

Dealing with critical challenges in African innovation platforms: lessons for facilitation

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Innovation platforms are increasingly used by research and development initiatives to actively engage the poor in agricultural innovation processes. These platforms are forums for action and learning, where different types of actors come together to address issues of mutual concern. However, the dynamic nature of the innovation process, and the differences in interest, capacity and power among the actors involved, pose a challenge in the facilitation of these platforms. We believe that the key to success is very much linked to the attitude, skills and capacities of the innovation broker. This paper highlights seven key issues which in our view are critical to effective platform facilitation and have not received the attention they deserve: the dynamic and evolving nature of platforms; power dynamics; gender equity; external versus internal facilitation; sustainability of the process; issues of scale; and monitoring and evaluation. These issues and implications for facilitation of innovation platforms will be discussed based on examples from the field and in relation to current theories.

Keywords: innovation platforms; facilitation; innovation brokers; Africa

There is growing scientific recognition of innovation platforms (IPs) and the role of facilitation in catalysing agricultural innovation (see Klerkx and Gildemacher 2011; Hounkonnou et al. 2012; Klerkx et al. 2012), with increasing documentation of experiences from practitioners (see Hawkins et al. 2009; Nederlof et al. 2011; Nederlof and Pyburn 2012; Hall and Mbabu 2012). IPs have become increasingly popular, and run the risk of becoming a void concept or misunderstood – for example because they are taken as merely mechanisms to regulate value chains or to extend new technologies to large numbers of farmers^{1,2}; still, the discussion whether or not IPs are useful and effective, is a relevant one. In this paper we argue that the success of an IP depends on the attitude and skills of the facilitator. Indeed, one of the most frequent questions from practitioners is: ‘how do we best facilitate IPs’?

IPs are composed of a range of actors, often with very different backgrounds, who discuss and address challenges and opportunities around a particular issue or area (Nederlof et al. 2011). IPs may operate at local or national levels; sometimes linking actors at different scales. Often, the actors have divergent and sometimes competing and conflicting interest

Box 1: Selection of agricultural extension and R4D projects across Africa with authors' involvement

Fodder Adoption Project (FAP) The project aimed to strengthen the capacity of poor livestock keepers to select and adopt fodder options and access market opportunities to enable them to improve their livelihoods; for this purpose the project engaged with a wide range of actors through IPs (Ethiopia, Syria, Vietnam) (2008-2010).

Nile Basin Development Challenge (NBDC) Program to improve the resilience of rural livelihoods in the Ethiopian highlands through a landscape approach to rainwater management; district level IPs were established to address natural resource management issues at the local level (Ethiopia) (2010-2013)

Volta Basin Development Challenge (VBDC) Program on integrated management of rainwater and small reservoirs for multiple uses; district level IPs were established to improve rain water management and increase production and market access at the local level (Burkina Faso, Ghana) (2010-2013)

Small ruminant value chains as platforms for reducing poverty and increasing food security in dry land areas of India and Mozambique (imGoats) The project aimed to increase income and food security through pro-poor value chain for goats using an IP approach (India and Mozambique) (2011-2013)

Livestock Livelihood and Markets Project (LILI Markets) The project aimed to improve market participation by small goat and cattle growers in semi-arid regions of Southern Africa using IPs (Mozambique, Namibia, Zimbabwe) (2007-2010)

Increasing food security and household income through small stock market development in Zimbabwe (ZimGoats) Project to increase food security and income for small-scale goat keepers through increased production, market development, and through the testing and use of an IP approach (Zimbabwe) (2011-2013)

Sustainable management of globally significant endemic ruminant livestock of West Africa (PROGEBE) Program on conservation of indigenous cattle in West Africa; local IPs were formed for value chain development on specific commodities to increase interest among farmers (Gambia, Guinea, Mali, Senegal) (2003-2013; IPs since 2011)

Building livelihoods resilience to alleviate poverty in semi-arid areas of West Africa (PLM) Program to build livelihood resilience of smallholder farmers through the establishment of community level IPs for dairy and/or vegetable value chains (Mali, Niger, Togo) (2010-2013)

Sub-Saharan Africa Challenge Program (SSA-CP) Response to the need to dramatically increase the development impact of agricultural research on livelihoods in Africa by developing, testing and promoting an IP approach for conducting agricultural research for development (AR4D) in Africa (throughout East, West, Southern Africa) (2005- 2010)

Convergence of Sciences-Strengthening agricultural Innovation Systems (COS-SIS) The purpose of the program was to carry out inter-disciplinary policy and institutional experiments with a view to elaborate, apply and assess a development approach to sustainable rural poverty alleviation and food security, based on innovation systems thinking (Benin, Ghana and Mali) (first phase 2001-2006; second phase 2008-2013).

Broadening Agricultural Service and Extension Delivery (BASED) Bilateral program between GIZ (then GTZ) and the Limpopo Department of Agriculture aimed at transforming the extension service delivery system (South Africa) (1998-2006)

and values, and they do not naturally want to cooperate or share information with each other. Experience has shown that skilful facilitation is needed to enable the platform members to reach a shared understanding of the issues at hand, agree on common goals, communicate, cooperate and coordinate activities to address their challenges and take advantage of opportunities.

In this paper, we reflect on some of the key challenges emerging from our experiences in facilitating IPs in Africa.³ These issues are recognised within development practice, and yet often do not receive the attention they deserve in IP facilitation. To support our reflections, we draw on examples of agricultural extension and research for development (R4D) projects implemented in Southern, East and West Africa in the past decade, which focused on agricultural production, value chain development and/or natural resource management (see Box 1). However, before we do that we first provide an overview of key issues in facilitating IPs.

Key issues in facilitating innovation platforms

To frame the discussion on key challenges on facilitating IPs, we briefly reflect on what IPs are, the implications for facilitation, and who is best suited to facilitate these platforms, drawing from practice and current theory.

Innovation platforms – forums for learning and action

In this paper, we adopt Homann-Kee Tui et al (2013)'s – practical – definition of IPs:

A forum for learning and action involving a group of actors with different backgrounds and interests: farmers, agricultural input suppliers, traders, food processors, researchers, government officials, etc. These actors come together to develop a common vision and find ways to achieve their goals. They may design and implement activities as a group or coordinate activities by individual actors.
(p1.)

IPs are based on innovation systems thinking: a holistic and comprehensive framework for understanding innovation (new products, new processes and new forms of organization) as emerging from a broad network of dynamically linked actors within a particular institutional and policy context (Hall et al. 2006).

Within agriculture, IPs can be useful to explore strategies that can boost productivity, sustainably manage natural resources, improve value chains, or influence policies; these strategies often include biophysical, socioeconomic and political elements, and concern various formal and informal institutions⁴ (Homann-Kee Tui et al. 2013). By bringing together actors from various sectors and from different administrative levels, and by acknowledging and making use of their diverse capacity (knowledge, skills, capabilities, interests, resources), IPs may be able to identify and address existing barriers or challenges to innovation and/or take advantage of potential opportunities.

From facilitation to innovation brokering

The task of a facilitator in the context of IPs goes beyond merely facilitating meetings and managing dynamics between a bounded group of actors. Rather, ‘innovation brokering’ is required which involves stimulating interactions with a wide range of actors, often operating at different levels, with diverse interests (see Klerkx et al. 2009; Kilelu et al. 2011). Innovation brokers are defined as the persons or organizations that catalyse innovation by bringing actors together and facilitating their interaction (Klerkx et al. 2009). To achieve this, brokers perform a variety of functions, ranging from facilitating interactions between actors, linking and strategic networking, technical backstopping, mediation, advocacy, capacity building, management, and documenting learning (see Box 2).

Box 2: Brokering functions (after Heemskerck et al. 2011)

- **Facilitation:** The facilitator convenes and manages regular meetings to identify key constraints and strategies and ensures that all members can express their views. He or she safeguards the overall process and nurtures relationships among the members, coordinates interactions, negotiates where required, and facilitates collective learning based on increased insight.
- **Linking and strategic networking:** The facilitator builds relationships with other relevant actors and invites them to collaborate with the platform; this may include mobilizing support and resources for activities undertaken by the platform.
- **Technical backstopping:** The facilitator may provide technical advice or link the platform to others who can provide that information; he or she may also solicit further studies or consultations to identify or confirm problems and information needs.
- **Mediation** Actors may perceive others as competitors, who want to monopolize the process and prevent others from receiving crucial information. The facilitator prevents such power struggles and addresses them if they arise. He or she tries to help the platform members realize they all have an interest in finding solutions and creating opportunities.
- **Advocacy** Innovation requires an enabling environment. The facilitator may help the platform to advocate for policy changes, generate new business models, or stimulate new relationships among the actors, and get the buy-in and support of those how matter to the platform.
- **Capacity building:** Most platform members are not equipped with the technical, organizational and management skills to play their role in the platform effectively. The facilitator may link the platform to training institutes and organize exchange and exposure visits; he or she may also help actors to organize themselves better.
- **Management:** With management we refer to the financial management, reporting and communication with the donor. Sometimes the facilitator combines the function of broker with that of manager.
- **Documenting learning:** The facilitator ensures that the meetings and the process are well documented and reported to relevant actors and other parties; it is used to simulate reflection and learning based on actions initiated, as well as the overall innovation process.

As we can see, the role of an innovation broker is diverse and challenging and demands a particular set of skills. Effective innovation brokers are flexible and natural networkers, have a knack for developing cooperation and partnerships, a strong and wide personal network, a capacity to manage relations effectively over time, a good sense of power dynamics, the ability to manage conflict, a listening ear, group facilitation skills, and the ability to consider broader system dynamics. They may also need to encourage actors within a given system to change entrenched practices and question the ways in which the system functions. This raises questions about who is best placed to fulfil this role.

Who are the brokers?

There are different ways of categorizing innovation brokers (e.g. see Klerkx et al. 2009), but generally brokers can either be organizations or individuals who can be members of the platform or independent from the platform (Tennyson 2005; see Table 1).

Table 1: Different type of brokers (Tennyson 2005)

	Individual	Organization
Internal	An individual operating from within one of the partner organizations with a designated role to build and /or develop the partnership	A team or department located within a partner organization specifically tasked with building and/or developing partnership relations on its behalf
External	An individual working externally to the partner organizations, appointed by either one (or more, or all) of the partners to build or develop some aspects of the partnership	An independent organization or mechanism created specifically to promote partnerships and/or to undertake a brokering function on behalf of different partnerships.

As Klerkx et al (2009) point out, the role of innovation broker in Western countries is often fulfilled by intermediary organizations that are independent from the platform and specialized in brokering, e.g. innovation consultants. However, such specialist brokers are not common in developing country contexts. As a result, the role of innovation broker is often fulfilled by those who instigate platform processes, for example research or development organizations. Representatives from these organizations may not only be responsible for establishing platforms, they may also be platform members. In some cases ‘insiders’ from a given system may be selected to play the role of broker, for example extension agents or government representatives.

Voices from the field: challenges faced

Although much has been written from a theoretical perspective on innovation systems and there are many guidelines for facilitating platforms, the challenges facing innovation brokers only become evident through practice. We highlight seven key issues here based on our experiences with IPs.

Dynamic and evolving platforms – a need for highly skilled innovation brokers

Ideally an agricultural IP addresses social, technical and institutional issues affecting the farm level as well as the wider context. Therefore the ability of the facilitator to enhance

interaction across different levels, with a view to enabling the enhanced functioning of the whole system, is of critical importance. This includes changes in attitudes, skills, and practice of individual actors, as well as the relations between them, all of which need to be carefully facilitated.

For example, in a small ruminant livestock project utilising IPs in South Western Zimbabwe (LILI Markets/ZimGoats), local actors initially identified production and marketing issues as key challenges. After verification the platform members agreed that market access was the most limiting factor; the IP members then sought to involve actors associated with marketing, including buyers, transporters and auctioneers as well as representatives from the local government responsible for regulating livestock marketing in the district. Once local markets were established and the sales modalities developed, the IP shifted to include processors, namely abattoirs, and focused on improving production, by linking farmers to commercial feed suppliers. This illustrates how the agenda of the IP, and in turn the composition of relevant actors, evolved and changed over time. Flexibility in facilitation of the innovation process and in the management of platform dynamics was vital in order to ensure that the IP focused on appropriate issues for achieving impact.

This example does not stand alone, and is typical for many IPs (see Duncan et al. 2011 for an example of how planted forage was used as an entry point for catalysing innovation on broader livestock value chain issues in Ethiopia). Based on an analysis of various case studies, Nederlof and Pyburn (2012) argue that a flexible approach to platform structure and membership is useful in case new topics arise, priorities change, or unexpected problems emerge. Sometimes the 'real' issues only emerge after the process has begun. It may also take some time to determine the best level for the platform to operate in support of institutional change. Navigating these dynamics requires tact and diplomacy, and the innovation broker's role in orchestrating this is critical. While innovation brokers can be provided with 'how-to' guidelines for facilitating IPs, it is much more complicated to equip them with the skills to 'manage change'. As process oriented approaches are by nature not a blue print with fixed goals and time frames, it is important that facilitators have a clear understanding of the need for flexibility and have the skills to work in an iterative way with relevant actors to achieve desired outcomes (see Ngwenya and Hagmann 2009).

Power and platforms – risk of reinforcing the status quo

Although issues surrounding power dynamics are widely recognized within the 'participation' literature (see Chambers 1997; Cooke and Kothari 2001), they have received scant attention⁵ in research on IPs (Zannou et al. 2012; Cullen et al. submitted). It is tempting to think that bringing different actors together may address key constraints for value chains, managing natural resources, and policy development, but bringing actors together may not address the underlying reasons for weak actor linkages. If these issues are not taken into account IPs may be used to reinforce existing dynamics, or be misused by powerful actors to achieve their own goals.

Experiences with district level platforms as part of a natural resource management (NRM) project in the Ethiopian highlands, suggest that careful attention should be given to power asymmetries. During a series of exercises to identify NRM entry points in one of the districts, termite infestation was identified as a priority issue by farmers, due to their impact on grazing lands, crops and infrastructure. However, local government representatives insisted that soil erosion should be prioritised – in order to meet national government targets for soil and water conservation. Government actors were overrepresented within the platform and facilitators realised that if the government agenda dominated the process it was likely to reinforce the status quo, in which farmers have limited voice in decision making processes, and lead to lack of engagement and ‘buy-in’ on the part of community members. Platform facilitators played a critical role in mediating between these different interests. Together with researchers, they identified an intervention that could serve as a compromise between farmers and government decision makers: a termite resistant fodder species called ‘Chomo grass’. This would help to conserve soils, rehabilitate grazing areas destroyed by termites and provide livestock feed.

However, achieving a compromise should not always be a priority for platforms. It is important to point out that the focus IPs place on identifying and solving common problems through a process of consensus building often ignores the fact that conflict can be an important catalyst for change. Pushing actors to achieve consensus may also lead to ‘solutions’ which are not ideal for all of the actors involved, particularly those who have less of a voice. With this in mind, although platform facilitation guidelines often state that the innovation broker should be relatively neutral and objective, there may be situations – particularly when there are power inequalities – when brokers may need to advocate on behalf of certain groups. There is growing evidence which suggests that such multi-actor processes may not be advantageous for marginalised groups who may be overruled or manipulated by more powerful actors (Edmunds and Wollenberg 2002). Those who take this view argue that measures should be taken to empower weaker groups before they engage in collective dialogue within a platform space.

Although care should be taken to ensure that those with more power do not dominate the platform space, there can be advantages to working with powerful actors. The COS-SIS program facilitated the creation of a cocoa IP which aimed to secure higher prices for cocoa farmers. The cocoa sector is composed of powerful actors, many of whom were represented in the IP. One of the IP members was formerly an advisor to the Minister of Finance and Economic Planning, with responsibility for cocoa affairs. The IP members asked this influential member to represent their interests, and in doing so convinced the minister to raise the producer price of cocoa for all farmers (see also Nederlof and Pyburn 2012 and Zannou et al. 2012).

Gender – promoting equitable opportunities

Gender is a critical factor in achieving development objectives and evidence suggests that disparities between the sexes limit the effectiveness of development programs (World Bank 2001, 2011). Evaluating IPs from a gendered perspective can serve to highlight imbalances between men and women in terms of power and representation. However,

when we look at the recent literature on IPs gender only seems to feature in the margins. Moreover, if we look at all the R4D projects we are and have been involved in, only a few have given attention to roles played by men and women, the relationships between them and how this influences innovation.

When reviewing the R4D projects we found that women are frequently under-represented in IP processes, despite the fact that in many project locations women are often the primary producers and processors of agricultural products. There are often limited numbers of women included in platform meetings, which in certain locations may reflect the wider cultural context. Platform facilitators and members may fail to take into consideration the constraints that women face in attending and being able to actively participate in platforms. Women's ability to participate may depend on the timing and location of meetings, the multiple demands on women's time and social expectations. Even if women are present in the platform they may not be able to voice their views. In certain parts of Africa, women are constrained from expressing their opinions due to cultural attitudes towards women speaking in public. This can result in platforms prioritizing issues that either do not reflect women's concerns, or could have a negative impact on them. For example, NBDC's IPs working on fodder development did not consider the extra demands on female labour and time that the new interventions required. Having said this, merely focusing on assessing women's participation in such public spaces may ignore the influence that women have over decision making processes 'behind the scenes'.

Nonetheless, it should be recognized that the recent focus on the use of multi-actor processes to link the poor, especially women, to economic and social benefits, does not always lead to desired effects. This is particularly evident in value chain processes where increasing women's participation in market-oriented production can either increase or decrease their access to and control over income, depending upon the character of their involvement and the specific characteristics of the chain (Coles and Mitchell 2011; KIT et al. 2012). For example, commercialization of small ruminants – which in many places are traditionally the responsibility of women – may lead to a loss of control over household resources for women unless provisions are put in place to protect female interests. This may be difficult to address because it entails interfering with power dynamics at a household level, which may have unpredictable and unintended consequences.

The use of a gender lens to critically look at the design, operating modalities, focus of the platform, key constraints, strategies and resulting outcomes may avoid some of adverse effects mentioned above. However, gender relations are usually deeply entrenched so transforming them may not be always be something that a platform is able to address, particularly if they are operating in a short time frame. In addition, concepts of gender equality are often imposed from a Western point of view, these may need to be reconfigured to take into account what men and women want in specific contexts.

Internal versus external facilitation – pros and cons

When reviewing the IPs described in Box 1, it was observed that almost all were facilitated by international and national research organizations; some were facilitated by

NGOs and occasionally extension officers were involved in brokering innovation. According to the scheme of Tennyson (2005), most of these individuals and organizations would be classified as 'internal' brokers, as they often have a direct stake in the process.⁶ This raises questions about their ability to facilitate platform processes as they may have a vested interest in platform activities. This issue is of fundamental importance to IP processes as those who establish and facilitate the platform often set the broad objectives, and this may significantly influence the selection of platform members, identification of key issues and subsequent entry points (see Nederlof et al. 2011). For example, organizations that instigate platforms may have their own institutional agendas, such as an emphasis on commercialization and value chain development, which may not always reflect the interests of the main beneficiaries.

Although innovation processes are based on participatory principles which include ensuring equal representation, flexibility and adaptive management, those who manage and facilitate the process may not always get the organizational support to undertake such an approach, and individual facilitators may have a narrow understanding of the function and purpose of the IPs. For example, many IPs are currently driven by national research organizations in response to the low uptake of technologies developed by them, such as the Research Into Use (RIU) program funded by DFID (see Mur and Nederlof 2012) and the DONATA program coordinated by FARA⁷. Some merely use platforms as a dissemination mechanism for existing technologies, instead of exploring the underlying reasons for low adoption.

In the case where international research centres and NGOs facilitate the process, there is a risk that members of the platform associate the platform with the funding organization. This may lead to members choosing issues that reflect the mandate of the funding organization, rather than expressing more genuine concerns. An alternative is to seek facilitators who are more closely aligned with the existing agricultural system, for example agricultural extension workers. However, such actors often have a limited mandate which restricts their ability to act effectively as innovation brokers (see Leeuwis 2004). Moreover, in utilizing such actors, government agendas may come to dominate the discussion, as we have seen in the case of NRM in the Ethiopian highlands. For these reasons it is important that both brokers and platform members clearly state their position and areas of interest.

A solution may be to involve specialized brokers, which have innovation brokering as their main task and are external to the membership of the platform. But this would require further experimentation to identify who could play this role, as well as willingness on the part of donor organizations to fund such arrangements. It is also important to bear in mind that although external brokers may have advantages in terms of perceived neutrality and objectivity, there may also be certain advantages to engaging internal brokers. Internal actors are often better positioned as they can use existing relationships, networks and local knowledge, this is particularly important in contexts where there are poorly functioning institutional frameworks which external actors may find difficult to navigate (see Klerkx et al. 2009).

Whilst the identification of actors as ‘internal’ and ‘external’ can be a useful way of identifying the pros and cons of different brokering arrangements, these categories may not be as fixed as they initially appear. So-called internal brokers may initiate a platform process but then gradually take more of an external role as the platform develops, and vice versa. There is also potential for designing brokering arrangements which involve cooperation and collaboration between both internal and external actors. Ultimately, the type of brokering will vary depending on the specific context, the purpose of the platform, the availability of actors and the skills required.

Issues of sustainability: towards self-organization

IPs exist only as long as they are useful: their composition is likely to change over time as different issues emerge, they may be reconfigured to address a new set of problems and ultimately they may evolve into a more permanent entity, such as a producers’ association, cooperative or even business. Platforms may serve to build the innovative capacity of actors within the system but the platforms themselves may cease to function.

Although most IPs are facilitated by research organizations or NGOs, who themselves have a stake in the process, these organizations are often perceived as relative outsiders by the other actors in the platform; they often reside outside the project area and operate on behalf of a specific project and donor. In order to sustain the innovation process, it would be important to capacitate other actors in the platform to take over some of the critical innovation brokering tasks after project funding comes to an end. However, handing over facilitation may be a complicated process. For example, relative outsiders may be more accepted as facilitators by other actors – especially where there are power inequalities or conflicting agendas between platform members – leading to potential resistance to internal actors taking over this role. In some cases it may be easier for external actors to convene the process and to keep the overall objective of the platform in mind; insiders may need capacity building in order to take on this role. Facilitation by so-called insiders may encourage ownership of the process among local actors, making it easier for the implementing organization(s) to phase out, but there can be problems with lack of trust, particularly regarding finances.

Experiences from projects which have instigated platforms and then tried to ‘hand over the stick’ illustrate some of the challenges that can be encountered. As part of a two-year project on goat production and marketing in dry land areas of Mozambique (imGoats), an international NGO was identified to take up the innovation broker role. Although a project team from the NGO took the lead, they realized the need to identify local actors who could take over the role of innovation broker in order to sustain the process. The platform members elected a committee of four members, representing different actor groups. Throughout the process, the project team provided on the spot support and backstopping. Although the committee gradually took over responsibilities for facilitation and coordination, they faced two big challenges: linking with different actors outside the platform, and strategic networking with government agencies. One constraint was the low capacity among the committee members at the start of the project, but committee members competing commitments and the short time frame of the project played a role as well. However, there are also positive examples of platform sustainability, such as the

case of the SSA-CP – whereby thirty six platforms were set up throughout Africa. Many have become established within the local or district government administrations. Support to farmers from local policy makers has strengthened the platforms. According to Mokwunye and Ellis-Jones (2010), the sustainability of the IPs has become apparent where farmer organizations, commercial people and local governments have become drivers and champions.⁸

We find it difficult to draw conclusions regarding the most effective brokerage arrangements for the sustainability of platforms. Generally speaking, as the main focus of any IP is to stimulate and support actors to start working as a self-organized and managed innovation system, handing over the task to local innovation brokers should be a central part of the process.

Issues of scale: how to ensure the quality of the process

Recently FARA was approached by the Minister of Agriculture of Sierra Leone, who wanted to establish three hundred and fifty IPs (Adekunle, pers. comm.). In addition to this, the Gambia, having been persuaded to try the approach, decided to commence by setting up twenty two platforms.⁹ However, working at this kind of scale demands that a new generation of innovation brokers is trained and armed with the basic tools for effective platform facilitation.

FARA has started undertaking such capacity building activities through a range of programs, including the SSA-CP and PAEPARD.¹⁰ The PAEPARD project in particular places an emphasis on training ‘Agricultural Innovation Facilitators’. FARA is also working with partners to enrich the curriculum of universities to include soft skills that are essential for the successful facilitation of innovation processes. In addition, the Kenya Agricultural Research Institute (KARI) and the Australian Centre for International Agricultural Research (ACIAR) recently developed an initiative to train people from national research organizations across Africa in the facilitation of IPs (Makini et al. 2013).

Such endeavours are highly encouraging, but it is important that they are not one-off activities. Developing skills in innovation brokering requires an iterative learning process which cannot be dealt with through modular training, but requires learning by doing and reflection on the process (Ngwenya et al. 2008; Ngwenya and Hagmann 2009, 2011). Moreover, institutional and policy support may be required over a sufficient time frame in order for such initiatives to have long-lasting impact. For example, those who are trained are likely to need support and possibly incentives from their organizations to address systemic and underlying constraints. Experience has shown that building facilitation capacity without investing in the institutional reform necessary to support process-oriented approaches is unlikely to succeed. In South Africa for example, a Participatory Extension Approach (PEA) with facilitation for change embedded in it was implemented through the BASED program (see Ngwenya et al. 2008). The program was successful in training quality facilitators among selected extension officers and managers. However, in order for these new emerging professionals to be successful a radical transformation of government structures was required to provide an enabling institutional environment. At

the beginning, some senior managers backed the approach and initiated the process of integrating PEA into the mainstream system. However, the process collapsed due to a change of management. As a result, many of the trained facilitators left the government system to form an independent NGO.

With these examples in mind, it is clear that developing facilitation capacity requires a much more systematic approach that pays attention to the broader supporting structure. Scaling out of IPs to other areas and locations needs to be accompanied by institutional and political support for different ways of working and for the newly emerging professionals who help guide these processes.

Monitoring and evaluation: a role for facilitators?

Monitoring and evaluation (M&E) is particularly important for IPs given the growing demand for evidence that innovation system approaches lead to impact on the ground. However, facilitators of IPs often struggle to develop appropriate M&E formats. Traditional research and development approaches have a tendency to employ a linear M&E model based on an assumption that change can be planned, easily identified and controlled (Prasad Pant 2010). However, such theoretical approaches and the associated tools are not necessarily suitable for an innovation system approach due to its complex, non-linear and participatory nature. Due to their nature the impacts of IP processes are not always tangible and can be difficult to monitor. IPs therefore require an M&E framework and set of tools that take into consideration the complexities of innovation systems, and which can document and assess process as well as outcomes (see Njuki 2010).

The objective of M&E in the context of R4D projects is two-fold: first, it may serve as a tool to generate research-based evidence for the effectiveness of IPs across different contexts; second, it is meant for joint learning among projects teams and the actors by assessing their performance and to gain a better insight into the underlying issues in order to adapt the course of action. Although researchers may play an important role in the first objective, innovation brokers play a critical role in the second one through facilitating and documenting a systematic process of action, monitoring, reflection and adaptation. In our experience, however, innovation brokers often do not consider M&E as part of their role, which makes implementation difficult. Based on the SSA-CP, a set of tools to document IP processes and outcomes were adapted for use by innovation brokers in several R4D programs in West Africa (see Pali and Swaans 2013; initially adapted for PROGEBE, some tools were used for the PLM project and VBDC). However, the tools were applied with mixed success. After further training, research focused platforms – which often assigned specific persons to document lessons – applied the tools successfully; however, facilitators of development focused platforms either did not always understand what was expected in terms of M&E or struggled to use the tools and found them cumbersome.

In one of the other projects (imGoats), outcome mapping – an alternative approach to planning, monitoring, and evaluating development impact developed by IDRC (Earl et al. 2001), was adopted for M&E.¹¹ Project partners and innovation brokers used this approach to track changes in behaviour (i.e. actions, relations, activities) among actors in

the platform and the wider environment. Although their experience was generally positive, the documentation and analysis was perceived as highly resource intensive. Overall, whether outcome mapping or other approaches were used, innovation brokers and project partners found it easier to apply and use the tools than designing the overall framework. This suggests a need for process-light, simple and accessible formats for M&E.

While more resource intensive approaches may work in more research and learning focused platforms, in more development focused projects, the use of relatively simple participatory tools may be more appropriate to monitor progress. This could be a task of the innovation broker, but it should be borne in mind that joint observation, documentation and analysis may also stimulate ownership of the process and outcomes among platform members. There are examples, e.g. from the SSA-CP, where farmers and other players on the platform helped in the monitoring process after having been trained. However, from our experience it seems that for the development of an overall M&E framework and the tools themselves, assistance and support from M&E specialists may be required, particularly if the M&E goals are focused on collecting evidence for external donors or researchers rather than for platform members themselves.

Conclusions

IPs are increasingly being used in research and development initiatives. However, the dynamic nature of innovation processes, and the differences in interest, capacity and power among the actors involved, makes the role of facilitation or innovation brokering particularly challenging. We believe that the key to success of an IP is very much linked to the attitude, skills and capacities of the innovation broker. This paper has highlighted seven key issues which in our view are critical to effective platform facilitation and have not received the attention they deserve. They range from the dynamic and evolving nature of IPs to issues of power and gender; the problematic role of innovation brokers, issues of sustainability and scaling, and monitoring and evaluation for learning.

For maximum benefit of IPs, facilitators with a flexible attitude and process skills are needed. Both internal and external actors can act as facilitators and there is potential for brokerage arrangements which draw on both actor groups. For example, we have seen from many cases that with external support farmers or other local actors can grow slowly into facilitation roles. It is also important to realize that not all brokering functions need to be fulfilled by one person or organization; so called champions, i.e. highly motivated actors in the platform, can play a role to mobilize peers of their groups, and promote contact between the platform members and their constituencies (see Heemskerk et al. 2011; Klerkx and Aarts 2013). It is clear that capacity building for facilitators is of critical importance and steps being taken by agencies including FARA and KARI are heading in the right direction for enhancing brokering skills at a larger scale.

Although IPs offer a potential way of achieving institutional change and a means for facilitating interaction and learning among different actors, this may be complicated in

contexts where there are entrenched inequalities and political sensitivities and where informal (local) institutions play an important role (Cullen et al. submitted). A group based approach provides an opportunity for different actors to interact, build trust and engage in joint learning and can potentially provide an opportunity to transform underlying values and patterns of interaction which may hinder innovation. However, this may work better in homogeneous settings where people are free to express themselves, than in heterogeneous settings such as IPs (Swaans et al. 2008). Under such circumstances combining multi-actor platforms with sub-groups which can focus on the needs of specific actors should be considered.

The context and the aim of the platform may also determine who is best placed to take on the role of innovation broker. As IPs have evolving agendas, fluid brokerage arrangements may be required which also evolve over time in order to draw on the skills and resources of both 'insider' and 'outsider' brokers. This requires sufficient flexibility on behalf of the facilitating organization and an understanding that actor roles may need to shift depending on the trajectory of the platform. More research is needed to explore the effectiveness of different types of innovation brokers across different contexts, how their roles change over time and implications for the innovation process, as well as how different brokering arrangements can be institutionalized so that innovation processes can be sustained after projects, or organizations instigating the process, phase out.

Despite the positive developments that are already taking place, significant changes to institutional arrangements and incentive mechanisms are required if IPs are to be successfully scaled up. This implies an emphasis on developing facilitation and management competencies among a range of actors that are systems based and process oriented, as well as the political will to support such new ways of working. Achieving socio-economic impact among small-scale farmers will be critical in order to justify such time and resource intensive processes. IPs will also require critical monitoring and assessment to ensure that they adequately target and address the problems of the poor.

References

Chambers, R. (1997) 'Whose reality counts? Putting the last first' London: Intermediate technology publications.

Coles, C. and Mitchell, J. (2011). 'Gender and agricultural value chains: A review of current knowledge and practice and their policy implications' ESA Working Paper No. 11-05. Rome: FAO. Available from:
<http://www.fao.org/docrep/013/am310e/am310e00.pdf>

Cooke, B. and Kothari, U. (eds.) (2001) 'Participation: The New Tyranny?' London: Zed Books.

Crane, T. and Richards, P. (2009) Causal process tracing: Overview and application. Convergence of Sciences – Strengthening Innovation Systems Workshop, Elmina, Ghana, 22–26 July 2009.

Cullen, B., Tucker, J., Snyder, K., Lema, Z., and Duncan A., (submitted) Reflections on power: An analysis of power dynamics within innovation platforms for natural resource management.

Douglas, M. (1986) *How institutions think*. Syracuse, NY: University of Syracuse Press.

Duncan, A.J., Ergano, K., Adie, A., Geleti, D., Assefa, T. and Bediye, S. (2011) 'Planted forage as an entry point for catalyzing stakeholder action on broader livestock value chain issues—Experiences from Ethiopia' IFAD Technical Advisory Note. Rome: IFAD.

Earl, S., Carden, F., and Smutylo, T. (2001) 'Outcome mapping: building learning and reflection into development programs' Ottawa: International Development and Research Center (IDRC).

Edmunds, D. and Wollenberg, E. (2002) 'Disadvantaged Groups in Multistakeholder Negotiations' CIFOR Programme Report.

Hall, A., and Mbabu, A.N. (eds.) (2012) *Capacity building for agricultural research for development: Lessons from practice in Papua New Guinea*. Maastricht: UNU-MERIT.

Hall, A., Janssen, W., Pehu, E., and Rajalahti, R. (2006) 'Enhancing agricultural innovation: How to go beyond the strengthening of research systems' Washington: World Bank.

Hawkins, R., Heemskerk, W., Booth, R., Daane, J., Maatman, A., and Adekunle, A.A. (2009) 'Integrated agricultural research for development (IAR4D): A concept paper prepared for the Forum for Agricultural Research in Africa (FARA) Sub-Saharan Africa Challenge Programme (SSA CP)' Accra: FARA.

Heemskerk, W., Klerkx, L., Sitima, J. (2011) 'Brokering innovation' In: Nederlof, S, Wongtschowski, M., van der Lee, F. (eds.). *Putting heads together: agricultural IPs in practice*. Bulletin 396. Amsterdam: KIT publishers, pp. 43-54.

Homann-Kee Tui, S., Adekunle, A., Lundy, A., Tucker, J., Birachi, E., Klerkx, L., Ballantyne, Duncan, A., Cadilhon, J., and Mundy, P. (2013) 'What are IPs?' Brief 1 of IP practice briefs by CGIAR Research Program on the Humid Tropics. Kenya: ILRI. Available from: <http://cgspace.cgiar.org/handle/10568/33667>.

Hounkonnou, D., Kossou, D., Kuyper, T.W., Leeuwis, C., Nederlof, E.S., Röling, N., Sakyi-Dawson, O., Traoré, M., and Van Huis, A. (2012) 'An innovation systems approach to institutional change: Smallholder development in West Africa', *Agricultural Systems* 108, 74-83.

Swaans, K., B. Cullen, A. van Rooyen, A. Adekunle, H. Ngwenya, Z. Lema and S. Nederlof. 2013. Paper. Dealing with critical challenges in African innovation platforms: lessons for facilitation. *Knowledge Management for Development Journal* 9(3): 116-135 <http://journal.km4dev.org/>

Kilelu, C.W., Klerkx, L., and Hall, A. (2011) 'Beyond knowledge brokering: an exploratory study on innovation intermediaries in an evolving smallholder agricultural system in Kenya', *Knowledge Management for Development Journal*, 7:1, 84-108.

KIT, Agri-ProFocus and IIRR (2012) *Challenging chains to change: Gender equity in agricultural value chain development*. Amsterdam: KIT Publishers.

Klerkx, L., and Aarts, N. (2013) 'The interaction of multiple champions in orchestrating innovation networks: Conflicts and complementarities' *Technovation* 33, 6-7: 193 - 210.

Klerkx, L., Hall, A., and Leeuwis, C. (2009) 'Strengthening agricultural innovation capacity: are innovation brokers the answer?' *Int. J. Agric. Res., Governance Ecol.* 8: 409-438.

Klerkx, L., Mierlo, B., and Leeuwis, C., (2012) 'Evolution of systems approaches to agricultural innovation: Concepts, analysis and interventions' In: Darnhofer, I., Gibbon, D., Dedieu, B. (Eds.), *Farming Systems Research into the 21st Century: The New Dynamic*. Dordrecht: Springer Netherlands, pp. 457-483.

Klerkx, L.W.A. and Gildemacher, P. (2011) 'The role of innovation brokers in agricultural innovations systems' In: *Agricultural innovation systems: An investment sourcebook. Module 3: Investment in extension and advisory services as part of agricultural innovation systems*. Washington, DC: World Bank.

Leeuwis, C. (2004) *Communication for Rural Innovation. Rethinking Agricultural Extension*, with contributions by A. van den Ban. Oxford/Wageningen: Blackwell Science/CTA.

Makini, F.W., Kamau, G.M., Makelo, M.N., Adekunle, A., Mburathi, G.K., Misiko, M., Pali, P., and Dixon, J., (2013) *Operational field guide for developing and managing local agricultural IPs*. Nairobi: Kenya Agricultural Research Institute (KARI).

Mokwunye, U, and Elis-Jones, J. (2010) *Sub Saharan Arica Challenge Program: Internal Review Report*. Accra: FARA. Available from: http://www.fara-africa.org/media/uploads/library/docs/ssacp/2010_SSA_CP_internal_review_Final_Report_Aug_2010_.pdf

Njuki, J., Pali, P., Nyikihadzoi, K., Olaride, P., and Adekunle, A. (2010) *Monitoring and Evaluation Strategy for the Sub-Saharan Africa Challenge Program*. Accra, Ghana.

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

Nederlof, E.S., and Pyburn, R. (eds.) (2012). *One Finger cannot lift a rock: facilitating IPs to trigger institutional changes in West Africa*. Amsterdam: KIT Publishers.

Swaans, K., B. Cullen, A. van Rooyen, A. Adekunle, H. Ngwenya, Z. Lema and S. Nederlof. 2013. Paper. Dealing with critical challenges in African innovation platforms: lessons for facilitation. *Knowledge Management for Development Journal* 9(3): 116-135 <http://journal.km4dev.org/>

Nederlof, S, Wongtschowski, M., and Van der Lee, F. (eds.) (2011) Putting heads together: agricultural IPs in practice. Bulletin 396. Amsterdam: KIT publishers.

Ngwenya H., Haggmann, J., and Ramaru, J. (2008) 'Going to scale with facilitation for change: developing competence to facilitate community emancipation and innovation in South Africa' In: Sanginga P., Waters-Bayer, A., Kaaria, S., Njuki, J., and Wettasinha, C. (eds.) *Innovation Africa: enriching farmers' livelihood*. London, UK: Earthscan Publications Limited, pp. 340- 357.

Ngwenya, H., and Haggmann, J. (2009) 'Facilitation for change: triggering emancipation and innovation in rural communities in South Africa' In: Scoones, I., and Thompson, J., (eds.) *Farmer first revisited: innovation for agricultural research and development*. Warwickshire: Practical Action, pp.220–228.

Ngwenya, H., and Haggmann, J. (2011) 'Making innovation systems work in practice: experiences in integrating innovation, social learning and knowledge in IPs' *Knowledge Management for Development Journal* 7, 1: 109-124.

Pali, P., and Swaans, K., (2013) *Guidelines for IPs: Facilitation, monitoring and evaluation*. ILRI Manual 8, Nairobi, Kenya: ILRI.

Prasad Pant, L. (2010) 'Assessing innovations in international research and development practice. UNU-MERIT working series papers 2010-43.

Swaans, K., Broerse, J.E.W., Salomon, M., Mudhara, M., Mweli, M. and Bunders, J.F.G. (2008) *The Farmer Life School: Experience from an innovative approach to HIV education among farmers in South Africa*, SAHARAJ 5,2, 52–64.

Tennyson, R., (2005) *The brokering guidebook: navigating effective sustainable development partnerships*. London: International Business Leaders Forum.

World Bank (2001). *Engendering development*. Washington, D.C.: World Bank.

World Bank (2011) *Gender equality and development*. World development report 2012. Washington, D.C.: World Bank.

Zannou, E., Soumano, L., Adjei-Nsiah, S., Ouloguem, B., Kossou, D., Klerkx, L., Adu-Acheampong, R., Traoré, M., Adade Debrah, K., Sakyi-Dawson, O., Nederlof, S., Dembélé, F., Saïdou, A., Vissoh, P., and Jiggins, J. (2012) 'Analysing power relationships in 'Concertation and Innovation Groups' in nine agro-enterprise domains in Ghana, Benin, and Mali' Invited paper for MOPAN 2012: Multi-actor collaboration in an uncertain and ambiguous world, July 2-4, 2012, Wageningen.

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¹ <http://www.future-agricultures.org/blog/entry/can-value-chains-and-innovation-platforms-boost-african-agriculture-11-reasons-to-be-sceptical#.UIAHFfuJmUk>

² <http://paepard.blogspot.nl/2013/09/innovation-platforms-right-path-to.html>

³ The challenges are derived from discussions among researchers and practitioners during a workshop on IPs in Nairobi, May 2013, in which most of the authors participated.

⁴ By institutions we mean the informal and formal rules and regulations that govern human action (Douglas 1986).

⁵ Dealing with power dynamics in multi-stakeholder settings receives further attention in the paper of Brouwer, Hiemstra, Walters and van Vugt in this Issue of KM4Dev Journal.

⁶ In the case of COS-SIS (see Box 1), the programme paid the facilitators who often came from universities or research organizations to act as innovation brokers. But they did not have a stake in the objective of the IP.

⁷ RIU is a DFID funded program aimed at catalyzing agricultural innovation; DONATA is a six year program run by FARA to accelerate the dissemination of agricultural technologies across the region.

⁸ Champions are highly motivated actors that can play a role to mobilize peers of their groups, promote contact between the platform members and their constituencies, and often set an example (see Heemskerk et al. 2011).

⁹ It is important to realize that IPs are not a blueprint solution; instead of starting with IPs, it is better to start with the identification of opportunities through a scoping exercise and then to take advantage of these opportunities, through establishment of actor linkages or an IP.

¹⁰ PAEPARD (Platform for African–European Partnerships for Agricultural Research and Development) seeks to strengthen African ARD actors' capacity to participate in European-led development initiatives for Africa and to create more responsive development programs for Africa.

¹¹ Outcome mapping is one of the more popular M&E approaches for the purpose of learning, but there are also other approaches and tools, for example Causal Process Tracing (Crane and Richards 2009) which was tested in the COS-SIS program.