officially in charge of Agricultural education. Dutch subject matter experts were then approached to help develop the materials. However, within a year, it became clear that this process was very much underestimated in the project design, in terms of time (and resources) needed, as well as the difficulty of producing

relevant information at the correct level when so far removed from the context. The 2-year Agricultural Institute curriculum was dropped, to focus on high schools only.

Early in 2013, the project also decided to put AHS teaching materials more in the hands of Afghan partners, with the development of a CDU (CD Unit); this includes senior faculty members of NAEC (trained at VHL), staff members of the DMTVET, supported by a small team based at CDI and Agromisa, in the Netherlands. The textbooks themselves will finally be written by DMTVET staff and lecturers at the University of Kabul, monitored and supported by the CDU. The CDU at NAEC is to take more of a leadership role in teacher training and piloting of the AHS materials. This is hoped to lead to more sustainable institutional change, with the AHS materials being developed closer to the base, but with input of new ideas and methods from the team in the Netherlands. This will allow for greater capacity development of NAEC faculty members.

Changing teaching methods and culture

Alongside curriculum development, an important institutional change that has been promoted by the project is a change in teaching methods as well as the teacher- and textbook-centred culture that exists in Afghan schools. This involves teacher training programmes as well as the integration of more creative, practical methods in the teachers' guides accompanying student textbooks at NAEC and the AHSs. While NAEC provides pre-service training, partner organisation People in Need (PIN – a Czech NGO) conducts in-service training to current AHS teachers. For NAEC faculty lecturers, a different teaching approach is being stimulated through regular intensive courses on interactive, learner-centred methods. The NAEC grounds now include learning fields, a permaculture garden and a greenhouse. For the AHS modules, three changes have been introduced, to stimulate more discussion with students: ideas for interactive teaching instructions (suggested exercises involving questioning students, group work, brainstorming, drawing, etc.); suggesting creative and hands-on 'interest approaches' to introduce lesson topics (e.g. bringing fruit, seeds, a goat to class; digging a hole and making observations, playing a game, etc.); and suggestions for practical exercises outside or in a laboratory, excursions and field visits.

Project partners have observed that students at NAEC are particularly enthusiastic about adopting more practical and interactive methods. By teaching these methods at NAEC and in the in-service training to AHS teachers - and if NAEC graduates teach in the agricultural high schools, the hope is that these graduates will become the necessary 'change agents' that will eventually lead to a different way of teaching.

Related to this, additional training has been necessary for the NAEC faculty members. Because so much happened so quickly and from scratch, more and increasingly varied responsibilities were placed on the NAEC faculty members, that fall outside their mandate as solely lecturers. For example, several have had to take on more management responsibilities; four now play a major role in the CDU (see point 1 above); NAEC faculty will increasingly take over in-service teacher training; and the CDU may also become more involved in the monitoring & evaluation/ piloting of new AHS materials.

Getting more of a gender balance in the agricultural vocational education system

Gender equality is a very deep-seated issue in Afghanistan, also among teachers, and will not change quickly. In response to donor demands, but also due to demands from within the country, this institutional change theme is being tackled by the project team. In Afghanistan, agricultural education is traditionally a domain of males, although women do work on farms, and can find jobs as veterinarians and teachers, for example. The strategy is to create conditions that encourage more women to go to NAEC, to become teachers at AHSs, thereby attracting more girls to attend these as opposed to general high schools. The first year of graduates at NAEC are all young men. From the second year, a special approach was developed to attract and train females to then go on to teach at the AHSs, which would therefore attract more girls to attend these schools.

Among the group of Afghan students who followed the Master's degree at VHL were six women, four of whom are now core members of the NAEC faculty. The total of six female faculty lecturers now working at NAEC serve as role models for potential female teachers. A number of steps were taken at NAEC, to deliberately encourage females to study there. Because their families do not want their daughters to live away from home in a dormitory, NAEC started by focusing on female candidates from the Kabul area only, so that they could still live at home while studying. The college arranges daily transportation for these students. An agricultural preparatory course was also created for the female candidates, to allow them to quickly catch up on basic agricultural knowledge - because they had attended *general* rather than *agricultural* high schools. The current group of 19 female students are also taught in classes separate from the males. Now in the preparation stages of its third year, NAEC has managed to attract a group of 65 students for its current prep course. The plan is to slowly attract more female students from other parts of the country, once a female dormitory has been built; and to eventually set a chain of changes in action as more women teachers get positions at agricultural high schools, encouraging more girls to attend them, and so on.

The political climate of Afghanistan is still very unstable, however. Taking the decision to encourage more female attendance creates a new risk for NAEC which could backfire: a group of female student teachers might make the college a potential target to conservative elements. Partly for this reason, NAEC has a male principal and a female vice-principal; if necessary, the college could be split along gender lines into two institutions.

Changes to be able to work in a fragile state context and in terms of donor relations

Working in a context of a fragile (or failed) state which functions in an *ad hoc* way, calls for a strategy of planning in short time periods and cultivating a pragmatic approach, accepting that there will be surprises along the way. Establishing a project in Afghanistan from a country such as the Netherlands calls for an approach that is able to work between two diametrically-opposed contexts. *On one hand*, the counterpart organisation is part of a weak state apparatus that functions marginally, and with limited legitimacy. *On the other hand*, the project is dealing with a donor system that is fixated on rules and regulations; that works according to achieving certain results within short time frames; and that is based on administrative and accounting processes that do not like uncertainty. In order for this project to work, two changes were necessary:

1. The donor needed to approve a project proposal in which project objectives were fixed, but the way to execute them was permitted to be left open and flexible. In this way, adjustments can be made as conditions change. *For example*, the donors at first agreed to only a 3-year timeframe – but were willing to extend to 10 years, on condition that the project is progressing in the right direction.
2. NAEC needed to be allowed to become a semi-private institution, still falling under the DMTVET but with reduced dependency on the state apparatus. This allows it to independently raise and disburse funds; hire and fire staff; and be able to adjust its strategy if necessary. If the NAEC manages to achieve financial independence (a combination of strategies including different donors), this should make it more able to attract quality staff and survive in such an uncertain environment. This is however a tricky issue. For now, Wageningen UR is paying the NAEC faculty higher salaries than the norm in Afghanistan through the project. This can only be sustained by alternative financing schemes, which need to be well worked out before the end of the first phase of the project in 2016. As a first step towards generating income NAEC is venturing into providing short courses for paying clients. At some stage, it may be necessary to test the ability and willingness of students to pay tuition fees.

d. Institutional change process dynamics

Factors facilitating change

Good collaboration within the project implementing team: The positive collaboration with project partner DMTVET has greatly facilitated the quick establishment of NAEC in Kabul. The DMTVET made a school building and dormitories available as well as farm land on a campus that includes three other vocational schools. NAEC is now temporarily set up in one of the Ministry's buildings while a

permanent building gets constructed on the same premises. It is anticipated that the certification process of the NAEC will also benefit by these good relationships.

Building trust within the project team and with the donor: The trust that has been built between the executing agency (CDI/Wageningen UR) and the donor facilitated a more open-ended approach. This was based on developing personal relationships and being very honest about what was possible and what wasn't possible in terms of expectations. At the same time, the Dutch embassy in Kabul is supervising the project, and since they are based in Afghanistan, they have a very good appreciation of the context. The proposal had a time horizon of 10 years which is not normally accepted, but the donor agreed that if certain goals would be reached within the shorter time frame, then another period of financing would automatically come into effect.

Investment in NAEC faculty: Having sent a group of agricultural students to VHL for a Master's degree and paying a higher salary than normal have facilitated the build-up of a core of highly motivated staff that is willing to embrace new ideas and to work on many different tasks outside their mandate. Continuing capacity development (through in-service training) of NAEC faculty lecturers and managers is a priority.

Rapid spread of good reputation of NAEC: The NAEC was accepted quickly as part of the DMTVET landscape by potential students, and the number of applicants quadrupled within a year of opening. The current student body at NAEC originally come from 23 of Afghanistan's 34 provinces, so the school is successful in attracting students throughout the country. This trend should see the quality of students rise as they will have to compete for a position in the school. NAEC has set up its own entrance procedure to avoid the rigging that tends to mar the national 'Konkor' exam process. *This is not sustainable in the long term* as it is logistically complicated and expensive, and the project management (CDI) is seeking other options.

Factors hindering change

The *ad hoc* nature of political decision-making: Although there is a five-year national education policy vision in place, it does not necessarily get followed. This lack of being guided by a clear TVET development plan may hinder getting sustained education change in some ways (although this openness could also be a facilitating factor in other ways). For example, this lack of clarity gave room to a parallel initiative that undermined the project. In 2012, DMTVET decided to use DANIDA's education budget support to republish outdated AHS textbooks; at the same time, the project was piloting new and improved textbooks. This was quite a surprise - but eventually did lead to a more concerted attempt to review the entire AHS curriculum and quality of materials.



Women students in the greenhouse at NAEC, Kabul (photo: Hans van Otterloo)

Cultural attitudes to gender equality (inside and outside the institutional context): Of the 30 teachers at NAEC, six are women, and of its current student population of 275, 19 are females. The discriminatory attitude of parents and communities towards girls' education, the lack of female teachers and the uneven distribution of female teachers in rural and urban settings are major barriers to girls attending higher education. And even fewer girls have been attending agricultural high schools than general ones. So getting qualified student candidates into NAEC has only been possible through introducing special measures there.

Lack of resources: The shortage of qualified staff, equipment and facilities at the Agricultural High Schools has hindered the efficiency/process of change.

Deeply rooted teaching culture mindset: The traditional, teacher-centred, textbook-based rote teaching reflects a certain idea about hierarchy in the classroom. With interactive, student-centred methods, the teacher does not always know all the answers. Also, using practical experiments opens up the possibility that they might not turn out the way they "should". This can be threatening to the teachers' authority. Also, the cultural attitude that a teacher does not dirty his/her hands presents special challenges to introducing more practical methods. Finally, deeply engrained attitudes about gender inequality hinder the progression toward institutional change in curriculum development and teaching culture. It is therefore often difficult for them to accept and adopt changes.

Differences in salary scales: The international community pays higher salaries than the government, which leads to unfair competition for few educated Afghans. In order to attract and retain quality staff at NAEC, Wageningen UR/CDI pays its faculty several times more than people with comparable degrees who work for government. This was not the intention of the project, but was necessary in order to be sure to maintain quality faculty who'd been trained at VHL at NAEC. *This endangers the long-term sustainability of NAEC.*

Lack of labour market needs assessment: The decision about the right focus for curriculum topics has been hindered by the fact that there is still not a clear needs assessment made of the agricultural sector and the labour market. This was to be conducted by the International Labour Organisation (ILO), but has still not come to fruition.

Unreliable partners: One of the partners of the project is a Czech organisation based in Afghanistan called People in Need (PIN). It took over a year to understand that PIN has not been able to fulfil its role of testing the AHS modules with the pilot schools. The results from testing are woefully behind schedule and what has come out of it thus far does not provide any clear indication of how the teachers are using them, what they like and do not like. This is a major hindrance to the process of improving the quality and relevance of the AHS teaching materials.

Lack of sharing and exchange within the donor community: As already explained above, getting to a good process for producing the modules has been full of obstacles. There was also a gap in available materials that are of a high quality, relevant and at the right level. The donor community (e.g. UN agencies, World Bank) does not seem to share up-to-date ATVET materials, so many topics needed to be worked out from scratch. Furthermore, a needs assessment of the agricultural labour market has still not been conducted by the ILO, although it was promised.

e. Lessons learned

1. **Ensure a flexible approach and a long time frame** when establishing projects in fragile states, and especially those aiming for (sustainable!) institutional. The traditional 'hit and run' approach of many donors will not work.
2. **Invest in building up a network on both sides of the project spectrum** (i.e., within the Afghan government and the donor community). This is generally important to being able to move forward, especially when working in a fragile state. *However*, the weakness of this approach is that it relies too heavily on personal relationships and lacks a solid institutional basis.
3. **Don't assume that 'a cook is good at building kitchens', especially in a different context.** Or in this case, don't assume that a functioning tertiary institution in NL has the expertise to build one from scratch in a fragile state. The institutional capabilities of the executing agency (Wageningen UR) were much more limited than assumed at the start of the project. The inability

to work across different units and departments within Wageningen UR necessitated mobilising resources from outside, and internal resources remained untapped. Also, the assumption that TVET institutions in Holland know how to develop TVET materials in Afghanistan did not stand the test.

4. **Invest in multi-faceted local capacity development.** Especially in a fragile state situation, it is important for local project leaders/stakeholders to be able to develop multiple skills so they can adapt to changed circumstances.
5. **Take time to find the right balance in curriculum development.** Curriculum development needs to reflect a balance between the local context and traditions and wider innovations in the world. This is tricky!
6. **Share and make available teaching materials developed for the agricultural vocational school level** - by the many organisations who are working on this to avoid having to produce a lot of materials from scratch.
7. **Clearly negotiate salaries and post-study expectations prior to sending people for training abroad.**
8. **Take care to train people to suit the project's needs.** In this case, do not send potential teachers to an institution that reinforces academic (theoretical) methods, rather than vocational and practical methods.
9. **Be sure to include relevant, local people in the design of a development project.**

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To explore
the potential
of nature to
improve the
quality of life



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