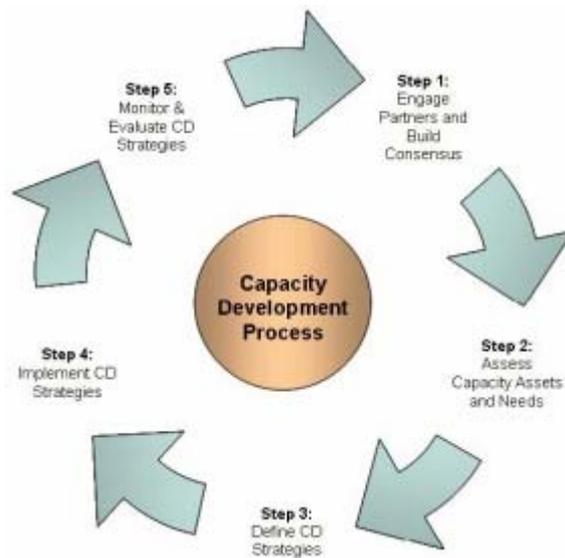


STRENGTHENING CAPACITY FOR AGRICULTURAL INNOVATION (SCAIN)

Capacity assessment in multi-stakeholder agricultural innovation platforms: A review of literature and experiences



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Contents

Acronyms	4
1. Summary	6
2. Background	9
a. Scope of the Review	9
b. Review Methodology	9
c. Challenges and limitations of the review	10
3. Findings	12
a. Literature Review	12
i. What capacity is – and how it is assessed	12
ii. Developing Capacity for Research & Innovation	15
iii. Agricultural Innovation Systems Capacity	19
iv. Integrated agricultural research for development (IAR4D) Capacity	22
v. Research-into-Use Capacity	24
vi. Value Chain Analysis – relevance to Capacity Assessment	26
vii. Summary of the Literature Review Results	27
b. Experiences of Capacity Assessment in agricultural innovation platforms	28
i. Background	28
ii. Summary of interview results	29
iii. Key point/s emerging from the interviews	37
c. Short reflection on the SCARDA capacity assessment experience	38
i. Introduction	38
ii. Assessing Agricultural Innovation capacity at national level	38
iii. Assessing Agricultural Innovation capacity at organisational level	38
iv. Lessons on Capacity Assessment and the Response	39
4. Conclusions: key points on capacity assessment	40
5. Acknowledgments	41
6. References	41
Annex 1 Terms of Reference	47
Annex 2 Review search strings, relevant documents and weblinks	49
Annex 3 Persons contributing experiences	50
Annex 4 List of relevant documents and weblinks	51

Acronyms

Terms:

AIS	Agricultural Innovation System
IAR4D	Integrated Agricultural Research for Development
CB	Capacity Building
FPR	Farmer Participatory Research
IPTA	Innovation Platform for Technology Adaptation
M&E	Monitoring and Evaluation
MDGs	Millennium Development Goals
NARS	National Agricultural Research Systems
NGO	Non- Governmental Organisation
SWOT	Strengths, Weaknesses, Opportunities, Threats
TOR	Terms of Reference

Organisations

ADB	Africa Development Bank
ALGA	Australian Local Government Association
ARI	Action Research International
ASARECA	Association for Strengthening Agricultural Research in Eastern and Central Africa
CGIAR	Consultative Group on International Agricultural Research
CIALCA	The Consortium for Improving Agriculture-based Livelihoods
CGIAR	Consultative Group on International Agricultural Research
CIAT	Centro Internacional de Agricultura Tropical
CIDA	Canadian International Development Agency
CIP	International Potato Centre
CORAF/WECARD	Conseil Oust et Centre Africain pour la Recherche et le Developement Agricoles/ West and Central African Council for Agricultural Research and Development
CSIR	Council for Scientific and Industrial Research
CTA	The Technical Centre for Agricultural and Rural Cooperation
DDRN	Danish Development Research Network
DFID	UK Department for International Development
DFID CRD	UK Department for International Development Central Research Department
DSI/AI	Netherlands Ministry of Foreign Affairs, Poverty Policy and Institutional Development Division
ECDPM	European Centre for Development Policy Management
EU	European Union
FARA	Forum for Agricultural Research in Africa
FAO	Food and Agriculture Organisation
FARM Africa	Food and Agriculture Research Management, Africa
GATES	Bill & Melinda Gates Foundation
GOVENET	Development Assistant Committee Network on Governance
GTZ	Deutsche Gesellschaft fuer Technische Zusammenarbeit. Now known as GIZ: Deutsche Gesellschaft für Internationale Zusammenarbeit or German Agency for International Cooperation
HRDI	Human Resources Development International

ICRA	International Centre for development orientated Research in Agriculture
ICRISAT	International Crops Research Institute for the Semi-Arid Tropics
IDS	Institute of Development Studies
IFPRI	International Food Policy Research Institute
IIED	International Institute for Environment and Development
ILRI	International Livestock Research Institute
ISNAR	International Service for National Agricultural Research
IUCN	International Union for Conservation of Nature
JICA	Japan International Cooperation Agency
NAADS	National Agricultural Advisory Services
NRI	Natural Resources Institute
ODI	Overseas Development Institute
RUFORUM	Regional Universities Forum for Capacity Building in Agriculture
SADC	Southern African Development Community
SADC-FANR	Southern African Development Community-Food, Agriculture and Natural Resources Directorate
SNV -	Netherlands Development Organisation
STEPRI	Science and Technology Policy Research Institute
STEPS	Social, Technological and Environmental Pathways to Sustainability
UN	United Nations
UNFCCC	United Nations Framework Convention on Climate Change
UNU MERIT	United Nations University – Maastricht Economic and Social Research Institute on Innovation and Technology
UNU	United Nations University
USAID	US Agency for International Development
WB	World Bank
WBI	World Bank Institute
WHO	World Health Organisation

Projects, Networks and Programmes:

C:AVA	Cassava : Adding Value for Africa
CBNRM Net	The Community-Based Resource Management Network
CD&IC	Capacity Development and Institutional Change Programme
DONATA	Dissemination of New Agricultural Technologies in Africa
IFORD	International Forum of Research Donors
IFUW	International Federation of University Women
ILAC	Institutional Learning and Change Initiative
LENPA	Learning Network on Programme-based Approaches
LI-BIRD	Local Initiatives for Biodiversity Research and Development
OFSP –REU	Orange-Fleshed Sweet Potato – Reaching End Users
PAEPARD	Platform for African–European Partnerships for Agricultural Research and Development
RIU	Research Into Use
SCAIN	Strengthening Capacity for Agricultural Research for Innovation
SCARDA	Strengthening Capacity for Agricultural Research for Development in Africa
SSA-CP	Sub-Saharan Africa Challenge Programme
UNDG	United Nations Development Group
UNDP	United Nations Development Programme

1. Summary

This review is an information resource for development practitioners, development agencies and funders of development activities who have an interest in assessing capacity for agricultural innovation in developing countries, including the developing regions of sub-Saharan Africa. In the context that further investment in the agricultural capacity of developing countries is recognised as a development priority, the review explores what is known about the “tools” (i.e. concepts and methods) which are available to guide assessment of innovation capacity in these countries. Given the perceived limitation of past investments focused mainly on developing agricultural research capacity, the review specifically explores tools for assessing the capacity of multi-stakeholder initiatives which include a wider range of “innovation actors”, including agricultural researchers.

The methodology for the review was a two-stage literature search using the Google search engine to identify the available published information. This was complemented by interviews and/or email exchange with practitioners working in or managing multi-stakeholder agricultural projects in sub-Saharan Africa focused on promoting innovation and with a capacity development component. The author’s direct experience of undertaking capacity assessment and capacity development work in SCARDA was a further information source.

The search for available literature revealed an abundance of information on capacity assessment tools and also a useful body of literature on approaches to supporting agricultural innovation in a multi-stakeholder setting. Strong support for the idea of investing in agricultural innovation capacity was evident in the literature, even when there was no clear consensus on definitions of capacity. There was very limited information on capacity assessment tools specifically designed for multi-stakeholder agricultural innovation in a developing country context.

A conceptual framework and approach for diagnosis of national agricultural innovation system capacity developed by Hall and co-workers (2006), expanded in a subsequent World Bank publication, was identified. However, it was not clear if this has been empirically tested in one or more developing countries. The forthcoming World Bank source book on agricultural innovation proposed a chapter on capacity diagnosis/assessment, but this was not included in an early draft of the source book seen as part of this review. The interviews with practitioners found that capacity gaps addressed in a range of large agricultural innovation projects were not, by and large, informed by use of a specific recognised capacity assessment methodology. Rather than using a specific capacity assessment methodology, these projects addressed capacity strengthening issues during project appraisal and incorporated these into the activity design, or identified capacity issues constraining implementation and impact during project progress review meetings, and incorporated capacity strengthening into subsequent work plans. In projects where there was a strong focus on targets and the approach was to contract in additional capacity in order to meet targets, rather than strengthen the capacity of existing partners.

While the absence of a proven methodology for assessing capacity in a multi-stakeholder agricultural innovation context is a major gap, the review identified some useful information to inform the development of such a methodology. This included general principles of capacity assessment, concepts relating to agricultural innovation capacity and capacity assessment, and more specific capacity assessment methods.

Key principles identified, on the basis of lessons learned from a range of capacity development investments and capacity assessment exercises were as follows:

- Capacity development and assessment is not a precise science. A “blueprint” approach, involving a detailed plan at the start, is not an effective way of investing in capacity development.
- Nevertheless, strategic investment in capacity development should be informed by an initial assessment of capacity.
- Stakeholder participation in capacity assessment is essential, and requires skilful facilitation to manage expectations and bias, and also to achieve consensus when prioritising how to address a diversity of capacity needs.
- Brokerage could be used to facilitate the process of stakeholder engagement on capacity issues that are blocking the progress of an innovation platform.
- Capacity development should not be rushed and by implication capacity assessment should also not be a rushed process.
- Because effective capacity development goes far beyond formal training, a “training needs assessment” is not a sharp enough tool for a strategic assessment of capacity needs in a more complex context, such as agricultural innovation.
- Capacity assessment should be closely followed up by a “capacity development response” to address issues identified; the assessment should include an exploration of the response.
- Capacity development at organisational level involves the capacity to manage change; assessing and developing capacity for managing change, including capacity for monitoring, learning and strategic management is recommended as part of any support to capacity development.
- If a capacity assessment has not been undertaken at the start, an assessment can be usefully undertaken of a multi-stakeholder initiative that is operating.

In addition to the principles above, there are useful generic and specific conceptual frameworks/tools to guide the process of assessing capacity in a multi-stakeholder agricultural innovation platform. The UNDP capacity development framework provides a useful generic framework for assessing capacity, developing a capacity development response and monitoring the results. The ECDPM draft framework for capacity development includes five core capabilities which can inform the design of capacity assessment. Specific concepts include the Agricultural Innovation Systems (AIS) conceptual framework which has been refined to provide a very useful set of concepts for designing a specific capacity assessment exercise. The Integrated Agricultural Research for Development (IAR4D) concept, while not focused on capacity assessment, has also been refined and empirically tested through the Sub-Saharan Africa Challenge Programme, with promising results. DFID’s Research into Use (RIU) concept, which includes a capacity development component, has been developed and empirically tested through its RIU programme, and is beginning to show results. Participatory Value Chain analysis and other value chain approaches provide a basis for developing strategies, programmes and projects which can be used to develop capacity to improve agricultural innovation performance. There is overlap and useful cross-fertilisation of ideas between these more specific approaches.

In addition to conceptual frameworks, other useful methods/tools for capacity assessment were identified. Capacity assessment is a skilled interactive process, and the most important tool is the capacity assessment team itself with an appropriate range of

experience and knowledge. This team can use proven tools for qualitative enquiry. The list includes secondary information review, key informant and focused group interviews, forms of stakeholder mapping and analysis, visioning, SWOT analysis, gap analysis, and a range of tools for facilitating discussion and analysis with key stakeholders during interactive meetings and workshops.

While capacity assessment of multi-stakeholder agricultural innovation is necessary context specific, case studies have indicated some key generic areas for capacity strengthening. The emphasis is on strengthening “soft skills” and the capacity of various actors and organisations to work in partnership. Experience with agricultural innovation platforms suggests developing the capacity of a diverse group of stakeholders to use a shared language/set of concepts was empowering for the stakeholders and reduced the risk of them adopting a “business as usual” stance.

2. Background

a. Scope of the Review

This review is intended for development practitioners, development agencies and funders of development activities interested in assessing capacity for agricultural innovation in a multi-stakeholder setting. It draws on available literature and direct sources of experience, including experience from implementing the DFID funded project Strengthening Capacity for Agricultural Research and Development in Africa (SCARDA). The tone is exploratory, aiming to identify consensus regarding key principles and recognised methods and “tools” for undertaking capacity assessment.

The review was undertaken under the project Strengthening Capacity for Agricultural Innovation (SCAIN) which linked SCARDA with possible future DFID investment in capacity strengthening in this sector. SCAIN activity 1.3 was “a review of available literature and selected experiences in identifying capacity needs in multi-stakeholder platforms relating to agricultural innovation” (see TOR, Annex 1).

The TOR outlines a three stage process. In the first stage a literature search would lead into a search for related experiences of capacity assessment and communication with key people. Secondly, drawing on this material and also on experience from SCARDA, draft capacity assessment guidelines were to be developed and piloted in three agricultural innovation platforms. The final stage was to refine the guidelines for capacity assessment. The process of pilot testing guidance notes in selected countries and the revised capacity assessment guidance notes are documented as two other publications linked to this review (Sutherland, ed., 2011; Sutherland, 2011).

b. Review Methodology

The starting point was to search the available published literature on methods and tools for diagnosis of capacity strengthening needs in multi-stakeholder agricultural research and development platforms. The first round of the literature search was undertaken through the Google search engine in July 2011 using a range of key phrases to search for “relevant” academic articles, websites and other literature. The key phrases used are listed in Annex 2. Some informative websites and various publications were identified and following analysis of the titles and abstracts available, publications were sorted into categories of relevance (see Annex 4). A second round of literature searches was undertaken in October 2011 using a more systematic set of search categories and this revealed some further relevant publications, including a significant number of publications from DFID’s RIU programme. These were listed under the same categories used for sorting the results of the first round.

Closer examination of the literature through rapid reading resulted in most documents being re-classified as “marginally relevant”, due to the publications lacking specific details of the tools and methodologies used for capacity assessment of agricultural innovation platforms¹ or similar initiatives. The review drew on the published materials classified as most relevant to the topic.

¹ The term “platform” is used loosely in this document to describe an association of stakeholders who commit to an overall objective and agree to share information and cooperate where feasible in activities that contribute to the overall goal.

Many documents contained core concepts guiding the approach to agricultural innovation and integrated agricultural research for development and emphasised the need to develop capacity. These documents also suggested various areas of capacity to be addressed, but in most cases the empirical basis for this was not clear.

The next stage was to identify other relevant initiatives, make contact with and interview the key individuals involved. This was undertaken in late October 2011, after the piloting activity had been implemented in Botswana and Rwanda. The other initiatives covered were the Research into Use Programme (DFID funded), the DONATA project (ADB funded), the Harvest Plus project on Orange Flesh Sweet Potatoes (Bill and Melinda Gates funded), the CAVA project (Gates funded) and PAEPARD (EU funded). In addition documented experiences of the CGIAR Challenge Fund Sub-Saharan Africa Challenge Programme designed to test the IAR4D concept were also covered. The process and results of the consultation are summarised in Section 2.b, which drew on interviews and/or email exchange with the individuals listed in Annex 3.

The third stage was reflection on SCARDA experience with assessment of capacity strengthening needs in agricultural research for development at national and organisational level. This was undertaken based on project documentation and the author's direct involvement in SCARDA.

Finally the key findings from the review were summarised, as a basis for the development of guidance notes. This included a reclassification of the more relevant documents and rechecking all of the weblinks to enable ease of access. These are detailed in Annex 4.

c. Challenges and limitations of the review

One of the main challenges was identifying literature which was specific to the topic. There were numerous publications on the related topics of agricultural innovation systems, value chain analysis and capacity assessment. However there was very little specifically addressing how to undertake an assessment of capacity for agricultural innovation or integrated agricultural research for development within a multi-stakeholder setting.

A literature based "evaluation" of diagnostic tools and methodologies as initially proposed was not possible. This was due to the lack of published accounts of experiences with diagnostic methods for assessment of agricultural innovation capacity upon which an evaluation could be based. The alternative approach was to review the literature providing guidance on undertaking capacity assessments, and literature sharing experiences of agricultural innovation and value chain capacity strengthening. This enabled identification of the range of methods and conceptual frameworks used for capacity assessment in other contexts, and the conceptual underpinnings of agricultural innovation systems which informed ideas about core capacities required for successful agricultural innovation.

The review of literature was guided by three main questions specific to agricultural innovation platforms and similar initiatives;

- Which conceptual frameworks and/or assumptions have informed the identification of capacity needs?
- What tools/methods have been used to identify capacity needs?

- What has been the experience of using these tools?

The first question was introduced because, as already noted, the initial review of the literature indicated that most agricultural innovation platforms did not have an explicit methodology for assessment of capacity needs. It was assumed that choice of capacity development/strengthening activities had been informed by the main concept or “theory of change” underpinning the project design.

While the three questions informed the review of literature, to avoid unnecessary repetition they are not restated in the analysis of findings.

3. Findings

a. Literature Review

This section summarises key points from the following categories of literature on the topic:-

- What capacity is and how can it be assessed – general literature.
- Assessing and developing research capacity.
- Capacity assessment in agriculture innovation systems (AIS) and related approaches.
- Value chain analysis and development.

i. What capacity is – and how it is assessed

The literature review process started with key words related to “capacity” such as capacity development, capacity building, capacity strengthening, capacity assessment, capacity needs assessment, capacity diagnosis and capacity analysis. This generated a wealth of ideas and general guidance about how to assess and undertake capacity development, capacity building and strengthening capacity in developing countries.

What is Capacity?

An understanding of what capacity is will inform approaches to assessing and developing it. Morgan (2006) provides an insightful discussion of what constitutes capacity development in his paper entitled “the concept of capacity”. Morgan argues that capacity is often seen as a “means to an end” in development discourse which emphasises “results-based performance”, but that this conception is limited. He argues that capacity development should also be seen as a valid end in itself; an intrinsic good.

Engel and co-workers (2007) whose work is linked to that of Morgan above, the basis of a review of experiences with capacity development undertaken by ECDDPM, propose a framework of 5 “core capabilities” that make up the type of generic capacity required in a development context as follows:-

- The capability to act.
- The capability to generate development results.
- The capability to relate.
- The capability to adapt and self-renew.
- The capability to achieve coherence.

When applied to an organisation, these five capabilities imply more than the ability to function and achieve results. Robust organisations also need the capability to relate well with other players (e.g. develop strategic alliances and partnerships and related well to their clients); to adapt and change to deliver results sustainably when under threat; and to counter known tendencies towards internal fragmentation when under pressure.

UNDP has played a leading role in developing approaches to capacity development. UNDP differentiates between “capacity building” and “capacity development”.

“**Capacity development** commonly refers to the process of creating and building capacities and their (subsequent) use, management and retention. This process is driven from the inside and starts from existing capacity assets. **Capacity building** commonly refers to a process that supports only the initial stages of building or creating capacities and is based on an assumption that there are no existing capacities to start from. It is therefore **less comprehensive** than capacity development. The OECD/DAC writes that capacity building ‘suggests a process starting with a plain surface and involving the step by step erection of a new structure, based on a preconceived design. Experience suggests that **capacity is not successfully enhanced in this way.**’ Capacity building can be relevant to crisis or immediate post conflict situations where existing capacity has largely been lost due to capacity destruction or capacity flight. (UNDP,2009a, p 3 author’s emphasis).

In this report the terms capacity strengthening and capacity development are used to indicate efforts to retain and improve capacity, and specifically capacity for agricultural innovation in developing countries.

A search of the websites of a number of development agencies suggests that not all have adopted Morgan’s concept of capacity, or the UNDP distinction between capacity development and capacity building. Nevertheless the literature suggests that many development agencies have reflected on and defined their approaches to capacity development over the previous two decades. Examples include the work undertaken over the past twelve years such as position papers commissioned by CIDA (Morgan, 1998), WHO (Milen, 2001), GTZ (GTZ, 2003); JICA (JICA, 2007) and SNV (Ubels, 2010).

Some development agencies have also been examining the effectiveness of their investments in capacity. For example DFID supported an evaluation of some investment in technical cooperation sub-Saharan Africa (DFID, 2006). The World Bank has funded a major independent evaluation of its capacity building investment in Africa in 2005 (World Bank, 2005), and created a Capacity Development Unit in the same year (World Bank Investment Annual Report, 2006). In November 2011, the World Bank organised a meeting with its partners to discuss capacity development strategy (<http://worldbank.org/wbi/2011-Partners-Meeting>).

How can capacity be assessed?

UNDP has played a leading role in developing approaches to capacity assessment in developing countries. A range of UNDP publications provide extensive guidance on capacity development practice, mainly focused on national and sectoral levels (UNDP, 2006b; UNDP, 2008a; UNDP, 2008b; UNDP 2008c; UNDP, 2009a; UNDP, 2009b; UNDP 2009c). These include useful guidance on how to assess capacity development needs and develop plans for addressing these needs. Included in the publications are core concepts and principles and a range of methods for assessing capacity and for planning, monitoring and evaluating capacity development investments.

UNDP (2008b) recommends use of a three dimensional framework for capacity assessment, as summarised below:

1. **Points of entry:** capacity resides on three levels – the enabling environment, the organizational, and the individual. The UNDP framework is specifically tailored to the enabling environment and the organizational level.

2. **Core issues:** UNDP identifies the four core issues; 1) institutional arrangements; 2) leadership; 3) knowledge; and 4) accountability.
3. **Functional and technical capacities:** necessary for creating and managing policies, legislation, strategies and programmes. UNDP has found that the following functional capacities are key: 1) engage stakeholders; 2) assess a situation and define a vision and mandate; 3) formulate policies and strategies; 4) budget, manage and implement; and 5) evaluate. Other technical capacities may also need to be assessed, depending on the situation.

UNDP suggests a three-step process to conduct a capacity assessment:

Step 1 Mobilize and design: Engaged stakeholders and a clear design are key to a successful capacity assessment, driven by three guiding questions: 1) 'capacity for why?' 2) 'capacity for whom?' and 3) 'capacity for what?'

Step 2 Conduct the capacity assessment: data and information are collected on desired and existing capacity through a variety of means, including self-assessment, interviews and focus groups.

Step 3 Summarize and interpret results: comparing desired capacities against existing capacities informs the formulation of a "capacity development response".

UNDP suggests that capacity assessments are integrated into ongoing planning and programming process at various levels. This includes national and sectoral level planning or a local development strategy or plan. An assessment can also be undertaken for a development programme or project.

In addition to a focus on capacity assessment linked to public sector processes and organisations, the past decade and a half has seen greater attention to assessing capacity of NGOs and civil society. A number of tools have been developed to guide capacity assessment at NGO and community level (e.g. Engel *et al.*, 2007; van Geene, 2003; UNDP, 2006a; CARE, 2000; McKinsey and Company, 2001). This includes emphasis on NGO capacity for participatory planning, monitoring and evaluation. NGOs are common partners in multi-stakeholder platforms, including those addressing agricultural issues and opportunities, and aspects of these methods may be useful for capacity assessment of agricultural innovation platforms.

There is a vast array of literature available on undertaking capacity assessments in the private sector (see Annex 1.2, literature under sub-heading "organisational capacity assessment"). As private sector players are also partners in agricultural innovation platforms, participating managers may have been exposed to relevant concepts such as "knowledge management", "change management", "strategic partnerships", "networking" and "learning organisation".

Networking capacity, and participating in existing networks, is an important aspect of strengthening agricultural innovation systems (Hall, 2007). There is a body of relevant literature on assessing and developing capacity of networks (e.g. Taschereau & Bolger, 2006; Eggar *et al.*, 2006) including rural development networks (Hartwich & Scheidegger, 2010) farmer networks in Latin America (Douthwaite, *et al.*, 2006; Clarke, 2006) and

agricultural research and development networks in West Africa (Narteh *et al.*, 2006). This literature is a useful source of ideas in cases where investment in the capacity of farmer groups and associations is being considered as part of strengthening national agricultural innovation capacity.

Key points from more generic literature

While there are differences of emphasis in the literature, there is broad agreement on the following:

- Capacity development is a key area of investment in developing countries.
- Capacity development is not a precise discipline or science.
- For this reason a blueprint or “capacity building” approach, in which capacity needs are precisely assessed and a detailed plan is implemented, is unlikely to be an effective way of investing in capacity development.
- Nevertheless, investment in capacity development should be strategic, and should be informed by an initial assessment.
- Developing capacity for monitoring, learning and flexibility to adapt capacity strengthening measures to meet emerging needs, is recommended as part of any support to capacity development.
- Effective capacity development goes far beyond training, and often formal training is not the most effective approach to capacity development.
- Hence, a conventional “training needs assessment”, while useful in some contexts (e.g. in a school or college), is unlikely to be the sharpest tool for a strategic assessment of capacity needs in a more complex context, such as agricultural innovation.

ii. Developing Capacity for Research & Innovation

DFID, and the World Bank [see Sections 2a(i), 2a(iv) and 2a(v)] are significant sources of current literature on research and innovation capacity development.

DFID CRD guidance

DFID publications reflect two strands of conceptual influences with regard to innovation capacity development. Concepts relating to organisational capacity assessment are emphasised in the literature coming directly from the Central Research Department (DFID, 2008; DFID, 2009; DFID, 2010) and consultants (e.g. Leach and Waldman, 2009). Concepts relating to AIS are emphasised in the publications of the Research into Use (RIU) programme. This reflects parallel areas of emphasis in DFID’s current research strategy and programmes and is summarised in section 2a(v).

The DFID, Central Research Department (CRD) publications are oriented towards developing the capacity of Southern research organisations, through partnership with Northern research organisations, in order to develop centres of research excellence. These provide general guidance on aspects of research capacity development. The 2010 DFID “How to Note” on Capacity Building in Research provides practical guidance for the development and management of Research Programme Consortia, including North-South partnerships as a key component of its 2008-2013 Research Strategy.

DFID guidance draws on concepts of capacity developed at ECDPM influenced by the thinking of Peter Morgan. An updated version of the five core capabilities identified by Morgan (2006) drawing on (Baser and Morgan, 2008) is summarised in DFID guidance on capacity for research consortia (DFID, 2010) as follows:

1. **To commit, relate and engage:** empowerment, motivation, confidence and the management of relationships.
2. **To carry out technical, service delivery and logistical tasks:** core functions directed at the implementation of mandated goals.
3. **To attract resources and support:** resource mobilisation, networking, legitimacy building.
4. **To adapt and self-renew:** learning, strategizing, adaptation, managing change.
5. **To balance coherence and diversity:** encourage innovation and stability, manage complexity, balance capability mix.

The guidance also draws conceptually on earlier studies commissioned by DFID, particularly a study on lessons learned with guidelines on developing the capacity of research systems (Pound and Adolph, 2005) and a scoping study of research capacity in Africa (Jones *et al.*, 2007). Pound and Adolph (*ibid*) emphasise going beyond developing individual knowledge and skills and thinking about capacity at different scales, including development of organisational capacity within the wider context of a national innovation system (Figure 1). An emphasis on organisational capacity, with a focus on research organisations, is understandable given the aims of the programme supporting research consortia. The consortia operate within a wider national innovation environment and link with other relevant actors in order to increase their effectiveness/impact.

While the DFID 'How To' guide is oriented to the formation of consortia by "partners" for "excellent" policy relevant research, some of the basic principles identified are equally relevant for assessing capacity in a broader agricultural innovation context involving a wider array of actors and organisations. The extracted principles are also relevant to agricultural innovation capacity assessment methods (key points in bold font added by the author):

1. *Capacity building is a process:*

CB is not a bolt-on extra, **nor is there is there a simple tool kit to make it happen**. However there is a range of tools which, if appropriately applied, can make a significant difference. Effective CB is the result of the interplay between individual, organisational, network and institutional factors. It is difficult to plan in advance which steps will need to be taken or which dynamics will evolve, **but planning is nevertheless essential to develop a shared vision and strategy**. At the practical level **the issues will need to be identified, and a road map outlined during the programme Inception stage**.

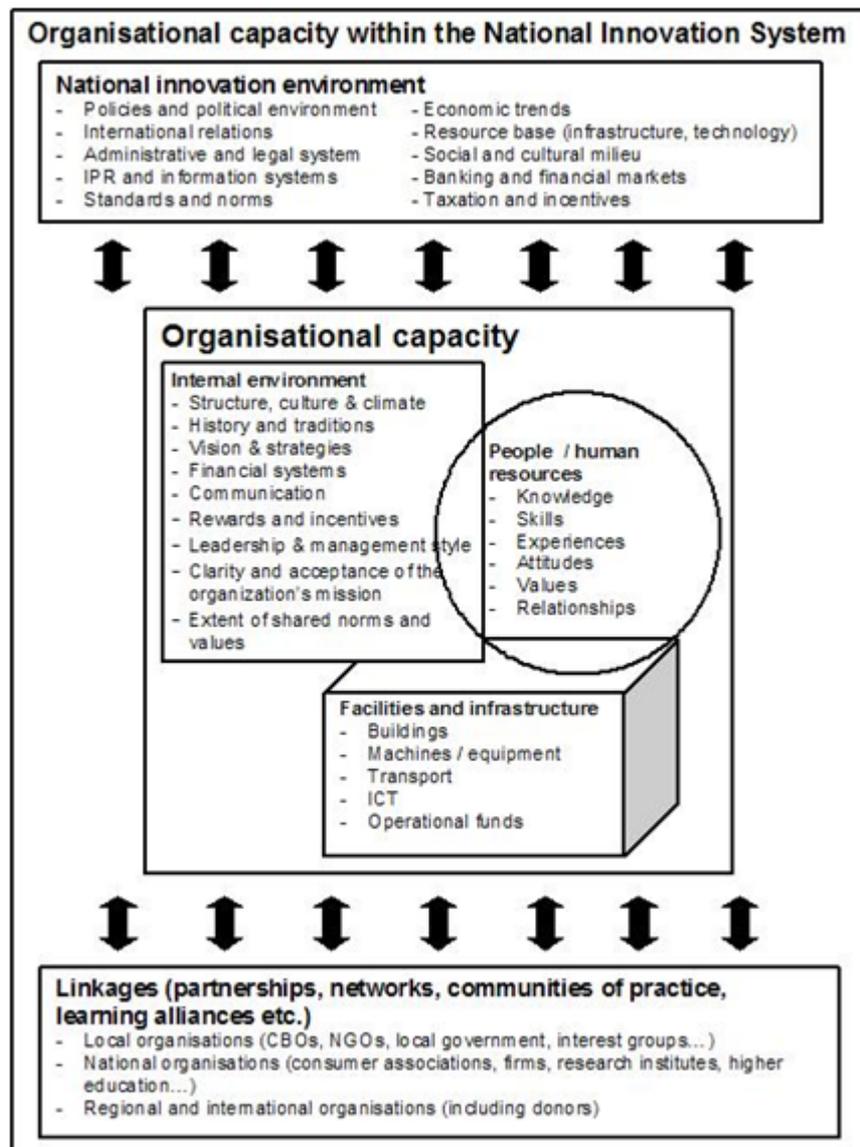


Figure 1: Pound and Adolph (2005), p6

2. Strengthen existing processes:

This suggests an iterative and flexible process that focuses on **building on existing strengths and assets** and enhancing local ability to solve problems, defining and acting upon development needs.

3. Ensuring full local ownership:

The preparation process for any new initiative is critically important. **It must be designed and implemented by national actors and not dominated by Northern researchers.**

4. A different way of working:

This will require a particular set of skills and expertise not normally found in research institutions. **Every aspect of organisational and institutional capacity development, from the capacity assessment and organisational analysis onwards, requires involving Organisational Development and change management specialists as full members of the team.** (DFID, 2010, p4).

5. Plans need to be updated regularly to reflect the changing reality and the growing awareness of stakeholders" (op cit.p13).

The 'How To' guide also recommends "tools" for assessment or analysis of capacity at individual, organisational and institutional levels.

LEVEL OF CAPACITY	RECOMMENDED ASSESSMENT TOOL/S
Individual	Training needs/capacity gap analysis via a "skills audit" against the types and levels of skills thought to be required.
Organisational	Collaborative SWOT analysis or self-appraisal using one of the following frameworks: <ul style="list-style-type: none"> • European Foundation for Quality Management (EFQM) models and checklist, or • The ECDPM 5 core capabilities list, or • The 7 'S' Model; the organization's structure, systems, skills, style, strategy, staffing and shared values.
Institutional/stakeholder	Stakeholder analysis, including stakeholder mapping, Institutional analysis – "rules of the game" especially the informal rules governing resource allocation and decision making, existing networks and alliances of relevance.

Adapted from DFID (2010)

Capacity lessons from competitive grant schemes

Competitive grant schemes are a form of investment encouraging multi-stakeholder development-oriented agricultural research and are also a potential vehicle for future investments in agricultural innovation. Lessons from a review of these schemes (World Bank, 2010) draw attention to the importance of the analysis of capacity and related actions to develop capacity in managing a grant scheme. Some of the actions proposed are very similar to actions suggested for strengthening agricultural innovation systems capacity, including development of relevant capacity at sector level: *"Sector development could be facilitated through sector forums/platforms and the use of neutral brokers. Development could also be encouraged by building or strengthening sector associations that serve as venues for building common understanding and collaboration, identifying challenges and opportunities, and developing a strategic plan for interventions. Successful intervention often requires prioritization of themes or value chains and strategic interventions that benefit the sector as a whole rather than a limited set of actors (World Bank, 2010, p19).*

Organisational and individual level capacity is also emphasised: “choose the main applicant carefully based on capacity. In addition... build new competencies for appropriate individuals, organizations, and institutions (knowledge, skills, and above all attitudes) to facilitate work in a partnership mode... train/support applicants in proposal development and successful applicants in the many activities required to administer their grants, such as reporting, disbursement, account management, and monitoring and evaluation (World Bank, *op cit*).

An assessment of agricultural innovation capacity at national level could ascertain what competitive grant schemes are in place and their policies regarding capacity (including eligibility criteria and special provision for developing organisations with low research capacity).

The search for relevant literature progressively narrowed to identify more specific literature on methods for capacity assessment in the context of agricultural innovation. Search strings including “assessment/diagnosis of capacity for agricultural innovation, agricultural innovation systems capacity/capacity assessment, capacity of multi-stakeholder agricultural innovation platforms,” threw up a limited range of published guidance on the main focus of this review. The World Bank and DFID were two prominent sources of support for relevant publications. There were also relevant publications by individuals working for other organisations involved in training and capacity strengthening for agricultural research including ISNAR and ICRA. These are discussed in more detail in the following two sections.

iii. Agricultural Innovation Systems Capacity

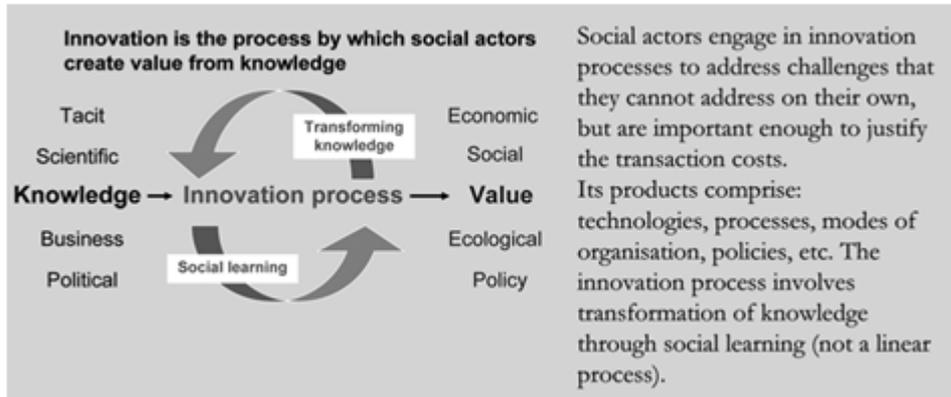
Agricultural Innovation System (AIS) Approach

The AIS approach is grounded, theoretically, in “soft-systems” thinking (Checkland, 1981) and a multiple source model of innovation in agriculture (Biggs, 1990). One of the leading ideas of the AIS approach is that innovation does not originate from a single source, but comes from multiple sources and is a social learning process that creates value from knowledge. For this reason agricultural innovation requires collaboration between a number of actors or stakeholders, hence the wide-spread adoption of the term “multi-stakeholder” in more recent development literature.

The view of innovation as a social learning process is explained in a recent article by John Daane of ICRA. ICRA is a training organisation which has traditionally focused on actor-oriented and systems approaches to agricultural research and development. This article also refers to the need for actors to have an incentive to engage with each other; hence analysis of incentives can form part of a capacity assessment at institutional level.

The same article also outlines what is meant by “innovation system” by listing key functions that an innovation system needs to perform in order to be effective as:

- Identification of needs and opportunities for innovation.
- Network formation and management.
- Developing, testing and adapting of opportunities.
- Knowledge and information exchange.
- Provision of an enabling environment for innovation.
- Market formation.



Source : *What is Innovation?* from Daane (2010) P76

- Resource mobilisation.
- Creation of legitimacy / counteract resistance to change.

These functions can also be seen as system “capabilities” that are needed, at individual and organisational levels. An assessment of innovation capacity might therefore use a similar list to explore capacity areas which might need to be addressed. This method was tried out in the SCARDA project as a self-assessment exercise by represented research and training organisations in Zambia (see Chancellor *et al.*, 2012).

A World Bank (2007) publication “Enhancing Agricultural Innovation” defines the core concepts for agricultural innovation systems (AIS). The case is made for developing national AIS capacity, drawing attention to the difference between “invention” and “innovation” as processes. It is argued that considerable resources have been invested in “invention” through technical research capacity development, but there has been much less investment in “innovation” capacity.

Innovation is a more complex process than invention, inasmuch as it involves a wider range of actors with different capabilities and interests. Innovation is therefore less easy to “manage” as a process (including planning, monitoring and evaluating) than invention/technical research.

Assessing AIS capacity

most relevant parts of the World Bank (2007) publication are Chapter 6 “A framework for diagnosis and intervention” and Annex A “Agricultural Innovation Systems: A Methodology for Diagnostic Assessment”. Chapter 6 provides a very useful conceptual framework for assessing agricultural innovation capacity. Annex A outlines a promising process and set of methods for undertaking a diagnostic assessment of AIS within a country or sector. The guidance builds on a working paper (Hall *et al.*, 2006) entitled “Concepts and Guidelines for Diagnostic Assessments of Agricultural Innovation Capacity”. The proposed methodology for rapid assessment of agricultural innovation capacity at the sector level is designed to identify “plausible intervention points” for investments in agricultural innovation.

The main focus of the IAS method is a rapid sector or sub-sector level diagnosis within a country. The method proposed combines collection and analysis of secondary information with key informant interviews. A systematic survey of actors in the sector using a survey instrument is not proposed, but it is suggested that this could be developed if required.

The AIS capacity assessment methodology proposes the following areas of analysis using data that would have been gathered:-

- Historical overview of the sector.
- Sector Mapping
 - o Identify the key actors in the four domains of the innovation system (research, enterprise, demand and intermediary).
 - o Assessing competencies and performance of organisations in the four domains.
 - o Exploring the functions of the organisations.
 - o Mapping and characterising the linkages between the organisations.
- Characterising the habits and practices of the organisations using a typology of restrictive and supporting habits and practices.
- Assessment of the implications for innovation capacity of the wider policy and support structures.

The IAS diagnostic methodology is presented as something that needs to be empirically tested, and this is the next step proposed. The 2007 publication does not make it clear if the methodology was field-tested before the workshop reported was held. The publication has inputs from a larger group of practitioners, and it is possible that rather than being field tested, the methodology proposed drew on experience and good practice from similar contexts.

A further relevant World Bank publication is "Agricultural Innovation Systems: from diagnostics toward operational practice" (Rajalahti *et al.*, 2008). As the title suggests, this publication focuses mainly on the analysis of "successful" cases of multi-stakeholder agricultural innovation, and not on a diagnostic process. The views of participants of a workshop held in March 2007 which discussed case studies are synthesised. The emphasis in (Rajalahti *et al.*, 2008) is on operational practice. The document presents agricultural innovation systems as ongoing processes, rather than clearly time-bound interventions which can be easily "projectised". The recommendation is for further elaboration of the conceptual framework for AIS, piloting activities to test the concept, the setting up of a community of practice and the development of tools for studying the impact of agricultural innovation system investments.

The 2008 publication does not revisit the diagnostic methodology, but the need to assess innovation capacity is emphasised: "*At the outset, it is useful for projects to systematically explore innovation capacity and institutional issues. Such an investigation will help highlight patterns of interaction and institutional factors that a project may need to deal with directly. It may also identify policy and institutional issues that must be addressed for a project to achieve its immediate objectives as well as its wider objective of promoting innovation capacity through institutional and policy change at the sectoral and national levels (Hall 2007). Depending on the context, the findings of the AIS capacity assessment, and potential prioritization of key investment areas, an innovation capacity strengthening plan, including identification of organizations capable of training and promoting innovation capacity, may be developed.*" (Rajalahti *et al.*, 2008, p59).

The 2008 publication also uses case studies as an empirical basis for elaboration of the AIS conceptual framework. Two types of innovation system are identified on the basis of how they started, each having four developmental phases. “Orchestrated” agricultural innovation systems are initiated and coordinated by public bodies as projects. They progress from being “pre-planned” to being “founded”, then “expanded” prior to entering the “dynamic” phase when innovation is characterised by a high degree of public and private interaction in planning and implementation. “Opportunity driven” systems are usually initiated by private sector organisations. They develop from a “nascent” to an “emergent” phase and then tend to “stagnate”, at which point additional (usually public sector) support can be provided so that they can also become “dynamic”. The final or fully functional phase of each type of system is thus similarly characterised by a combination of public and private sector actors.

This typology is helpful when there is an intention to assess and strengthen capacity in an existing initiative, as it provides a framework for assessing the type of innovation system and which phase it is in. When the capacity assessment guidance was piloted in SCAIN the three innovation platforms being assessed were found to be at different phases of development. This influenced the approach used to assess capacity, the types of questions that were more relevant and the types of activity most needed to strengthen capacity.

While the further development and testing of AIS capacity assessment/diagnosis tools is not explicitly listed in the recommendations of the 2008 World Bank publication, it can be assumed that this was an oversight. This assumption is affirmed by the World Bank’s subsequent support for developing the “Agricultural Innovation Systems Investment Sourcebook”. According to the concept note the sourcebook will have guidance on “assessing innovation systems including the status of AIS, including the critical factors, actors and conditions for innovation” and will give guidance on the “AIS Assessment Framework, Actor Matrix, NetMap Tool, Benchmarking, Organizational/institutional assessment tools” (see: www.infodev.org/en/Document.930.pdf). A recent pre-publication announcement that the sourcebook is due to be published in early 2012 notes the importance of context specific assessment in investment targeting; “*agricultural innovation system (AIS) investments must be context specific and respond to the stage of and vision for development in a particular country and agricultural sector. Given the resource limitations, investments need to be assessed, prioritized, sequenced, and tailored to the needs, challenges, and resources that are present.*” (see: <http://ilriclippings.wordpress.com/2011/11/21/agriculture-innovation-systems-an-investment-sourcebook/>).

iv. Integrated agricultural research for development (IAR4D) Capacity

IAR4D Approach

The Integrated agricultural research for development (IAR4D) approach has a number of elements in common with the AIS approach, and also has similar conceptual underpinnings (Tenywa *et al.*, 2011; Hawkins *et al.*, 2009). IAR4D assumes that a multi-stakeholder collaboration over different levels is essential for agricultural innovation, that innovation is a social learning process and that the value chain approach is a useful tool. The main difference from AIS is that IAR4D places the main responsibility for initiating and steering the social learning process on the shoulders of the agricultural research actors, while the AIS approach assumes that this responsibility can be shared, in that innovation can originate from any of the potential actors. More recent IAS publications have also

suggested that researchers may not be the most appropriate actors to facilitate innovation and propose public support for a professional “brokering role” in steering the social learning process (Hall, 2010; Kilelu *et al.*, 2011; Hirvonen, 2011).

The IAR4D concept has been embraced in sub-Saharan Africa by ASARECA and FARA. ICRA has provided training in IAR4D, including a programme of training at national level in Uganda. The IAR4D concept informed the design of two FARA-led initiatives (SSA-CP and SCARDA). These are discussed in section 2b and 2c below.

The four ‘defining principles’ of (IAR4D) as proposed in a recent concept paper published by FARA are:

- “1. IAR4D integrates the perspectives, knowledge and actions of different actors around a common theme (i.e. an innovation challenge that serves as ‘entry point’ for network formation and collaboration).
2. IAR4D integrates the learning that actors achieve through working together. It is a social learning process, with actors learning from the experience of working together at the individual, organisational and institutional levels.
3. IAR4D integrates analysis, action and change across the different (people, planet, profit) ‘dimensions’ of development.
4. IAR4D integrates analysis, action and change at different levels or scales of spatial, economic and social organisation. It recognises that e.g. local innovation may require simultaneous action and change at the local, national and international level. (Hawkins *et al.*, 2009, p.1)”

Capacity assessment in IAR4D

These four principles are working assumptions which could frame the assessment of capacity. For example the assessment could investigate the capacity of an organisation, or of a multi-stakeholder alliance to:

- a) Define an innovation challenge that can realistically be addressed.
- b) Work effectively with other organisations to address this challenge.
- c) Think and work in an interdisciplinary mode, integrating different dimensions (e.g. improvements in income, nutrition and environmental sustainability).
- d) Function effectively at different levels of operation; local, national and international.

While the IAR4D approach has been empirically tested through the SSA-CP project, the methodology described for implementation of IAR4D does not explicitly focus on capacity assessment.

SSA-CP experience and lessons from using this approach in the Lake Kivu region of East Africa, using the agricultural innovation platform concept, has been clearly documented (Tenywa *et al.*, 2011). The design and formation of a number of local commodity-based innovation platforms in the Lake Kivu region was informed by a 6-step action learning process which included identification of the development challenge, site selection, consultation and scoping, visioning and stakeholder analysis, development and implementation of action plans. Social network analysis helped to identify the selection of

the sites for the market-led platforms. In the lesson learning section, the paper explains how in the “new generation” of market led platforms addressing marketing constraints relating to potatoes through improving marketing capacity had a positive outcome as production of potatoes and demand for them increased. However, during the ongoing evaluation a new capacity issue arose; farmers said they could not meet the increased demand unless they had improved access to credit. As a result the capacity to provide credit became another hurdle to address.

The SSA-CP IAR4D methodology described focuses on the exploration of innovation constraints with stakeholders based on a particular commodity, rather than on a more specific assessment of innovation capacity. This example does not imply that the initial assessment of capacity issues was inadequate using the project methodology, but it does signal the need for the assessment of capacity issues within an innovation platform to be an ongoing process. Moreover, in such a context it is important to make provision for responding to emerging key capacity challenges.

There are other, related, research-led approaches to agricultural innovation which also address local capacity issues. For example the “Enabling Rural Innovation” initiative in Malawi and Uganda was informed by the “resource to consumption-framework”; a newer variant of the value-chain approach based on improving market access for resource poor small-holder farmers through gender sensitive approaches (Kaaria *et al.*, 2008). The application of this approach across three different African countries found that participatory approaches to capacity assessment worked well at community level, when combined with participatory approaches to analysis of the value chain, including a gender analysis component. Of particular importance was the capacity to develop and sustain partnerships at different levels.

v. Research-into-Use Capacity

Another initiative that is strongly influenced by agricultural innovation systems (AIS) concepts is DFID’s “Research into Use” (RIU) programme which started in 2006 and is due to end in June 2012. IAS concepts influenced the capacity element of the RIU programme design which began in 2003 (see section 2b) and have continued to shape the analysis of the programme’s experiences. The RIU concept was influenced by a recognition that significant investments in agricultural research through DFID’s Renewable Natural Resources Research Strategy (1995-2006), required a much more strategic effort to scale up the research results for poverty impact. RIU also provided a basis for learning more about how to link potential agricultural innovation partners.

There is much common ground between the ideas in the RIU literature and the World Bank literature cited earlier. One author, Andy Hall, has made significant contributions to both sources of literature. RIU literature emphasises the difference between innovation and invention, in arguing the need for investment in capacity development with actors involved in the up-scaling and out-scaling of technology. RIU, like SSA-CP has applied the concept of local innovation platforms which are usually based on commodities or conservation-oriented technologies. These RIU platforms have also used value chain concepts.

The following key points are noted in a more recent RIU publication:

- *Capacity development for out-scaling and up-scaling proven technologies, practices, policies and processes needs to be demand-driven, action oriented and integrated.*
- *Capacity development cannot be an add-on. A strategy must be in-built.*
- *The sets of skills and knowledge for out-scaling and up-scaling differ from those needed for research. There will be a shift from technical skills to the soft skills needed to strengthen institutions, policy, legal and economic processes.*
- *The range of actors involved in capacity development services will increase. For out-scaling and up-scaling they will tend to be non-government, civil society and private sector organizations and southern research organizations.*
- *Networks are a powerful tool for capacity development.*
- *Capacity development is a long-term process.*
- *Formal monitoring and evaluation are critical if opportunities to learn and create synergies are not to be lost.*

(RIU, 2008, p1)

In another RIU publication (Reddy *et al.*, 2011) presents experiences of how the Asia programme used its resources and draws attention to the policy implications of funding capacity strengthening beyond the development of skills and empowerment relating to the up-scaling and out-scaling of technology. *“The main feature of what the partners actually used RIU resources for was to improve the scope and quality of relationships and attendant processes necessary for innovation. This suggests that the main task of policy is not to fund the generation of new knowledge through research, or to “do development”, although these activities remain important. Rather, the main task of policy may be to have a capacity strengthening agenda. This capacity strengthening goes beyond developing the technical skills of actors and empowering poor people (again, these remain important). It concerns strengthening the collective dynamic of configurations of agencies working in and around a project (op cit. p23).”*

Innovation champions and brokers

In the context of the importance of institutional mechanisms for supporting key agencies to work more effectively together, a number of other more recent publications on innovation processes have emphasised the need for “champions” including “innovation champions” who are different from researchers who champion new ideas (Hall, 2010) and also for professional “innovation brokers” (Kilelu *et al.*, 2011; Hirvonen, 2011).

Hall (2010) suggests that if brokering for innovation is not publicly funded it is unlikely to happen, but it can be done by a variety of organisations, public and private and consortia. In the context of assessing capacity needs within an agricultural innovation context, the potential contribution of a more or less neutral intermediary or “broker” should not be under-estimated. Such a person would not usually be available at the start of an initiative and therefore would not be involved in the type of capacity assessment envisaged in the guidance notes which complement this review (Sutherland, 2011a). However, if the agricultural initiative includes a brokering function at the design stage, then the broker could play an important role in identifying capacity issues and coordinating inputs to strengthen key areas of innovation capacity identified. A large urban water management

action-research project which centred around city learning alliances had some success in this area through using funded brokers known as “learning alliance facilitators” (Sutherland *et al.*, 2011).

The evidence from the RIU programme regarding agricultural innovation capacity assessment suggests that capacity assessment is necessary to inform a process of strengthening the capabilities of key innovation players, including local “champions”. However, analysis of the learning from RIU also suggests that there is a role for engaging professional brokers to facilitate the agricultural innovation process. This raises the possibility that a capacity assessment might include a consideration of whether a professional broker might be needed in a particular context, and if any of the key actors might be in a position to play a brokering role.

vi. Value Chain Analysis – relevance to Capacity Assessment

More recent multi-stakeholder agricultural platforms, including the “market-led” platforms of SSA-CP, have incorporated value chain concepts and apply them in a range of initiatives in various agricultural subsectors including smallholder cropping (Kaaria, *et al.*, 2008; Tenywa *et al.*, 2011; Adekunle *et al.*, 2010) smallholder livestock (Naye *et al.*, 2009; Maigua, 2006) and horticulture (Steglich *et al.*, 2009). This body of evidence, along with the results from interviews reported in section 2.3 and the pilot testing of the guidance notes (Sutherland, *et al.*, 2011b), indicate that various forms of value chain analysis can be used when assessing the capacity of an agricultural innovation platform.

The review of methods involved a summary examination of some of the guidance on Value Chain appraisal, in order to identify methods/tools relevant to capacity assessment in agricultural innovation.

The value chain analysis does not aim to produce a capacity development plan for the value chain. The focus in value chain analysis is usually on identifying specific bottlenecks or constraints in the chain as a basis for planning how the value chain can be improved. While the focus may not be on strengthening the capacity of value chain actors as an end in itself, improving the access of poorer farmers to markets and information is a common aim in agricultural value chain initiatives. The analysis can provide a road map for action that often includes capacity development activities.

A wide range of user guides and manuals are available for value chain analysis of agricultural products. These date from the mid 1980s to the present and have recently been reviewed in a World Agroforestry Publication Review of guidelines and manuals for value chain analysis for agricultural and forest products (Nang’ole *et al.*, 2011).

Thirteen of the guides reviewed related specifically to value chain appraisal and the design of interventions. All 13 include an explanation of key concepts relating to value chains, and most include aspects of sub-sector analysis, rapid market appraisal and value chain mapping. These methods could be used to provide information that informs an understanding of the institutional and policy context for innovation in a particular commodity or sub-sector and identify potential actions to address institutional and policy weaknesses or opportunities.

Two of the 13 focus more specifically on tools used for value chain analysis which could be used in the analysis of innovation capacity needs of a particular value chain or sub-sector, although they do not specifically use the term “innovation capacity” (Nang’ole *et al.*, 2011).

While the various guides have been developed by experienced practitioners, literature indicating that their efficacy for identification of capacity needs has been systematically evaluated was not easy to find. One of the methodologies, Participatory Market Chain Approach (Bernet *et al.* 2006) has been assessed to have potential for stimulating technological and institutional innovation when transferred from Latin America to Uganda (Horton, 2008).

Two of the guides are useful as sources of methods or tools for assessment of capacity needs in agricultural innovation. “A Toolbook for Value Chain Analysis” (van der Berg *et al.*, 2009) has several tools that are potentially useful for exploring innovation capacity issues. Tool 2 ‘Mapping the Value Chain’, Tool 7 ‘Governance and Services’, and Tool 8 ‘Linkages’ could be adapted to explore opportunities for organisational and institutional level capacity strengthening. The other guide is “Chain-wide learning for inclusive agrifood market development; a guide to multi-stakeholder process for linking smallscale producers to modern markets.” (Vermeulen *et al.*, 2008). This publication has useful and practical guidance on initiating and managing multi-stakeholder processes. Section 5 has a step by step guidance on various types of mapping which could be adapted when exploring capacity needs within a planned or an existing innovation platform. Part of section 5 looks specifically at ways of improving inclusion within the value chain.

vii. Summary of the Literature Review Results

The overall review findings are summarised in Section 3. Below are some points emerging from the literature reviewed relating to capacity assessment:

Definitions of capacity vary - Development agencies and practitioners do not have a standard definition of “capacity”. Often the terms “capacity building”, “capacity development” and even “capacity strengthening” are used quite loosely.

Importance of investing in capacity – in spite of differing definitions of capacity, there is growing recognition that donors and governments need to continue to invest in and support capacity development. This includes acknowledgment of the need to broaden investment beyond research, and supporting National Agricultural Research Systems (NARS), to include other actors whose involvement is key to agricultural innovation. Over 10 years experience with competitive grant schemes funding development oriented agricultural research and innovation projects suggests that capacity limitations are a barrier to participation and need to be factored into the design of these schemes.

Helpful new concepts: A newer set of concepts, such as AIS, IAR4D, RIU and Participatory Value Chain analysis, provide a basis for developing strategies, programmes and projects which can be used to develop capacity to improve agricultural innovation performance. Experience with implementing multi-stakeholder approaches to agricultural research for development/innovation, including IAR4D, RIU and local innovation platforms, have been documented more recently. These approaches are not specifically designed to assess capacity of the stakeholders involved, but the literature indicates that implementation has usually included capacity development activities. These approaches employ

participatory methodologies, usually involving a sequence of activities, which aim to identify issues to be addressed and mobilise support from stakeholders to address these issues. As a consequence capacity issues constraining agricultural innovation may be identified and addressed as part of the problem-solving process.

Identified areas for capacity development. Through case studies, a number of key generic areas for capacity development and strengthening in agricultural innovation have been proposed. The emphasis is on “soft skills” and mechanisms for enabling various actors to engage more effectively in agricultural innovation processes. As the understanding that strengthening and developing agricultural innovation capacity is a complex and somewhat unpredictable process, “innovation brokers” have been proposed as a useful mechanism for “growing” innovation capacity.

General methodologies for capacity assessment: The literature, both on general aspects of capacity assessment, and on assessing agricultural innovation capacity, acknowledges that blue-print approaches don’t work – capacity assessment is a context specific process. More generic capacity assessment guidance also emphasises the importance of having a realistic plan or “response” for capacity development and a robust framework for monitoring its implementation and evaluating its effectiveness. This implies an assessment of the capacity to provide capacity strengthening services and the capacity to manage, monitor and evaluate capacity strengthening inputs. There is a substantive body of literature on this area of capacity (see Annex 1 and also DFID, 2010).

Specific methodologies for capacity assessment: Aside from case studies of “examples of successful agricultural innovation” the literature did not evidence experience in using specific capacity assessment methodology designed for a multi-stakeholder agricultural innovation context. The World Bank’s ongoing commitment to assessment of, and investment in, agricultural innovation capacity is indicated by among other things its plan to publish a sourcebook to guide investment in national agricultural innovation systems. The review found one methodology for diagnosis of national agricultural innovation capacity. It was unclear if this methodology has been empirically tested. A planned chapter on this topic was not in an early draft of the World Bank source book seen as part of this review.

Specific experiences of using capacity assessment methods in a multi-stakeholder agricultural innovation context: Very few published accounts were found detailing how capacity has been assessed within an agricultural innovation platform, including use of diagnostic tools for this, to assess and guide investment in agricultural innovation capacity. This is a gap in operational research. The literature and web-search revealed a number of initiatives using multi-stakeholder platforms, including innovation platforms. However, the methods used to assess capacity needs in these platforms are not well described in the few published accounts available. This gap was addressed in part through interviews undertaken as part of this review as described in Section 2b.

b. Experiences of Capacity Assessment in agricultural innovation platforms

i. Background

The review of literature above, was complemented by a rapid look at some other multi-stakeholder agricultural innovation platforms/platforms. The design of selected initiatives

was influenced by a combination of AIS, IAR4D and value chain concepts. The initiatives covered were the Research into Use Programme (DFID-funded), the DONATA project (ADB-funded), the Harvest Plus project on Orange Flesh Sweet Potatoes (Gates-funded), the CAVA project (Gates-funded) and PAEPARD (EU funded), and National Agricultural Advisory Services (NAADS) in Uganda– (ADB-funded). Further information on these platforms can be found via various publications and weblinks (See Annex 4).

The approach used was to identify individuals with a detailed understanding of how capacity issues were assessed in these platforms, and then interview them if possible. If an interview was not possible an email exchange was used. Due to the limited time available, it was not possible to interview a wide range of players in each of the initiatives, and the focus was on interviewing individuals who had been involved in the design and overall implementation and/or management of each initiative.

In the case of the SSA-CP designed to test the IAR4D concept, copies of the internal and external reviews and literature on the website was used in place of an interview or email exchange with a person closely involved with programme implementation.

The interviews/email exchanges covered 5 questions:

1. What types of capacity strengthening were undertaken by the initiative.
2. At what stage/s were capacity strengthening needs identified and why then?
3. What concepts and assumptions informed the type of capacity strengthening provided.
4. What approaches/methods were used to identify capacity strengthening needs.
5. Comments on the adequacy of the approaches/methods used to identify capacity strengthening needs.

ii. Summary of interview results

The results from the interviews are summarised in the tables below, with analysis of the implications for capacity assessment.

1. Types of capacity strengthening provided and delivery mode

PROJECT	TYPE OF CAPACITY	DELIVERY MODE
DONATA	Understanding AIS & value chain concepts, Technical on aspects of commodity.	Workshops at national and higher levels– informal and more formal training and mentoring.
PAEPARD	Capacity to engage in Agricultural Research for Development (ARD) partnerships and to win ARD research contracts, ARD concepts.	Training workshops involving development of ARD proposals.
RIU	National innovation capacity and more specific capacity in commodity based platforms.	Country level workshops.
NAADS	Extension workers capacity to demand services, and systems for this – more of institutional development.	Not covered in interview.
CAVA	Various (assessed through situation analysis) technical, institutional and organisational including gender awareness.	Mostly workshops and mentoring.
OFSP- Future harvest	Technical mainly –linked to 3 components of the project – nutrition, seed production and marketing.	Formal technical training, workshops, PhDs.
SSA-CP	Technical and more generic linked to M&E and concepts.	Workshops, mentoring, more formal training at field level.

A range of types of capacity were strengthened in these initiatives. Some of the initiatives with wider mandates provided training in basic concepts underpinning the approach being promoted. Most initiatives provided some form of technical training relating to capacity to produce, process and market a commodity, and this was a significant activity for the initiatives promoting particular crops.

2. At what stages in the project were capacity strengthening needs identified, and why then?

PROJECT	STAGES	REASONS
DONATA	Regular 6 monthly workshops and through communication with project managers.	Part of the project design as the focus was on development of actual platforms – not just the capacity to have innovation platforms.
PAEPARD	At the start tried to use workshops; different work packages used different approaches; one specifically on capacity strengthening used a series of workshops.	Hands-on Training workshops involving development of IAR4D proposals seen as a practical way to strengthen capacity.
RIU	Series of national workshops – took time to get going.	Project design focused on specific countries and national agricultural innovation system capacity development – later narrowed down to specific issues/sub-sectors or commodities. Project conceptualisation, of information market places, IS concepts.
NAADS	Series of workshops and range of training and training materials developed in response to perceptions of demand and opportunities.	Project conceptualisation of privatisation of extension services, demand and commercially driven agricultural development in line with programme for modernisation of agriculture.
CAVA	Situation analysis at the start, and subsequent response to the needs of the value chains in each country.	Project design based on value chain approach to empower and provide income for smaller producers and processors; need to get a broad understanding in order to focus activities and then respond to issues as they arose so that project targets could be met.

PROJECT	STAGES	REASONS
OFSP-Future harvest	Work plan of each component set the training schedule. Training was more responsive in case of the marketing component; market chain analysis at initial stages informed the timing of training interventions along with capacity to provide the training.	Assumption was that specific capacity needed in order to make project work and reach targets; analysis needed to identify which areas might be addressed.
SSA-CP	Phase 1 provided training through workshops and in phase 2 training at field level mainly through the implementing organisations; mainly technical and institutional at community level.	Phase 1 designed to build capacity of potential partners so that multi-partner bids could be prepared for funding IAR4D. Phase 2 was mainly to promote technology uptake and value chain with the partners that won project funding.

Most platforms had a start-up workshop/meeting and related activity such as visits to stakeholders which served as a means of identifying or refining capacity strengthening needs. Identification of capacity needs was not usually the main purpose of the start-up activity, which was more about stakeholders signing up to an overall purpose. In most cases building the multi-stakeholder platform or an institutional system for a more demand driven agricultural research and extension service, was an objective which naturally led to capacity needs being identified quite early on in the project. Capacity issues were revisited periodically as issues or obstacles to implementation arose, and this often happened in the project meetings (e.g. six monthly or annual meetings).

3. What concepts and assumptions informed the type of capacity strengthening provided?

PROJECT	KEY CONCEPTS & ASSUMPTIONS	DRIVERS BEHIND CONCEPTS
DONATA	Innovation Platform for Technology Adaptation - Innovation systems, technology adaptation, scaling up and out, value chains, linking with information systems. Information systems will make things work better and speed up the process.	Need to get return on research investments, response to donor perceptions of research; growing importance and potential of information technology.
PAEPARD	Strengthening the capacity of African research organisations, civil society and the private sector will better enable them to participate in EU research projects. Transfer of technology, skills, AIS thinking.	Need to better link European and African agricultural research systems.
RIU	Agricultural Innovation systems; linking supply and demand for information for innovation; getting research into use is possible.	DFID research agenda.
NAADS	NARS, knowledge and information market places.	Modernisation of agriculture in Uganda, WB agenda/search for a new paradigm for extension.
CAVA	Value chains; scaling up; countries unequally developed institutionally hence targets for each; improving access to information farmers.	Gates vision testing out. Value chains; scaling up. Gates vision testing out.
OFSP-Future harvest SSA-CP	IAR4D (see elaboration in section 2.1).	Promoting multi-stakeholder approaches to integrated agricultural research for development and then "testing proof of concept".

A range of concepts and assumptions informed the types of capacity strengthening provided, and also the approach to identification of capacity needs. Generally conceptual frameworks were found to be a helpful way of starting to identify needs and for planning responses to the needs identified. This could be the components of a value chain, a national innovation system or a national research and extension system, the different levels of players in a system, or a combination.

Behind the various frameworks lay assumptions or sets of beliefs including:

- National public sector research and extension organisations cannot deliver cost-effective innovation working on their own; they need to be part of multi-stakeholder processes and platforms.
- There is need to widen the participation and increase competition in the supply of agricultural research and extension services.
- Private sector/free market principles and practices are needed to make agricultural innovation related services and processes more relevant and cost-effective.
- Farmers and small scale processors are poorer and marginalised because they don't have good access to markets and other information; providing access to information will empower them to benefit from engaging with markets.
- In some cases NGO intermediary agencies and private individuals have the capacity to provide effective services when the public sector services are lacking.

4. What approaches/methods were used to identify capacity strengthening needs?

PROJECT	APPROACHES & METHODS	COMMENTS
DONATA	Workshops; multi-level progress review; mentoring and technical backstopping; feedback from national focal points.	Approaches varied between sub-regions.
PAEPARD	Workshops, questionnaires and an e-consultation (for European stakeholders).	Approach used varied between European and African stakeholders.
RIU	Workshops national level; key informant interviews and other forms of stakeholder consultation.	
NAADS	Workshops; market place; use of consultants.	
CAVA	Workshops different levels and situation analysis, plus technical advice/mentoring.	Approach used decided by NRI experts not so much dictated by project management.

PROJECT	APPROACHES & METHODS	COMMENTS
OFSP-Future harvest	Analysis through key informant interviews; focus groups; workshops.	More scope for flexibility in the marketing component than the other down the chain components.
SSA-CP	Technical steering committee; consultants; progress review workshops.	Approach varied between the 3 main pilot learning sites.

The most widespread method used to identify needs were workshops – but these had a dual function of developing stakeholder links and developing the multi-stakeholder process. Other methods included key informant interviews, information arising during mentoring and technical backstopping, focus groups, technical advisory committees and assessment by national focal points involved in platforms.

5. Any comments on the adequacy of the approaches/methods used to identify capacity strengthening needs – what might be done differently/better in this respect?

PROJECT	Adequacy of Methods	Suggestions for improvement
DONATA	Workshops are useful; video conferencing is convenient but not the same as face to face. National focal points and technical backstopping are effective but there is much variation between individuals.	Find ways to get the right people to the workshops. Have clearer TOR for national focal points from the start. Need for incentives. Formalising the learning process.
PAEPARD	The capacity needs assessment was done as part of a process of facilitating the engagement of African and European stakeholders. Insufficient time was given to developing a shared understanding of key concepts and to identifying capacity needs.	Need a clear framework for looking at capacity needs. Project design should include capacity needs assessment as a specific activity.
RIU	Conventional methods, such as snap-shot needs assessments, are totally inappropriate.	Set up systems and processes that enable continuous learning and change to take place, allowing for winners and losers.
NAADS	As above	As above

PROJECT	Adequacy of Methods	Suggestions for improvement
CAVA	Workshops, key informant interviews and technical backstopping are useful. Pressure on impact targets drove the orientation of the workshops – emphasis on end results rather than capacity strengthening.	Where capacity was already strong, such as farmer associations in Uganda, less work is required to strengthen capacity – assessment of existing capacity would be part of diagnosis and design and setting of targets in this type of project.
OFSP- Future harvest	Value chain analysis is useful, but the problem can be that the targets drive the process; open to influence by more powerful interests; limited scope for reflection and learning.	Considerable learning and doing – although this was not the focus of the project. Many assumptions made and “we got it wrong often; not much time for thinking and reflection.” Guidelines could be developed for this, depending on the types of actors engaged with.

Responses to question 5 did not suggest that the approaches or methods for identifying capacity needs have been assessed (in a formal way) with regard to their cost-effectiveness. Anecdotal evidence from PAEPARD and experience during the inception phase of SCARDA (see Section 2c), suggest that efforts to identify and prioritise needs through surveys and asking people in workshops to identify their needs results in long shopping lists. A more strategic approach to the assessment of needs is felt to be more useful than asking stakeholders what their training needs are. For example during the implementation phase, the C:AVA and OFSP projects developed capacity strengthening plans based on a process of participatory analysis and reflection which helped to refine needs over a period of time – DONATA has used a similar approach. There is consensus that an interactive learning process is effective and necessary for getting stakeholders on board and making things happen in terms of agricultural innovation. However, this is also costly in terms of time and other inputs.

The level at which capacity needs are assessed has a bearing on the methods used. For example diagnosing the needs of national systems is usually based on expert consultation, sometimes with workshops. This appears to be a more challenging process than identifying the needs of an agricultural innovation platform around a particular commodity.

Concepts are important in shaping the approach used to identifying capacity needs. While some form of “road map” to steer capacity development activities is helpful, the IAS concept implies that it is more important to establish a system or network for communicating needs and responding to them, than to identify a particular stage when capacity needs will be agreed and planned. The IPTA and agricultural value chain concepts and assumptions inform the identification of specific types of training linked to the commodity and value chain involved. However, experience with applying the IPTA concept suggests the importance of providing generic types of capacity strengthening which are linked to

assumptions about capabilities and capacities needed to participate in a multi-stakeholder platform (see Sutherland et al, 2011b).

A framework for investment into capacity, such as a plan of how capacity strengthened will translate into more tangible benefits, is easier to achieve when a value chain approach is used because the end benefits are easier to identify from the start. An added benefit of the focus provided by a value chain approach is that aspects of innovation capacity can be assessed and strengthened “on the job” which provides a more experiential learning experience than participation in a formal capacity assessment exercise. The flip-side is that pressure to achieve easily quantifiable results, to meet project targets, through a value chain intervention may dampen a spirit of learning by doing and the focus may shift to quick solutions which include “buying in” capacity as an alternative to building or strengthening the capacity of partners.

The existing examples of agricultural innovation platforms are mostly based on value chains or commodities and capacity strengthening in specific technical aspects of the commodity in question tends to be emphasised. Diagnosis of this capacity need is usually done by technical specialists within the team who are back-stopping, or driving, the platform or value chain project. The approach used to “technical back-stopping” may vary according to who is providing this input. Those who are back-stopping may choose to focus more on the technology itself (a more traditional technical advisory role played by extension), or on the institutional issues that are limiting the uptake and wider application of a technology (a more agricultural innovation facilitation role).

A key issue is whether the main focus of an investment is to strengthen broad-based innovation capacity or to obtain results from an investment in agricultural innovation which strengthens capacity as a by-product.

iii. Key point/s emerging from the interviews

- Overall project objectives influenced the approach used to identify capacity, and also the approach to capacity strengthening.
- Workshops were a common tool used to identify needs. This included workshops during the early stages to develop consensus and also workshops to report progress, identify challenges and develop plans to address these. This process, implicitly and/or explicitly involves an assessment of capacity in relation to what the challenge is and how it might be addressed.
- Workshops also provide the dominant method for delivery of learning about the innovation process and how to address the emerging challenges. This in itself is a form of capacity strengthening which is often part and parcel of the project planning and reporting process.
- More formal and focused training can follow identification of challenges, particularly with platforms having value chain or commodity focus. In such a case technical back-stopping or informal “mentoring” (in other words providing general support and giving advice on how challenges arising might be addressed) was an important method used to strengthen capacity of national researchers.
- Fostering understanding of the key concepts relating to innovation and the value chain, and encouraging stakeholders to work in different ways, was seen as important in some of the initiatives. It was felt that this was empowering for the stakeholders and reduced the risk of them adopting a “business as usual” stance.

c. Short reflection on the SCARDA capacity assessment experience

i. Introduction

SCARDA is different from the initiatives discussed in Section 2b, in that it was specifically designed to strengthen capacity for agricultural research and development. By contrast the initiatives discussed were designed to test newer approaches to undertaking multi-stakeholder research for development, and/or to promote a particular agricultural commodity. SCARDA is also different in that it piloted and promoted a specific approach and methodology for assessment of capacity needs. The author's information derives from direct involvement in designing and facilitating the SCARDA workshops on capacity assessment, designing and undertaking some of the capacity assessments and facilitating change management workshops with the selected focal organisations. The approach to capacity assessment used in the SCARDA project, and some of the challenges faced and lessons learned, are described elsewhere (Chancellor *et al.*, 2011). A few of the key learning points from SCARDA of relevance to capacity assessment methods arising from the authors learning on the job are made in this section of the review.

ii. Assessing Agricultural Innovation capacity at national level

While SCARDA eventually focused on developing the organisational capacity of selected NARS focal institutions, it began with the idea of assessing and strengthening capacity at national level across a range of actors (FARA, 2007). Each sub-regional organisation used a somewhat different methodology and national level scoping studies were undertaken in over 40 African countries; 22 in West Africa, 7 in Eastern Africa and 12 in Southern Africa. This included interviews with senior representatives of national research institutes, agricultural universities and colleges, extension services, farmer organisations, NGOs and agri-business organisations. The scoping studies were followed up by stakeholder workshops in each sub-region in which the representatives from the countries discussed capacity issues and priorities relating to agricultural innovation. This was followed by a continental level workshop, where a smaller number of countries were selected for capacity strengthening activities; 4 from West Africa, and 3 each from Eastern and Southern Africa. At this workshop the question of whether SCARDA should focus on all of the main actors in a national agricultural innovation setting, or only on the research actors, was keenly debated. It was agreed that SCARDA should focus its effort on particular organisations ("focal institutions"), but could include their close partners ("satellite institutions") in some of the capacity strengthening activities.

iii. Assessing Agricultural Innovation capacity at organisational level

This decision provided a basis for planning a second round of capacity assessments in a smaller number of countries. The second round narrowed the capacity assessment focus to the "focal institutions" and including some of their "satellite institutions". The approach to capacity assessments at this level, although guided by a common methodology specifically developed and provided for the task, was undertaken differently in each of the target countries. The two main reasons for the variations related to 1) the different personal approaches and choices made by the experts involved, and 2) the varying amounts of time available for each assessment (which was outside of the direct control of the capacity assessment teams). A third reason for variation, was that modifications were made on the basis of ideas developed during the earlier assessments which were

shared between the wider assessment team and tried out in subsequent capacity assessments.

Further layers of capacity assessment, deepening the quality of the analysis and also the degree of participation by the various actors, followed during the two year implementation period. This deepening of the assessment came largely from the focus on improving management capacity in the focal institutions, which had been identified as a priority in the initial country level scoping exercises. The approaches used for this, including “change management” principles, were influenced by a mid-term review and by the approaches of the selected providers for management capacity strengthening activities (see Orchard, 2011).

iv. Lessons on Capacity Assessment and the Response

In summary, the main lessons emerging from SCARDA capacity assessment experience were;-

Time required for effective capacity assessment: In most cases the capacity assessment was rushed and therefore one of the core principles for capacity assessment was not upheld. This meant that time for advanced preparation of the assessment process was limited, including the training/preparation of the assessment team in use of the proposed methods. A further constraint was the absence of a mechanism for financially rewarding or compensating local members of the assessment team. Usually the pressure on time was due to project management factors outside the control of the assessment team. The main lesson is that funders and managers of capacity assessment processes require a good understanding of what is involved in an effective capacity assessment. This lesson informed the design of the pilot testing of capacity assessment guidance.

Capacity assessment methods that worked well: The country level scoping studies used a questionnaire approach with more quantitative emphasis in two of the sub-regions and a more qualitative approach in one sub-region. The questionnaires provided a considerable amount of data on aspects of capacity, but most of this data was not used to inform the development of the SCARDA capacity strengthening strategy. Some of the quantitative data was however useful when it came to establishing baselines for evaluating the impact of SCARDA as part of the design of the M&E system for the project.

The second round of assessment at organisational level used a tool that encouraged the focal institutions to select from a menu of potential areas of capacity strengthening, and potential mechanisms for providing the selected areas of capacity strengthening. This menu tool did provide tables of data that were presented and used to develop a detailed costed plan to implement SCARDA. This was done in order to meet the donor’s request for a very detailed capacity strengthening action plan. However, the downside of the menu approach was that it led to a reductionist type of planning, approaching a blueprint approach to capacity strengthening, which encouraged a “one size fits all” approach to thinking about how to manage project implementation. The result was that the focal institutions indicated that they felt distant from the capacity assessment process, and saw themselves as recipients rather than as partners in the process. Ownership and further refinement of the capacity strengthening actions, based on deeper levels of capacity assessment, came with the introduction of change management linked approaches which enabled much more context specific interventions (Orchard, 2011).

Size and history of the country and scale of its key organisations: Although the focus of SCARDA was on organisational level capacity strengthening the process was more explicitly informed by the AIS approach in two of the sub-regions (ASARECA and SADC). In the two countries with relatively weak national agricultural research organisations, Lesotho and Rwanda, and to a lesser extent also in Burundi and Botswana, the assessments focused more on quality of relationships between actors of the AIS in comparison to the countries with larger and stronger NARIs. This focus was also linked to the way that history had shaped the development of national institutions. In both Lesotho and Rwanda the history of organisational development meant that no one organisation had a strong mandate or enough resources to act autonomously from the other players. Partly as a result, the selected interventions in Lesotho focused on activities designed to strengthen linkages between the focal institutions and other actors involved in agricultural innovation. In Burundi and Rwanda the inclusion of the other innovation systems actors in the capacity strengthening activities was not as extensive.

Capacity Response; decisions about capacity providers: Although the focus of this review is on capacity assessment, SCARDA has an important lesson to share about how capacity providers are selected and their services procured. There is little point in undertaking a participatory capacity assessment which agrees priorities with stakeholders if the capacity strengthening response is delayed. It is possible that by the time the funding arrives for actions agreed the priorities may have changed, or another solution to a capacity problem has already been identified, and/or the stakeholders have become sceptical about the process. In SCARDA, initial delays in providing capacity strengthening services caused by lengthy and top-down procurement procedures were addressed by increasing decentralising of decision making and financial disbursement and decision-making mechanisms. This enabled the participating focal organisations to have much more control over the design of the capacity response and the procurement process. This has implications for the capacity assessment approach. As noted in the guidance notes, there are tools for addressing this potential bottleneck and for managing the expectations raised during a capacity assessment exercise.

4. Conclusions: key points on capacity assessment

The review was undertaken to inform the development of guidance on how to assess capacity for agricultural innovation in a multi-stakeholder setting. In addition, the findings are also an information resource for development practitioners, development agencies and funders of development activities who are interested in the process of capacity assessment, but not necessarily involved in undertaking one. The review has drawn on a wide body of literature listed in Annex 4 and also on direct experience.

Development agencies and practitioners do not have a standard definition of “capacity”, but

there is growing recognition of the need to continue to invest in and support capacity development. This includes broadening investment beyond the development of NARS capacity to include other actors whose involvement is key to agricultural innovation.

A newer set of concepts, including AIS, IAR4D, RIU and Participatory Value Chain analysis, provide a basis for developing strategies, programmes and projects which can be used to develop capacity to improve agricultural innovation performance. More recently

documented experience with implementing multi-stakeholder approaches suggests that capacity development has been an important component. These newer approaches employ participatory methodologies which identify issues and mobilise support from stakeholders to address these issues; capacity issues constraining agricultural innovation are identified and addressed as part of the problem-solving process.

Case studies have identified important areas for capacity development and strengthening in agricultural innovation, including “soft skills” and mechanisms for enabling various actors to engage more effectively in agricultural innovation processes. As strengthening and developing agricultural innovation capacity is a complex and somewhat unpredictable process, “innovation brokers” have been proposed as a useful mechanism for “growing” innovation capacity.

The literature and direct accounts of direct experience suggest that blue-print approaches to assessing agricultural innovation capacity seldom work as capacity assessment is a context-specific process. Literature and direct experience also emphasises the importance of having a realistic plan or “response” for capacity development and a robust framework for monitoring its implementation and evaluating its effectiveness. This implies an assessment of the capacity to provide capacity strengthening services and the capacity to manage, monitor and evaluate capacity strengthening inputs.

There was limited evidence in the literature on the use of a capacity assessment methodology specific to a multi-stakeholder agricultural innovation context. The review found one methodology for diagnosis of national agricultural innovation capacity. It was unclear if this methodology has been empirically tested. The forthcoming World Bank sourcebook to guide investment in national agricultural innovation systems will include a chapter to provide guidance on capacity diagnosis.

The absence of published accounts detailing how capacity has been assessed within an agricultural innovation platform suggests that there is a gap in operational research.

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Annex 1 Terms of Reference

Institutional capacity strengthening for agricultural research and innovation in Africa: an evaluation of tools and methodologies for identifying capacity needs in multi-stakeholder innovation platforms.

Background

During the implementation of SCARDA the emphasis was placed on strengthening the capacity of the focal institutions in order to enhance their performance in priority areas. These areas, and the capacity strengthening interventions to address them, were identified through a participatory process of institutional analysis and built into change management action plans.

In response to demands from the focal institutions, SCARDA began to provide support to a number of pilot schemes to develop the capacity for market-led research. During the later stages of the project, new platforms were launched in some countries in which a wider group of organizations is participating. An example of this is farmer participatory research (FPR) to improve small-scale poultry led by the National University of Lesotho in partnership with farmers' organizations, agricultural extension, the Department of Agriculture, local government units and the private sector. The participatory collaboration of multiple stakeholders will help ensure that different aspects of poultry production and marketing are addressed and that improvements translate into increases in household incomes.

SCARDA lesson-learning workshops showed that there is a consensus on the need to provide further support to multi-stakeholder ARD platforms in order to ensure impact. However, little work has been done to develop tools and methodologies that can be used to identify the capacity needs of organizations participating in these processes. The focal institutions and their partners are involved in new innovation platforms initiated through SCARDA or other programmes. These platforms provide an opportunity to develop and test new tools and methodologies and the lessons learnt from their application will be shared more widely through the electronic platform.

Terms of Reference

The terms of reference for this contract are in support of delivering Output 1: Tools and methodologies for analysing capacity gaps in agricultural innovation platforms in Africa developed and tested, and specifically under activity 1.3:

An evaluation of tools and methodologies for identifying capacity needs in multi-stakeholder ARD research platforms will be carried out. This will include value chain analysis and various approaches to institutional analysis, organizational needs assessment and network analysis. The deliverable from this activity will be a report which will include draft guidelines on capacity needs assessment which will be used in a pilot study to be undertaken as activity 1.4 under output 1.

Deliverable Details: A two part report of not more than 40 pages (excluding appendices). Part 1 – Review of tools and methodologies for identifying capacity needs in multi-stakeholder Integrated agricultural research for development platforms. Part 2 - Draft

guidelines on capacity needs assessment in for use in a pilot study of three agricultural innovation platforms.

Proposed approach & deadlines

1. Review of tools and methodologies

As the available literature on this topic is sparse, a three pronged approach will be used to gather information for the review as follows:

- Collection and review of published literature and information available via the internet.
- Identification of relevant initiatives (agricultural innovation platforms and similar initiatives relating to integrated agricultural research for development in Africa) and consultation with key individuals involved regarding their experiences with relevant tools and methodologies (via email and telephone).
- Drawing on the experiences of this project's main partners (NRI, CORAF, ASARECA, SADC-FANR) with relevant tools and methodologies through targeted interviews with key individuals, reflection on own experience by the authors, and comments on the draft report from the advisory committee for Output 1.

After the point of diminishing returns is reached in the collection of relevant information the material collected will be used to address key questions relating to the review. The main findings will be summarised.

2. Development of Guidelines

The development of guidelines will be informed both by the review above, and by the nature of the task under activity 1.4 using the following process:

- Gathering of general information and characterisation of the three innovation platforms where there guidelines will be piloted – to provide a context for the guidelines.
- In the light of the characterisation of these innovation platforms, identification of tools and methods likely to be most useful for diagnosing capacity issues.
- Assembling of information and guidance on how to use these tools in the context of the pilot testing activity 1.4.
- A generic outline plan/approach for combining the use of the selected tools for activity 1.4.

Annex 2 Review search strings, relevant documents and weblinks

Review search strings

FIRST ROUND – July 2011

Capacity Building in **agricultural innovation platforms** - Africa
Diagnosing capacity needs in **agricultural innovation systems** - Africa
Diagnosing capacity needs in **agricultural research for development** – Africa
Diagnosing capacity needs in IAR4D – Africa
Methods for Diagnosing capacity in **agricultural value chains** – Africa
Methods for Diagnosing capacity in **agribusiness** – Africa
Training needs assessment for **agricultural research capacity** - Africa
Tools and methods for diagnosing capacity development in agriculture
Experience of diagnosing capacity development needs
Strengths and weaknesses of tools for diagnosing capacity development
Capacity development of capacity strengthening projects and programmes - Africa

SECOND ROUND – Oct-Nov 2011

Agricultural innovation systems diagnosis
Agricultural innovation systems assessment
Agricultural research for development capacity assessment
Agricultural research for development capacity diagnosis
Agribusiness capacity assessment
Agribusiness capacity diagnosis
Capacity assessment tools and methods
Capacity strengthening assessment agriculture
Capacity building assessment agriculture
Capacity development assessment agriculture
Capacity strengthening diagnosis agriculture
Capacity building diagnosis agriculture
Capacity development diagnosis agriculture
Tools for capacity diagnosis agriculture
Tools for capacity diagnosis agricultural innovation
Methods for capacity diagnosis agriculture
Methods for capacity diagnosis agricultural innovation
Approaches for capacity diagnosis agriculture
Approaches for capacity diagnosis agricultural innovation
Capacity development review

Annex 3 Persons contributing experiences

NAME & ORGANISATION	INITIATIVE/S	CONTRIBUTION
Claire Coote, NRI	OFSPSCAIN	Extended interview informing Section 2.3 & Piloting IP capacity assessment in Botswana and Mali
Dan Kisauzi, NIDA Associates	RIU, NAADS	Extended interview informing Section 2.3
Richard Lamboll, NRI	CAVASCAIN	Extended interview informing Section 2.3 and Piloting IP capacity assessment in Rwanda
Myra Wopereis, FARA	DONATA	Interview informing section 2.3
Barry Pound, NRI Associate	SCAIN	Piloting IP capacity assessment in Rwanda
Rory Hillocks, NRI	SCAIN	Piloting IP capacity assessment in Botswana and Mali
Andrew Westby, NRI	CAVA, OFSP	Interview informing section 2.3
Tim Chancellor	PAEPARD	Interview informing section 2.3

Annex 4 List of relevant documents and weblinks

Through the Google search engine, the search strings above generated a long list of potentially useful resources. Each potential resource was examined through a rapid reading and classified into the categories “very relevant”, “relevant”, “interesting” and “marginally relevant”. The more useful resources were then organised into sub-categories. The weblinks for each resource was rechecked at the end of the review. In some cases the original weblink was no longer working and in this case it was removed and no weblink is indicated.

The more useful sources were classified and grouped into categories that relate to different aspects of capacity assessment and subdivided into two main categories:-

- Literature containing principles, lessons and general guidance on aspects of capacity development relevant to agricultural innovation platforms and their capacity, and
- Literature on guidance and tools for capacity assessment.

The subsequent grouping of literature into categories reflects the results of the searches under the search strings entered. It is therefore quite likely that some key literature has not been included. If time had been available a wider search using a wider range of key words could be undertaken in order to further expand the sources of relevant information under some of the sub-headings.

RELEVANT LITERATURE: PRINCIPLES, LESSONS & GUIDANCE	
Category	Relevance to Capacity Assessment in Agricultural IPs
Agricultural Training and IAS:	Longer term scope for influencing the training provided in agricultural colleges and universities - to include concepts and skills relevant to innovation processes so that graduates are better equipped to contribute to the innovation process.
Agricultural Innovation Systems, IAR4D & Farmer-led Research	Provides theoretical and empirical support for the capacity assessment - core main concepts, arguments and some evidence supporting multi-stakeholder approaches to agricultural innovation, including integrated agricultural research for development.
Brokerage of Innovation:	An assessment might identify existing players with brokering capability, and how these might be supported and their role in future capacity assessment exercises.
Capacity Development - Agriculture	General experiences and principles applying to the agricultural sector that include some useful ideas that can be used in the design of a capacity assessment.

Category	Relevance to Capacity Assessment in Agricultural IPs
Capacity Development General	Core concepts and principles that can be used to guide the design and implementation of a capacity assessment.
Capacity Development - NGOs	Provides more specific information regarding capacity issues in the NGO sector that can be used to inform how to engage this type of key stakeholder during a capacity assessment.
Capacity Development - Research:	Provides conceptual underpinnings, some analysis and general principles that can be used when designing capacity assessments in contexts where research organisations are the main players in an innovation platform.
Innovation Networks:	Source of information and concepts that outline the significance and scope of networks and can inform how relevant networks might be included as part of a capacity assessment.
Innovation Platforms:	Information on both the concepts guiding and the experience of implementing the concept of an innovation platform. This can be useful to shape questions when assessing an innovation platform already functioning, or to inform discussion about the design of an innovation platform at the end of a capacity assessment process.
Innovation Systems:	General ideas and experiences of innovation systems from other sectors that could give some ideas to a capacity assessment team during the design of the assessment or an innovation platform.
Learning Alliances :	The ideas and some experiences of implementing a particular type of multi-stakeholder innovation platform in other contexts which could be applied to the design of an agricultural innovation platform.
Organisational Capacity Development:	Might be useful when the capacity assessment indicates need to focus attention on only one or two organisations that are strategically vital to the innovation platform.

Category	Relevance to Capacity Assessment in Agricultural IPs
Monitoring and Evaluation of Capacity Development:	Includes material relating to appraisal of situations and planning of capacity strengthening interventions. Particularly useful is the ideas about how to develop indicators for capacity development in context of agricultural innovation, as this can inform the design of the response to the capacity needs identified.
Value Chains and Agribusiness	Useful source of ideas and empirical data on the types of capacity issues constraining agricultural innovation and how these have been identified and responded to.
Tools and Guidance Relevant to Capacity Assessment:	
Category	Relevance to Capacity Assessment in Agricultural IPs
Capacity Assessment General	Primary sources of guidance on undertaking capacity assessments in various development contexts, including useful conceptual frameworks and other tools.
Capacity Assessment AIS	Useful conceptual framework and also suggestions on the types of tools for a capacity assessment.
Capacity Assessment Community Level:	Useful as a source of ideas in situations where community level capacity is major area of focus of an innovation platform.
Change Management:	Useful general principles that can be useful not only in identifying the types of question to ask when assessing capacity of an organisation to engage with an innovation platform but also in the design of the capacity development response.
Institutional Development	Potentially useful for guiding discussion about how to capture the broader institutional capacity issues and capture the “rules of the game” that are hindering innovation processes during a capacity assessment.
Knowledge Management	Useful for developing questions on how organisations currently assess and manage their human capacity, shared information internally and with other organisations, in a way that can assist the innovation process.
Organisational Analysis Tools	Some tools that might be useful, particularly during stakeholder workshops or in a group meeting within a key organisation involved in an innovation platform.

Category	Relevance to Capacity Assessment in Agricultural IPs
Stakeholder Partnerships	Some concepts and tools that might be useful, particularly when assessing the strengths and functionality of linkages and partnerships between actors within an innovation platform.
Value or Market Chain Guides & Tools	Very useful sources for concepts and tools that can be used as part of a capacity assessment in innovation platforms where marketing and value adding activities are a major constraint and planned focus of future capacity interventions.

Agricultural Training and IAS:

Ekwamu, E., Ochola, W.O., Ekaya, W., Osiru, M. and Dhlamini, N. (2009) Capacity Development for Agricultural Transformation: *Making Postgraduate Level Training Relevant to Africa's Agricultural and Rural Sector Development*. RUFORUM, Kampala. <http://elearning.jkuat.ac.ke/journals/ojs/index.php/gchera6/article/view/74> (Accessed 17.11.11).

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