International Journal of Agriculture and Forestry 2012, 2(3): 92-100
DOI: 10.5923/j.ijaf.20120203.03

Stakeholder Participation in Innovation Platform and Implications for Integrated Agricultural Research for Development (IAR4D)

Kefasi Nyikahadzoi[1,*], Pali P[3], Fatunbi A.O[2], Olarinde L.O[2], Njuki J[3], Adekunle A.O[2]

[1]Forum for Agriculture Research in Africa hosted by College of Agriculture, Lilongwe, P O Box 219, Malawi
[2]Forums for Agricultural Research in Africa, PMB CT 173 CantonmentsAccra, Ghana
[3]International Livestock Research Institute, Nairobi, Naivasha Rd, Nairobi, 30709, Kenya

Abstract In sub-Saharan Africa, there is increasing interest for the adaptation and use of the innovation systems approach to advance learning and development in the Agricultural Research and Development (ARD) sector. This crave is constrained by unavailability of a proven blue print that describe the paradigm shift from the linear approach and how such could function under different socio-economic, cultural and political climate. This paper uses three case studies from the Sub Saharan Africa Challenge Program (SSA CP) to accentuate approaches and strategies for the successful use of the innovation system approach in agricultural research and development. The paper shows that the establishment of Innovation Platforms under the premise of Integrated Agricultural Research for Development (IAR4D) at the grass-root uses social networks and capital to mobilize for collective action necessary to meet market demand. It also shows that the ensued iterative structure is suitable for dealing with policy issues that constrain value chain at district level, while the apex structure is functional in dealing with policy issues at national and regional level. This paper proposes a coordinated ARD strategy that links innovation platforms at the continental, sub-regional, national and the grass root as the best practices for comprehensive use of innovation system approach.

Keywords Innovation Platform, Africa, Agriculture, Apex, Iterative, Grassroots

1. Introduction

The Sub Saharan Africa Challenge Program (SSA CP) was initiated in 2004 following the observed inadequacies of the conventional Agricultural Research and Development (ARD) to yield satisfactory outputs especially, the use of technologies and inventions to achieve good income and reduction of poverty among the smallholder farmers in Africa. It was noted that, besides the inadequate funding, other impediment to the contribution of African agricultural research to development impact was the way the research system is organized and conducted (SSA CP, 2008). The ARD system has treated the different component of the agriculture as an independent entity and not as sub system that must function in a coordinated manner to drive agriculture as the overall system. The old system is rather linear in nature where research - derived knowledge consisting of large prescriptive technology packages flows linearly from researchers to farmers through extension agents (SSA CP, 2008).

The Inter-academy Council (2004) attributed the low productivity of the agricultural sector in sub-Saharan Africa to failure to put useful research into use. Bernard et al (2009) noted that numerous academic on-station and non- participatory research failed to foster desired impacts such as changes in policy and practice, sustained high productivity at farmers field and reduction in poverty. Moriarty et al (2005) also notes that efforts to involve farmers into research through action research, farmer field schools, learning alliances and other interactive methodologies were never taken forward by implementers such as NGOs, donors and governments. Even where they did, the income of smallholder farmers did not improve largely because of poor linkages to markets. Many of the local innovations could not be scaled up largely because of institutional related constraints.

While the adoption of action research and other participatory approaches made research activities and agendas more relevant and practical it has, focused exclusively on the level of the individual or the community (Moriarty et al, 2005). Therefore, other stakeholders such as, agro-dealers, agro-processors, and local representatives of line departments, that are intended to support these smallholder farmers were sidelined (Cavatassi et al., 2009). In some cases, they

* Corresponding author:
knyika@gmail.com (Kefasi Nyikahadzoi)
Published online at http://journal.sapub.org/ijaf

were even seen as 'part of the problem'. According the SSA CP (2008), this can be counter-productive because all these players have specific roles and are essential links in the value chain necessary for improving agricultural productivity. Moriarty et al, (2005) thus conclude that without the inclusive participation of all stakeholders involved in an agricultural system the finding research agenda may be incomplete or misdirected and ultimately the impact of an innovation can become limited and unsustainable because the institutions vital for scaling up have not been represented in the research process. According to Hall (2005) embedding research in a system of innovation recognizes that it is not just knowledge inputs that are missing, but also the institutions and processes necessary to make knowledge available and to enable its use are also missing.

The Sub Saharan Africa Challenge Program adopted an Integrated Agricultural Research for Development (IAR4D). The concept is designed to foster social interaction and learning by embedding agricultural research within a larger system of innovation whereby knowledge from numerous sources is integrated and effectively put into use. The IAR4D concept uses Innovation Platforms (IPs) as its operational frame to engage stakeholders in a network configuration to undertake multidisciplinary and participatory research. The establishment of IPs is in response to the recognition that new technologies and processes are brought into use, not just by the activities of researchers, but through the activities of a number of various actors and organizations that have the competence and incentive to bring about mutual change. The IP uses interactive and deliberative approaches to diagnose problems of common interest, explore opportunities and investigate solutions.

In an Innovation Platform, there should be direct and continuous interaction, communication and knowledge sharing among the IP actors. The IP facilitates quick and continuous feedback from end users (farmers) at all stages of research for development. It also ensures the timely integration of new knowledge into the innovation process using experiential learning, monitoring and evaluation, and continual feedback. The new institutional reforms are expected to overcome the shortcomings of traditional approaches and generate greater impact from agricultural research for development (AR4D) leading to improved rural livelihoods, increased food security and sustainable natural resource management throughout sub-Saharan Africa.

The IAR4D approach acquires its strength from a number of social theories and empirical evidences. Hall (2005) argues that by bringing stakeholders with complementary capabilities together, it will bring to scale the new knowledge that is created along the innovation process. When all stakeholders depend on one another for realization of their individual objectives, the opportunistic behaviors are completely removed. It therefore implies that shared ownership of the research agenda and an overall sense of joint responsibility for outcomes is core strength of the IAR4D concept (Ashby, 2009). Situating agricultural research in a wide set of relationships places it closer to all organizations that need to respond to changing production conditions, market fluctuations and trends, and changing policy and regulatory environments. This can reduce the cost of acquiring necessary information required for planning. IPs can help in reducing economic coordination risks, which Dorward & Kydd (2004) in Morales (2005) define as "the risk of failure of an investment due to the absence of complementary investments by other players at different stages in the supply Chain". In other words, it can lead to the generation of a national public good. Dorward & Kydd (2004) further assert that the applications of lessons learnt in the previous transactions over time may lead to decreased transaction costs as trust among economic agents increases and thus create disincentives for opportunistic behaviour.

While the importance of institutional issues to guide the process of uptake up-scaling and innovation is undisputed, there is no shared knowledge on what are the optimal methods for establishing innovation platforms. Moreover the approaches for defining development challenges to be addressed within innovation platforms are not well articulated. Given the widespread crave for the IAR4D innovation platforms by researchers, development agents and donor organizations it is thus important to establish their effectiveness and share some lessons from their formation and functioning necessary for scaling them out. In this paper, we use experiences of establishing innovation platforms within the Sub Saharan Africa Challenge Program (SSA CP). We describe the various process of establishing the innovation platforms and then discus their weakness and strengths. Evidence presented in this paper is gathered through the IP characterization and establishment tool which was administered to 36 Innovation Platform within the SSA CP. Three in depth case studies describing various methods used to establish IPs from purposively selected districts are prepared by the authors based on the information obtained from the activity reports, IP attendance registers and the authors' involvement in establishing the IPs. The authors also interacted with IP actors and smallholder farmers within various intervention districts across Sub Saharan Africa.

We use an institutional perspective to understand factors that foster participation, and patterns of interaction that reduce dependency relationships and reflect interdependence between and among partners. We take, as our starting point, Chambers (1983) argument that the most fundamental aspect for the success of a project success and its sustainability is early and continuous participation of potential beneficiaries. Wennink et al (2007) asserts that greater participation by the poorest farmers improves not only their livelihoods, but also their innovative capacity. Chambers (1983), demonstrated that failure to institutionalize participation in projects can lead to non-sustainability. Early involvement of all stakeholders can make project objectives congruent with the needs of the participants. It can be argued therefore that the differences in establishing IP have a huge impact on the degree of ownership amongst beneficiaries. Therefore unless factors that might inhibit early active participation of intended beneficiaries are established and addressed, the po-

tentials of IAR4D to increase agricultural productivity may be limited. This study is premised on Wennink's (2007) assertion that participation reduces the threats to sustainable community development as it reduces the use of blue print thinking and influence of international aid that ignores indigenous knowledge, institutions and socio cultural aspects of the intended beneficiaries of an intervention.

2. Instituonal Reforms under the Sea Cp

The SSA CP has established three Pilot Learning Sites (PLS). In West Africa sub region, Kano-Katsina-Maradi (KKM) in Nigeria and Niger as participating countries. In the "Lake Kivu"catchment area of East Africa covering, Democratic Republic of the Congo, Rwanda and Uganda, and in Southern Africa covering Zimbabwe Malawi and Mozambique (ZMM). Within each PLS, there are three different projects that seek to address generic problems that characterise the site.

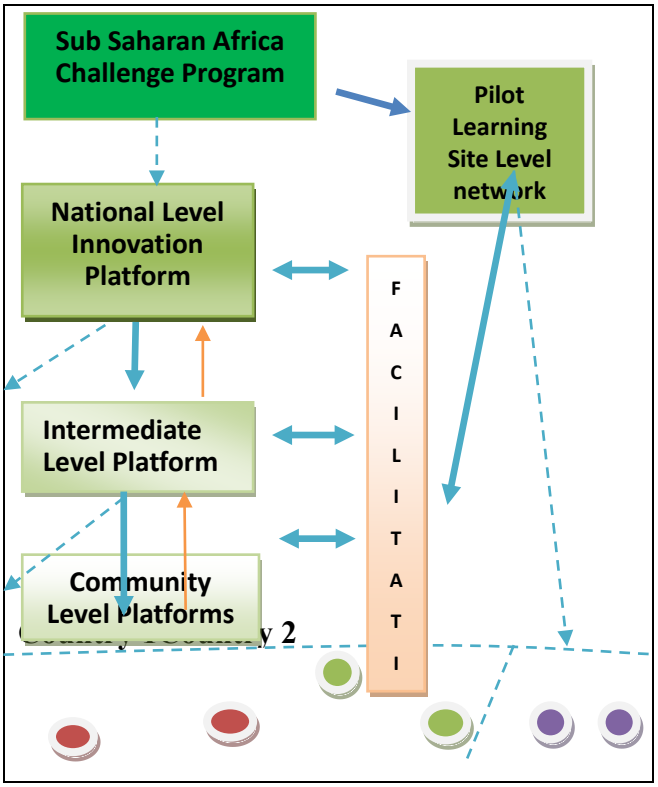
2.1. Projects within the Challenge Programme

In the KKM PLS, the major challenge is to find ways of intensifying crop and livestock production systems and improving access to markets and promoting sustainable management of natural resource base. There are three projects which work independent of each other. The first one focuses on the intensification, access to markets and sustainable management of natural resources and is led by National Agricultural Research Institute of Niger. The second project is led by International Institute for Tropical Agriculture (IITA) and it deals with sustainable agriculture intensification and integrated natural resource management. The International Fertilizer Development Centre (IFDC) leads the third project that focuses on multi-stakeholder approach to linking technical options, policy and market.

In Lake Kivu the major challenge is how to increase return to land use in a sustainable way and increasing the production and value addition of high value, low volume products. There are also three projects in Lake Kivu PLS. The first project deals with the production of more food products and better nutrition and is led by Instituts Sciences Agronomiques du Rwanda (ISAR). The second project focuses on conservation and sustainable use of natural resources and is led by Makerere University (MAK). The third project is led by International Centre for Tropical Research (CIAT) and it deals with agro-enterprise diversification and improved markets access. Projects in Lake Kivu adopted a coordinated approach.

In ZMM, the major challenge is to reduce vulnerability through improved soil nutrient and water use, intensification, diversification and improved functioning of markets and the value chain. There are three projects designed to address this challenge which work independent of each other. Among the three, the first one is dealing with integrated agricultural research on production of vegetables and is led by Bioversity International. The second project deals with integrated soil fertility management innovations in maize-cereal system, livelihood and environmental system and is led by Soil Fertility Consortium for Southern Africa (SOFECSA). CIAT leads the third project that deals with efficient water and nutrient use in cereal system using conservation agriculture.

Each of the nine projects established four IPs that they use to promote technologies. Although the projects are designed to generate outputs that will result in similar outcomes, the activities in each sub project are aimed at addressing problems that are specific to circumstances of the very different environments and production chains. The activities in the three PLS and across countries are supported by cross site research support staff (CRST) that provides technical backstopping in selected key areas and facilitates the use of a common approach.



(Adopted fromMoriarty et al , 2005)

Figure 1. Different levels of Innovation Platforms.

Although the innovations have different entry points, they all seek to address four key issues that constrain realization of impact from ARD activities in the region. These are technological issues, institutional issues, policies and markets.The four fundamental issues exist in varying degrees and are prioritized differently in each location, but they still form the basis for establishing the IPs. Most of the IP consist of a multiple nested sub-systems of ARD as shown in Figure 1. The local level handles the logistics for input supply and product marketing. The district level provides technical and management support to the local group. The national level is involved in policymaking and negotiations about price setting for inputs andproducts.

Building effective and sustainable partnerships is a challenge since there was no blue print, guidelines or standard handbook on to how the IP should be established. Each project therefore used context specific issues to be addressed, the costs and time available and the expertise. Many questions have to be answered before the establishment of an IP. These include; what is the best structure and process for decision-making of the innovation Platform? Who should decide on what issues? To what extent are the power and control of the initiating organizations (which often holds the budget) is transferred to the other partners. The distribution of power and control involve making trade-offs between and among the needs and expectations of country level partners, and end users and the donors. There are several variations and adaptations in the manner in which the IPs were established. Some of the projects emphasized policy development, and their first point of call was policy makers. Others put emphasis on natural resource management, such as the Integrated Soil Fertility Management (ISFM) and Conservation Agriculture in ZMM; Natural Resources Management in Lake Kivu. Such projects first established relations with policy makers who they believed would help in crafting a policy environment that would support adoption of technological innovations. Those projects that sought to tackle marketing issues started by identifying market issues at grass roots level and then sought other stakeholders to assist them implement their identified solutions.

Nevertheless, all Innovation Platforms were started from scratch largely because the program expected projects to follow a random approach in selecting intervention sites. The establishment of all Innovation Platforms followed a general process with the following steps.

- Site selection largely using randomization
- Identification of potential Innovation Platform actors
- Development of a common research agenda
- Formulation of work plans
- Development of monitoring and evaluation protocols
- Development of knowledge sharing mechanisms

In most cases the process was facilitated by the researchers or project proponents who would then transfer the implementation to other stakeholders. All the IPs meets project expectation of having a common research agenda, and clearly defined information sharing mechanisms. Although the processes are clear, the starting points differ significantly, Some IP started from the grassroots level; others from the apex while others used an iterative approach (see cases 1, 2 and 3 below).

As Wennink *et al* (2007) said the method used to introduce participation determined the nature of patterns of interaction and level of participation. Table 1 below shows the different level at which end users are involved in research by projects.

Table 1. Different IP Structures within SSA CP

PLS	Apex	Iterative	Grass roots
KKM	0	12	0
LK	7	5	0
ZMM	0	8	4

Case 1: Establishment of Grassroot IP to Promote the Production of Vegetables in Thyolo – Malawi

This case discusses how IP were formed to promote the production and marketing of vegetables in Thyolo District of Malawi. In this area, 90% of the smallholder farmers own a vegetable garden for subsistence. Historically, smallholder vegetable producers worked on the basis of traditional and individualist mode. Despite high transaction costs associated with long intermediary chains, the management of markets information, difficulties in accessing seeds and lack of technical know-how the method of vegetable production remained unchanged in Malawi. Most farmers said that they had stopped growing vegetables for commercial purposes largely because there was poor local market. The project team visited vegetable growers in the five selected villages. Focused group discussions were conducted with farmers. Several challenges that limit vegetable production in the area were identified. Lack of guaranteed vegetable markets was identified as a major constraint to vegetable production. Participatory market surveys were then conducted with selected farmers.There was a high level of interest from farmers such that they paid their own bus fares to Thyolo district office from where the project provided transport that was used to travel to different vegetable markets. The team identified various potential vegetable buyers which included, major supermarkets, hotels, boarding schools, hospitals and restaurants. Vegetable growers also collated information on pricing, demand, and methods of payment. The vegetables farmers discovered that the market demand for vegetables is very high but they needed to pay particular attention to quality, and consistence in supplying the fresh produces. Participatory market surveys boosted the confidence of farmers and build inward drive to grow vegetables on a commercial basis.Having built the confidence of farmers the project team, with the help of communities identified stakeholders that could help in ensuring the provision of high yield vegetable seed variety, essential information, etc. A stakeholder workshop was then conducted. All stakeholders in the value chain were invited. These included NGOs, vegetable buyers, extension officers, farmer representatives. Of the forty participants, 34 were smallholder farmers and of these seven were females. During the meeting, the principles of IAR4D concept was presented. Vegetable value chain analysis was conducted and barriers to commercial vegetable production were identified. These included lack of knowledge and information on the type of vegetables that are required by potential buyers; lack of stable and reliable markets; lack of knowledge and technical skills on irrigation technologies; lack of capital to purchase inputs;lack of knowledge on prices being offered on different markets; poor extension services and fluctuating market prices.

The various stakeholders discussedthe options of helping vegetable farmers to increase productivity and came up with a unified way of assisting the farmers. The objective of this IP was to remove poverty and increase food security through improving yield and marketing of vegetabes. It was

noted that individual effort was not sufficient to meet the identified vegetable demand. Another institutional challenge was to reduce transaction costs that buyers would incur if they chose to purchase from a large number of farmers producing small quantities of vegetables. World vision, an international NGO and agricultural extension officers working in the areas joined the platform and handledthe responsibilities of mobilising farmers in selected IAR4D villages to form marketing cooperatives.

It was agreed that to sustain the market linkages, it is important to build a strong linkage with research and training in order to remove bottlenecks that limits the supply of quality vegetable inherent in the value chain. Training included the need to sensitize farmerson the right type of vegetables that are needed by potential buyers; training farmers on how to produce quality vegetables throughout the year using various technologies; helping farmers in finding reliable markets and training farmers on basic principles of business management. Plan were develoed to link farmers to micro-finance institutions so that they could access loans to purchase inputs on time. One microfinance committed itself to helping farmers with loans to purchase inputs. A local hosiptal offered to buy all the vegetables from the farmers. A commitee was then establishedto coordinate the activities of various the stakeholders. After the first meeting, follow up visits showed that the number of vegetable growers rose by more than 120% in one village within a space of one week.

Case 2: Establishment of Ntungamo Pineapple IP Case Study

The Ntungamo pineapple IP was established on the 14 July 2009. The formation of an apex body structures was convenient for the projects in Lake Kivu largely because there was very limited amount of time and financial resources to consult widely. Hence, there was high participation of stakeholders at higher level, whose activities are concentrated at strategic level rather than operational level, hence, the IP activities at the grassroots level are limited.

The initiation began with a meeting between the researchers, the policy makersextension staff and farmersrepresentative from the pineapple growing areas. The objective of the meeting was to establish contacts and strategy for IP formation, and to plan for subsequent follow up activities. At a follow up meeting between ten farmers, three researchers, nine policy makers, two extension workers, a background was given about SSA-CP,theIAR4D concept and the IP as a new approach to solving ARD problems. The key stakeholders in the organic pineapple value chain were identified using the stakeholder analysis. The strategies to tap into the existing market for organic pineapples were discussed. This district level IP was established from scratch from an existing market opportunity for pineapple production where stakeholders were organised to improve the production and strengthen the marketing of the crop.

In each of the 15 sub-counties of the district there is a farmer group which is managed by an executive committee. Executive members from the sub-county farmer groups represent the Farmers' Groups at district level IP meeting that is held once every month. The meeting is chaired by the District Agricultural Officer (DAO). The decisions made at the District level are taken to the sub county by farmer group representatives where they are implemented. Any problems faced at sub county level are communicated to the District level IP through the executive members of the sub county. Arguably, this might not be a desirable arrangement because it may result in high level stakeholders controlling activities at the farmer group level.

The IP seeks to improve the pineapple production, post harvest handling and marketing. Several research issues and other constraints were identified and prioritized through brain storming session by the stakeholders on the platform. In order to increase pineapple productivity the following research issues were prioritized; availability of pineapple planting materials and control of pests and diseases. In order to meet market demand, the IP evaluated options for rapidly multiplying and distributing quality planting materials of market preferred pineapple varieties for the organic niche market. To strengthen the bargaining power of the farmers, the IP also promoted collective marketing that ensures the production and marketing of required quantity and quality of existing pineapple varieties. The IP also seeks to evaluate different options for optimizing agronomic practices (e.g. size, spacing, disease and pest control, soil-water conservation) for market preferred varieties. The IP also considered the branding of dried pineapple fruits for national and regional markets. In order to strengthen the competitiveness of pineapples, economic studies to analyze the profitability of organic pineapples and its products vis-a-vis other competing crops (e.g. beans, potatoes) are carried out by researchers. Although there is a high degree of researchers' involvement to support the activities, the National Organic Movement of Uganda (NOGAMU) the private sector that buys pineapple has also played a major part in organizing and training the farmers.

Case 3: Establishment of an Interactive IP Musawa (Maize-Legume-Livestock) IP Case Study

The Musawa Maize-legume-livestock IP in Nigeria was started and built on existing networks by Sudan Savanna. The establishment of the IP was facilitated jointly by researchers the local government administration and extension. The main agricultural challenge of the Sudan savanna TF is to improve the adoption of improved technologies, soil fertility maintenance; disease, insect and pest control, adoption of *Striga* resistant varieties and labor-saving technologies for field operations and processing. The IP also seeks to improve and diversify the markets of agricultural products.

The Task Force organized a meeting in October 2008 where stakeholders such as farmers, researchers, policy makers, farmers organizations, extension, NGO and the private sector were invited.During the meeting, the Taskforce introduced the IAR4D concept to the participant and tried to seek their engagement. The development of concrete and feasible strategies for the formation of the IPS in the project's sites was also discussed during the meeting. After

the initial meeting stakeholders were given an opportunity to reflect on the meeting and their involvement and to share the concept with their superiors and work mates. Three months later another workshop was convened. Participants for this workshop were drawn from district level policy makers, output marketers, input suppliers, extension, farmer organizations, researchers and NGOs. The stakeholders at this meeting shared knowledge and experiences on the project's trials and demonstrations. They also reviewed factors that are inhibiting smallholder agricultural development. They cited high costs and poor access to credits, inputs and produce markets, non-participation of actors (farmers) in policy formulation and weak linkages and interactions amongst the IP members in terms of partnership, collaboration and knowledge sharing.The meeting established potential partners and collaborators that can help reduce the identified bottlenecks that constrain agricultural productivity in the district. The Sudan savanna continued to sell the idea to government official that did not attend the two IP meetings to solicit their support, political will for the effective functioning of the IP.

The final stage of the establishment of the IP involved formal launching of the IPs. The launching took place on the 19thFebruary, 2009 at the headquarters of Musawa local government area of Katsina state, Nigeria. The formal IP set up was attended by 150 participants. These include farmers, representatives of research, extension organizations, IITA, Institute for Agricultural research (IAR), Bayero University Kano (BUK), National Animal Production Research Institute (NAPRI), Kano state agricultural and rural development authority (KNARDA) and Katsina stateagricultural and rural development authority (KTARDA). Others include Farmer Based Organizations, inputs dealers, outputs dealers, credit organizations, policy makers, traditional leaders and youth organizations. During the IP formation meetings, presentations were made on the compositions, functions and stakeholders' roles on the IPs. The project's farmers shared the experiences on the successes of the project's trials and demonstrations. The policy makers (local government officials) made commitments to the success of the project in their areas. Specifically, they pledged to refocus their policies towards promoting agriculture in their areas especially in the aspects of subsidy, extension, credit and input supply.

Although the three cases were established to address common key issues, they differ in many aspects which include their research approaches, governance structure, downward and upward linkages as shown in Table 2 below.

Table 2. Differences in Case Studies

Aspects	Grass root	Apex	Interactive
Entry point	Vegetable production and marketing	Promotion of pineapple production	Promotion of soil fertility and disease control
Structure and governance	Not well defined at village level	Organization structure well defined at district level	Well defined terms of reference of the IP
Inclusion of female farmers	High	Relative low	Low
Downward links	Loosely accountable to members	Separate IPs for sub county and district	Annual meeting which brings different actors together
Upward links	Weak and not well defined	Strong	Poor and not well defined
How research is organized	In collaborative manner	In consultative manner	In week consultative manner
Time requirement for the establishment of the innovation platform	Short as communities worked with officials that have time for them	Long as it is caught up in government red tape.	Long as it is caught up in government red tape
Cost of the establishment	Not expensive	Government official demand sitting allowance	Expensive as government officials demand to be paid

Table 3. Differences in Participation Among the Cases.

	Overall mode Ofparticipation	Was aPriorityNeed Addressed?	Who Decided the Nature ofresearch?	Joint Evaluation	Is technologylikely to beadopted?
Grass root	Collaborative	Yes	Markets requirements	Yes even at grass root level	Yes and in the short run and is this adoption likely to be sustained
Iterative	Consultative	Yes	Researcher in consultation with farmer organization	Yes but limited at district level	Yes but in the long run
Apex	Limited consultative	Yes	Researchers	Yes but at a much high level	Yes but in the long run

3. Implications on Stakeholder Participation

The three cases are going to be evaluated using the following criteria which include the degree to which researchers and practitioner versus farmers influence the functioning of the IPs and breadth of stakeholder participation in research, and the degree to which smallholder farmers rally behind the projects and the cost of establishing innovation Platforms.

3.1. Participation of Different Stakeholders in Project Activities

It is important to note that in all cases, the project agenda and objectives were framed within the parameters of the project proposals submitted to FARA for funding. However, none of the projects emerged to address only the researchers concerns, but the totality of the perception of the problem by stakeholders on the platform informed the activities.In most cases, the IAR4D innovation platform drives the specific technologies. it is important to assess how each of the three research governance structures accommodates farmers and other stakeholders in addressing the generic problems that constrain the value chain.

The three cases differ in the way they approach policy advocacy. In order to understand the role of each of these structures in policy making, Ostrom's (1992) three levels of rule making is used. She notes that rules are made at three levels; operational choice, collective choice and the constitutional levels. Operational choice level rules affect the day to day running of activities by smallholder farmers. The collective choice level rules affect the operational choice rules. Policy making and management and adjudication of policy and policy decisions occur at this level. Constitutional choice level rules are the national legislation that can be used to craft the set of collective choice rules. Formulation, governance adjudication and modification of constitutional decisions occur at the constitutional level.

The vegetable project seeks to impact more at the operational choice rules and deals with questions such as what agricultural produce to grow and for who? To a much lesser extent, it does purport to affect collective choice rules. The vegetable IP in its present form is ill-equipped to lobby for an enabling environment at national level. As discussed in the case, the highest national policy making board within the vegetable project is the District Agricultural Officer (DAO). Other policy issues would be dealt with as and when economic and policy related factors that influence the functioning of input and output markets or any other issue that constrain vegetable production arise. Hopefully that would be when other policy options for promoting the engagement of the poor in vegetable production and marketing will be considered at national level.

The iterative is better equipped to influence collective choice rules. It draws actors that deal with policy at district level and national level but less at the local grassroots level. The structure seeks to influence the collective choice rules which in turn affect the operation choice decisions. It deals with issues that affect the value chain at a higher level for example the coordination of actors is at district level. The apex structure has the potential to influence, not only at national level, but also at regional level. The structure draws its membership from various research institutions that work as one team. Its involvement at grassroots level depends largely on how the research governance structure can implement issues discussed at the higher level to local farmers and flexibility and readiness to adapt to local level variations and realities.

3.2. Participation in Research

Table 3 below shows the general levels of farmers' participation in different activities of the Innovation Platforms.

Farmer participation research also differed in all the three cases. In the vegetable project, farmers were initiators and advocators of action once the project was introduced to them. Instances where they could not go alone they sought strategic alliances with other stakeholders with help from the project staff. The facilitators took a back stage and left the market to decide on what vegetables to grow. With full the support of relevant stakeholder, the smallholder vegetable growers responded to what is demanded rather than to what the farmers could supply or what the projects want to experiment with.

In the iterative case, the district level stakeholders with a few farmer organizations that were able to buy in the research framework developed a research agenda to sell to smallholder farmers. It therefore means that these farmer organization with assistance from agriculture extension workers were supposed to pass on the information to smallholder farmers. Therefore the research agenda was developed at high level and then the idea sold to farmers. This supports Wennink *et al* 's (2007)argument thatiterative structure tend to solicit support for the decisions that are already made. Within the apex case, the process started with a group of national researchers working as one team to take different innovations to local smallholder farmers.

3.3. Ability to Bring Smallholders to Rally behind the Project

There was a high level of participation of farmers during the establishment of Innovation Platforms where the process takes off from grassroots. As noted in the case study, although markets for vegetables were readily available, there was a big emphasis on quality and consistence of supply. Vegetable growers that participated in market survey mobilized other farmers to ensure they could collectively sustain a constant supply of quality vegetables. The main drive for farmers to organize themselves is the realization that collective action rather than individual action provides a better opportunity to gain, not only favorable terms of trade but also maintain a constant supply of high quality vegetables. Unsurprisingly, there was a high level attendance of farmers

of which 40% were women during the first village planning meeting. Key informant interviews revealed that there is scoop to have a high percentage of women participating in vegetable production because vegetable growing has been viewed as a preserve for women.

There was ownership of research agenda largely because it was identified with a wide participation of farmers and other stakeholders were just brought in to solve critical issues that were already identified by farmers.It takes advantage of already existing social networks that also serve as channels of communication and mobilization of the members. The structure has the potential to balance the interests of those that are less articulate, assertive and aggressive in making demands particularly women.

As noted in the iterative and apex cases agricultural extension officers mobilize people for IAR4D. Though the attendances were generally high, 80% were men. This confirms Wennink *etal*'s (2007) findings that market access and value chain development have a larger percentage of male members. This is largely because women have limited access to land which is owned by men in most countries of SSA.In most cases, the events were labeled as 'one of those meetings'. The entry point was defined by researchers who then sought community participation to test certain technologies.

3.4. Involvement of Private Sector in Innovation Platforms

In the vegetable project, the private sector is brought into the IP through the impersonal hand of the market. Their level of engagement would therefore largely depend on the ability of the IP to produce good quality vegetables and also to out compete other producers, otherwise they might leave the IP. With the technology based innovation platform, the private sector is brought into the partnership by the hope that the technology would improve yield and also demand for agricultural inputs. In the interim, the private sector maintains its engagement by sending their junior members of staff in anticipation that the technology might improve yield. Their continued participation is largely dependent on the success of the technology to increase yield and create a demand for more agricultural inputs such as fertilizers, rippers and seeds. The apex creates a conducive environment for removing policies that inhibit the functioning of the markets, partnerships and agricultural production. It is based on the inherent assumption that innovation is a result of fostering a condusiveenabling, technological,and institutional environment (political, economic and social).

3.5. Costs of Establishing Innovation Platforms

In an iterative and apex set up, the process got entangled in bureaucratic and administrative procedure. The pace of operationalizing IPs depended largely on the workloads and schedules of various stakeholders. The work plans developed did not take into account the needs of the small holder farmers but rather the work schedules of key stakeholders.The apex structure makes the networks quite vulnerable to donors' conditions and might present a threat to the long term financial sustainability of networks. There are high administration and coordination costs of keeping the various partners involved. Within the grass root structure, there were no major costs incurred. The inclusive and participatory nature of the process creates a sense of ownership over its outcomes such that there were no financial incentives required to garner farmers' participation.

4. Conclusions

Although the character of multi stakeholder partnership participation has been different in the three cases, the differences are important. The predominant mode of participation was consultative with collaborative participation occurring in the vegetables case. This reflects that participation is a gradual process. Collaborative and collegiate modes of participation require time and the building of trust among parties involved. Lessons learnt from each case could ensure that all important multi stakeholders are effectively included in the IPs

From the case studies, we concluded that commodity based IPs link better to value chain actors and research than technology based ones. The main drivers to maintain this link are the expectations of the value chain and the quality of the product. In order to compete from other established vegetables growers, the small holder farmers have to join the IP to enhance collective action to be more effective and profitable. The grass root structure provides small holder farmers with the power to think and act as they wish and to exercise choices that can secure desired changes.

REFERENCES

[1] Ashby, J. A., 2009. Fostering farmers first methodological innovation: Organisational learning and change in international agricultural research, In: Scoones, I., and Thompson, J., (Eds.), Farmers First Revisited: Innovation for agricultural Research and Development, Practical Action Publication, pp 39 – 48

[2] Bernard, T., Hocde, H., and Faure, G., 2009 Research Involving multi stakeholder partnerships, In Scoones, I., and Thompson, J., (Eds.), Farmers First Revisited: Innovation for agricultural Research and Development. Practical Action Publication, pp 161 – 162

[3] Cavatassi, R., et al 2009. Linking Smallholders to New Agricultural Economy: An evaluation of the Plataformas Program in Ecuador, ESA Working Paper No. 09-06

[4] Chambers, R., 1983. Rural Development: Putting the Last first, Longmans, Essex

[5] Dorward, A. R. and J. G. Kydd., 2004. "The Malawi 2002 Food Crisis: The Rural Development Challenge." Journal of Modern Africa Studies 42(3)

[6] Hall, A., 2005. Embedding agricultural research in a system of innovation,Consultative Group on International Agricultural Research, Science forum, strengthening research-for-development capacities

[7] IAC (Interacademy Council), 2004. Realising the Promise and Potential of Agriculture: Science and Technology Strategies for Improving Agricultural Productivity and Food security in Africa, Amsterdam, Netherland, www.interacademycouncil.net

[8] Killough, S., 2009. Partnership for action research, In: Scoones, I., and Thompson, J, (Eds.), Farmers First Revisited: Innovation for agricultural Research and Development. Practical Action Publication, pp 153 – 157

[9] Morales E. G., 2006. Institutional Arrangements to Improve the Responsiveness of Agricultural Innovations Systems to the Needs of the Poor: An Investigation of Participatory Monitoring and Evaluation in Bolivia, Degree of Doctor of Philosophy University of London and Diploma of Imperial College. Imperial College, Wye, University of London

[10] Moriarty P., Fonseca C., Smits S., Schouten T., 2005 Learning Alliances for scaling up innovative approaches in the Water and Sanitation Sector , Delft, The Netherlands

[11] Ostrom, E., 1992. Governing The Commons: The Evaluation Of Institutions For Collective Action, Cambridge University Press, London

[12] Sub Saharan Africa Challenge Program (SSA CP), 2008. Medium-Term Plan 2009-2010, Forum for Agricultural Research in Africa. Accra, Ghana

[13] Wennink, B., Nederlof, E. S., & Heemskerk, W., 2007. Access of the poor to agricultural services: the role of farmers' organizations in social inclusion**.** Amsterdam: KIT Publishers