



## VALUE CHAIN APPROACH-BASED PLATFORMS: INNOVATION PLATFORMS FOR TECHNOLOGY ADOPTION IN AFRICA

by *Djalalou-Dine A. Arinloye\**, *Ousmane Coulibaly\**, *Adetonah Sounkoura\**, and *Sidi Sayang†*

\*International Institute of Tropical Agriculture (IITA-BENIN) †West and Central African Council for Agricultural Research and Development (CORAF/WECARD)

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#### Background and Context

Multi-stakeholder platforms (MSPs) can be defined as “bringing together different stakeholders (actors) who have an interest in a problem situation and engaging them in a process of dialogue and collective learning that improves decision-making, action and innovation” (Mwesige, 2010, p. 181). In the case presented here, the core role of MSPs is to improve coordination and collaboration along the value chain, resulting in more efficient and equitable linkages that benefit those poor who are economically active. Where market linkages are weak, as is the case in many rural areas, not just in Uganda, small and medium-sized producers, input suppliers, traders, and millers are forced to depend on scanty and skewed information on business opportunities. They tend to have a narrow picture of their sector, which breeds suspicion and mistrust among the various actors that contributes to overall stagnation of the entire sector. MSP approaches are a potentially relevant intervention because they seek to change the unproductive market dynamics and stimulate actors to take a broader view of the chain beyond the self-interest of individual positions.

The development of multi-stakeholder processes as a pathway for the Promotion of Science and Technology for Agricultural Development (PSTAD) project in Africa was the pivotal intervention in which actors were involved to better understand their roles in value chain development. The PSTAD project is led by the Forum for Agricultural Research in Africa (FARA), managed by Subregional Research Organizations (SROs), and implemented by the National Agricultural Research Services (NARS) with funding by the African Development Bank (AfDB). This project supported two of FARA's regional initiatives -- the Regional Agricultural Information and Learning Systems (RAILS) and the Dissemination of New Agricultural Technologies in Africa (DONATA). The present case study focuses on lessons learned from the DONATA interventions in African countries. The overall goal of DONATA is to promote the adoption and

enhance the impact of proven agricultural technologies, including farmers' innovations and good agricultural practices. Three objectives guide DONATA's work:

- Undertake multi-stakeholder innovation platform processes and value chains analysis by linking agricultural technologies and best practice development to market demand.
- Develop innovations in extension and advisory services to facilitate up- and out-scaling of technologies and best practices among limited-resource households.
- Create linkages with other regional initiatives and programs, including RAILS, to improve information exchange and communication behaviors.

DONATA uses the Innovation Platform for Technology Adoption (IPTA) approach along the value chain to facilitate the rapid dissemination and adoption of innovations in cassava and maize production in target countries. The IPTA includes stakeholders and collaborators of diverse social and economic levels and the institutions that govern their behavior, with all groups working toward common objectives. The IPTA considers innovation to be a dynamic and systemic process that organizes and uses knowledge in new ways; and innovation can emerge from many sources, complex interactions, and knowledge flows.

The midterm review carried out by the AfDB has pointed out some bottlenecks that affected the success of the interventions. The main constraints were the inadequate understanding and application of the concept of an innovation platform, and the lack of effective technical backstopping support to facilitate the innovation platforms. In west and central Africa, the West and Central African Council for Agricultural Research and Development (CORAF/WECARD) selected the International Institute of Tropical Agriculture (IITA) to play this critical role of technical backstopping through facilitation and capacity-strengthening activities for the life of the project. The backstopping aimed

to assist CORAF/WECARD in providing technical facilitation to IPTA's actors along the maize and cassava value chains, and capacity strengthening of NARS in disseminating proven agricultural innovations.

The focus is on analyzing the structure, conduct and performance of platforms across African countries. The sample target countries are Burkina Faso and Sierra Leone as start-up countries, and Benin and Togo as new countries. Start-up countries are those countries where IPTAs were established since the project started in 2008, and new countries are those that started establishing their platforms more than one to two years ago (2010). In these two categories of countries, all the installed platforms were visited systematically except for Sierra Leone, where seven platforms were selected among the current 45 on the basis of their operating and effectiveness levels. Field visits led to data collection on stakeholders' perceptions and opinions to improve the conduct, efficiency, and sustainability of the platforms. In Sierra Leone, cassava value chains have been promoted, and in Benin, Burkina-Faso and Togo, maize was selected because of its contribution to food security as the region's main staple food crop and to producers' incomes generally.

A value chain approach has been used for effective and efficient coordination among its actors, access to input and product markets, achieving gender equity, creating partnerships with other stakeholders (such as public-private, private-cooperatives and related organizations along the value chains), augmenting the overall performance of the platforms, and implementing corrective measures. This case presents the constraints, opportunities, strengths, and weaknesses of the various platforms identified, and the challenges faced by new and start-up platforms. In addition, suggestions and recommendations for better redefining the role of value chain actors in innovation platforms are shared for future action.

## Methodological Approach

**Inventory of platforms:** An inventory sheet was sent to national coordinators or country focal points<sup>1</sup> so they could indicate the location of each platform implemented, the target crop, the innovations selected (e.g., improved varieties, availability and access to seeds, planting materials and other inputs), types of products being promoted (raw or processed), and the categories of actors involved. This initial review helped to categorize the platforms and group them according to types. Criteria used for the typology includes the technology promoted, the location of the platform (such as the agro-ecological zone), and the kinds of actors involved.

<sup>1</sup> The country focal point is the person in charge of leading the project in that country. The focal point provides project technical and financial reports on implemented activities to CORAF.

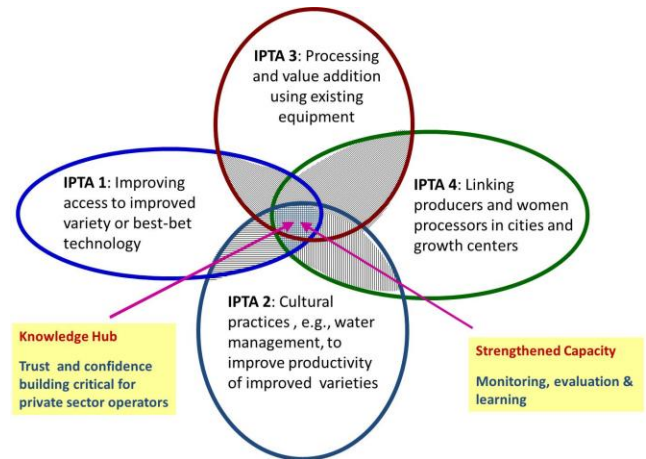


Figure 1: Innovation platform for technology adoption (IPTA) value chain (CORAF, 2009).

**Typology of the platforms:** Three main criteria formed the comprehensive typology used to classify the platforms:

- Functional level of the platforms and set of strengths, weaknesses, opportunities, and threats (SWOT) associated with the progress of activities within the platforms in target countries. Detailed information on across-country SWOT comparison is presented in the appendix.
- Experience of the country in implementing DONATA's activities (i.e., start-up countries and new countries).
- Availability of secondary data, including activity reports, number and types of platforms implemented in each country, and need to collect complementary primary data.

**Preliminary assessment tool kit:** The next step consisted of drafting a tool kit for the assessment of commodity-based value chain platforms. The tool kit includes a conceptual framework and actors' interview guides. Key points addressed include the structure, conduct, and performance of the platforms, the level of achievements, and gaps between expected and effectively achieved activities and targets.

**Focus group discussions with IPTA's actors:** Focus group discussions were conducted separately with each category of platform actors in each country using the preliminary assessment criteria. The categories of actors interviewed were groups of producers, maize and cassava processors, input dealers, extension agents, wholesalers/retailers, and consumers. Information, including quantitative data, was compiled and analyzed to address specific issues regarding the objectives sought.

**Interviews with key informants:** Key informants included knowledgeable resource persons who could provide specific details needed to cross-check or complete information from the focus group discussions: scientists, extension agents, service providers, private or cooperative processors, country focal points, and their staff members, such as field technicians, as well as monitoring and evaluation agents.

**Field visits:** The evaluation team visited some production, participatory varietal selection, and best agronomic practices demonstration sites from which farmers observe and choose before adopting and replicating such on their individual plots. The team also visited some processing units owned by platforms or private companies that provide services and products to the platforms, and conducted interviews on linkages with platform members. Factors that may upgrade the quality of the services and products in response to clients' demands were also discussed and recommended.

### Major Findings

Except for the Kenema platform in Sierra Leone, the common perception by actors from most of the platforms was that they were supply-driven through CORAF's initiatives after the workshop in Dakar, Senegal, in 2008 even though the countries' representatives selected the commodities. This perspective was reported mainly in Benin, where the stakeholders tended to view the platforms as an outside instrument owned by the project focal point instead of being demand-driven. This is a capacity-strengthening issue that IITA should address as part of its facilitation and support for the platforms' technical backstopping.

The start-up platforms have made significant advances in their operating practices and achievements. This performance can be explained by the fact that the platforms were established under various environmental and institutional conditions. The concepts and entry points for each platform are understood differently in each country and location/region within countries. However, the platforms should be viewed in the global context of value chains. Platform actors may understand this, but in practice, the linkages between nodes and segments of each platform (i.e., connections between actors within and between platforms) are poor and should be strengthened. This deficiency shows the need for more capacity building on these concepts, not only for understanding and harmonization but also for the need to master the platform concept in a value chain approach.

In the newly established platforms in Togo, in the Kara and Savannah regions, few actors have a good understanding of the concept of platforms from a value chain perspective. The survey results show that a majority of the actors involved in the platforms in Togo understood DONATA's platform as "the gathering of all actors that interact to support and promote the production of a new variety of maize named Quality

Protein Maize (QPM)". The need to link production platforms to marketing and processing platforms was not perceived as a key priority in the Kara and Dapaong (Savannah) regions in north Togo. The IITA and DONATA teams suggest, therefore, that platforms be upgraded by strengthening linkages between stakeholders, and that capacity-building sessions be organized (in French and English) on the value chain-based platform concepts (i.e., an examination of actors and their linkages using participatory, interactive methods). It is also recommended that demonstration plots be installed in other villages to create increased visibility of the platforms' achievements (or per Rogers, 2003, "observability") and expand the dissemination of information describing good production and postharvest practices. Actors also expressed the need for exchanging and sharing experiences between platforms operating at both the national and regional (or inter-country) levels.

### Replicable Lessons Learned and Recommendations

Most of the start-up countries created the marketing and processing platforms to address the constraints of poor access to product markets and low prices following good harvests. The priority given to production before looking to markets and the characteristics of the demand will change with the value chain approach, where demand from markets and product attributes are the key factors that should drive the supply (Swanson, 2006). The value chain approach takes into consideration the market demand as well as the characteristics or attributes for which traders, processors, and consumers are willing to pay the premium prices that will drive a platform's success. Other value chain components such as governance, capacity building, effective linkages between actors, and lower transaction costs, in addition to performance measurement of effectiveness, efficiency, gender equity, public-private partnership, and sustainability, will be important for sustainable platforms to succeed. The capacity building of focal points and stakeholders on the value chain approach of platforms will be key. The new countries should learn from the experiences and lessons of start-up countries, both successes and failures, to ensure proper sustainability and achievement of their platforms.

Discussions with stakeholders highlighted five needs:

- Better identify stakeholders' needs and generate ideas for platform sustainability and access to input and product markets.
- Facilitate exchange of experiences between countries and platforms within countries and also with other development institutions.
- Increase support for widespread dissemination of positive experiences and lessons, including relevant information and knowledge.
- Continually strengthen the capacity of the actors and empower them at various levels.
- Ensure the sustainability of platforms.

The major outputs of the installed platforms are the improved communication and information-sharing processes. The platforms have created a strong collaborative environment, which increased trust among stakeholders along the value chains. This result was noted by joint analyses and fostering understanding of daily issues and priority setting of platforms' entry points. A joint action plan was created, as were shared roles on specific issues, to overcome the problems they had in common. The involvement of the public sector, represented by including policy makers as members of the platforms, also allowed a safe and fruitful institutional environment for the platforms' activities. This has led to increased interactions with external actors, such as government, prefectural authorities, and project partners.

Moreover, platform actors have acquired the ability to function as autonomous organizations. This is a good pathway by which the sustainability, self-confidence, engagement, and mutual understanding of actors in the value chains can grow and improve. These attributes will be translated further into various kinds of new actions and partnerships within and between the value chains' actors. The ability to cohere and integrate various dimensions, including an improved ability to think beyond specific actors' interests and see overall perspectives, negotiate between different interests and develop joint positions, and avoid self-oriented profit-taking behaviors were also noted among the participants.

Farmers were able to create operating space by increasing their efficiency and effectiveness of engagement with the government, private sector actors, and financial institutions. They were also able to create market demand and meet quality and quantity expectations through the wide adoption and dissemination of improved technologies (e.g., the improved maize and cassava varieties). With the continual support of national and non-governmental organizations' extension services, actors have created the capacity for joint learning and adaptation to unpredicted circumstances. These behaviors have resulted in increased engagement of farmers, processors, and others in improving their effectiveness and efficiency, in increased productivity, in increased incomes and employment of actors across the value chains, and in more efficient and profitable production and processing that have contributed significantly to reducing food insecurity in the project intervention areas.

Some expectations that are consistent with the results of this preliminary assessment were raised. The discussions highlighted the following priorities for capacity building:

- The need to train and inform stakeholders in platform conduct and sustainability within the value chain approach (platform concept and entry points, value chains actors mapping, operating and performance, value-adding creation, gender and equity issues).

- Knowledge and empowerment of stakeholders in access to inputs and product markets (including insecticides, pesticides, seeds, equipment, finances, quality and pricing).
- Exchange experiences between countries and platforms within countries and with other development institutions (challenges, constraints and opportunities, and success stories).
- Ensure the sustainability of platforms by scaling up experiences and best-bet practices.

A need for continuous capacity building within each country and across countries has been expressed. We call it continuous learning on agribusiness and entrepreneurship and empowerment of actors at various levels of the maize and cassava value chains through field training.

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## Disclaimer

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**APPENDIX: ACROSS-COUNTRIES SWOT COMPARISONS**

Tables 1, 2, 3, and 4 summarize the comparison of the constraints, opportunities, strengths, and weaknesses identified across countries for both new and start-up platforms.

**Table 1. Across-countries comparison of STRENGTHS associated with platforms.**

Country	Sierra Leone	Benin	Togo	Burkina-Faso
Commodities	Cassava	Maize	Maize	Maize
Status	Start-up and new platforms	New platforms	New platforms	Start-up and new platforms
Strengths	<ul style="list-style-type: none"> <li>• PRODUCTION (new and start-up)</li> <li>• Officially registered and recognized: legal registration of some platforms (Bombali in the Northern Province)</li> <li>• Relevant multi-stakeholders involved</li> <li>• Good knowledge of production techniques for cassava</li> <li>• Existence of management committees</li> <li>• Production of improved varieties of cassava</li> <li>• Groups created to meet specific opportunities (i.e., motivated actors)</li> <li>• Existence of management committees</li> <li>•</li> <li>• MARKETING</li> <li>• Contracts between producers and traders</li> <li>Respect of gender equity (new platforms)</li> <li>PROCESSING</li> <li>• Diversification of processed products: processing cassava into foofoo, gari and flour (new platforms)</li> <li>• Existence of management committees</li> </ul>	<ul style="list-style-type: none"> <li>• PRODUCTION (new)</li> <li>• Improved maize productivity</li> <li>• High adoption of good agricultural practices in maize production</li> <li>• Availability of a management unit</li> </ul>	<ul style="list-style-type: none"> <li>• PRODUCTION (new)</li> <li>• Improving the productivity of maize</li> <li>• Adoption of best practices in maize production</li> <li>• Presence of an office manager</li> </ul>	<ul style="list-style-type: none"> <li>• PRODUCTION (start-up)</li> <li>• Beginning of grain producers in structuring departmental unions, provincial and national</li> <li>• Existence of the Federation of Maize Producers (FNZ)</li> <li>• Existence of a college of maize producers in the CICB</li> <li>• Existence of agricultural research institute producing basic seed and seed production firms</li> <li>• Availability of technicians for monitoring seed production and certification</li> <li>• Existence of the National Union of Seed Producers</li> <li>• MARKETING (new)<sup>2</sup></li> <li>• Organization of grain traders in many areas</li> <li>Existence of an informal information network (semi-wholesalers and collectors) for each wholesaler on the availability and price of maize</li> <li>PROCESSING (new)</li> <li>• Existence of processing units with high-performance equipment;</li> <li>• Existence of local suppliers to reduce imports</li> <li>• Increasing demand for flour with increasing urbanization</li> </ul>

Source: Coulibaly et al., 2011

<sup>2</sup> Marketing and processing platforms are not yet effectively functioning in the new countries (Benin and Togo).



Table 2. Across-countries comparison of WEAKNESSES associated with IPTAs.

Country	Sierra Leone	Benin	Togo	Burkina-Faso
	Cassava	Maize	Maize	Maize
Status	Start-up and new platforms	New platforms	New platforms	Start-up and new platforms
<b>Weaknesses</b>	<ul style="list-style-type: none"> <li>• Non-diversified products (start-up platforms)</li> <li>• Delay in disbursing DONATA funds</li> <li>• Non-registration of start-up platforms</li> <li>• Remoteness from product markets (accessibility and marketing problems)</li> <li>• No registration with the local administration</li> <li>• Lack of processing equipment (especially with Moyamba platform in the Southern Province)</li> <li>• Lack of capacity building on platforms implementation and operation</li> <li>• Lack of understanding of platform notion in a value chain context</li> <li>• Platforms are established without expressed need of farmers, so the platforms are considered as the focal point's properties</li> <li>• Absence of some necessary stakeholders in the platform</li> <li>• Irregular meetings</li> </ul>	<ul style="list-style-type: none"> <li>• Lack of capacity building on platform implementation and operation</li> <li>• Lack of understanding of platform notion in a value chain context</li> <li>• Platforms are established not from expressed need of farmers, so the platforms are considered as the focal point's properties</li> <li>• Absence of some necessary stakeholders in the platform</li> <li>• Irregular meetings</li> </ul>	<ul style="list-style-type: none"> <li>• QPM variety's potentials unknown by the majority of actors</li> <li>• Insufficient or unavailability of QPM seed to farmers</li> <li>• Insufficient knowledge in improved agronomic practices for improved QPM variety production</li> <li>• Limited exchange visits between various platform actors</li> <li>• Delay in disbursing DONATA funds</li> <li>• Steering committee not yet fully operational</li> <li>• Delays in kit provision to farmers</li> <li>• Lack of knowledge on value chains and agri-business</li> <li>• Low supply in quantity and quality from farmers to meet poultry feed demand (yellow maize)</li> <li>• Commercial seeds produced by DONATA farmers not certified</li> <li>• Platform of commercialization is still not operational</li> <li>• Long distance between prefectures making it difficult for members to meet regularly</li> <li>• Poor quality of fertilizers and seeds, which need sorting before planting</li> <li>• Lack of adequate storage facilities</li> <li>• Poor governance for contractual arrangements between farmers and traders</li> <li>• Low bargaining power of farmers to deal with traders in setting maize price</li> </ul>	<p><b>PRODUCTION</b></p> <ul style="list-style-type: none"> <li>• Lack of seeds and seed producers</li> <li>• Failure of subsidized fertilizer</li> <li>• Delay in disbursing DONATA funds</li> <li>• High cost and non-availability of inputs: fertilizers, herbicides ,and seeds</li> <li>• High level of impurities in maize on the market</li> <li>• Inadequate postharvest practices</li> <li>• Inadequate storage facilities, especially in villages and departments</li> </ul> <p><b>MARKETING</b></p> <ul style="list-style-type: none"> <li>• Low use of the metric system in the marketing; the utensils used are based on volume (flat, box, bag and bolls ) and not on weight</li> <li>• Lack of access to working capital</li> <li>• Subregional sales of maize subject to special authorization</li> <li>• Low quality of Burkina Faso maize compared with that of Benin on the Nigerian market: weight, cleanliness ,and grain size (source: Chambre d'Industrie et de commerce de Burkina-Faso)</li> </ul> <p><b>PROCESSING</b></p> <ul style="list-style-type: none"> <li>• Lack of equipment suitable for processing</li> <li>• Lack of standards for local products processed</li> <li>• High production costs (including electricity)</li> <li>• Lack of support for the promotion of processed products on the market</li> <li>• Poor quality of packaging used</li> </ul>

Source: Coulibaly et al., 2011.

Table 3. Across-countries comparison of OPPORTUNITIES associated with IPTAs.

Country	Sierra Leone	Benin	Togo	Burkina-Faso
Commodities	Cassava	Maize	Maize	Maize
Status	Start-up and new platforms	New platforms	New platforms	Start-up and new platforms
Opportunities	<ul style="list-style-type: none"> <li>• Availability of improved varieties of cassava</li> <li>• Demand for cassava-based products</li> <li>• Fertile lands for cassava production</li> </ul>	<ul style="list-style-type: none"> <li>• Strong demand for maize (due to proximity to Nigeria)</li> </ul>	<ul style="list-style-type: none"> <li>• Subsidized input (fertilizers and seeds) prices by the government</li> <li>• High demand for maize exists at community and national levels</li> <li>• Available supply markets</li> </ul>	<ul style="list-style-type: none"> <li>• The support of banks: the availability of BRS and ECOBANK to finance the production platforms of maize marketing and processing</li> <li>• Membership of an economic zone in West Africa as important market opportunities for maize and processed products</li> <li>• The appearance of the food crisis raises the need to develop market-oriented maize value chains</li> <li>• Cereal production, including that of maize</li> <li>• Support for producers by the state (i.e., subsidies) to reduce the cost of acquisition of mineral fertilizer</li> <li>• Existence of a local market for processed maize -- mainly flour, couscous flour, couscous, lumps of flour and yellow grits; the main consumers are households, the Army, and breweries</li> <li>• The availability of interesting and appropriate maize varieties</li> </ul>

Table 4. Across-countries comparison of THREATS associated with IPTAs.

Country	Sierra Leone	Benin	Togo	Burkina-Faso
Commodities	Cassava	Maize	Maize	Maize
Status	Start-up and new platforms	New platforms	New platforms	Start-up and new platforms
Threats	<ul style="list-style-type: none"> <li>• Difficult access to land</li> <li>• Lack of appropriate structure for processing and storage</li> <li>• Inadequate tools for cassava production</li> </ul>	<ul style="list-style-type: none"> <li>• Poor soil fertility</li> <li>• Excess supply of maize</li> <li>• No adequate storage facilities</li> </ul>	<ul style="list-style-type: none"> <li>• Poor soil fertility</li> <li>• Excess supply of maize</li> <li>• No adequate storage facilities</li> <li>• Significant insect and pest attacks on maize plants</li> <li>• Land tenure insecurity; most of the farmers are migrants and have to rent land</li> </ul>	<ul style="list-style-type: none"> <li>• Non-competitiveness of maize in Burkina in the sub-region compared with that of Ghana, Ivory Coast, and Benin</li> </ul>

Source: Coulibaly et al., 2011

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