



# PAEPARD



 Facilitating **innovation**  
in agricultural **research** for development:  
**Brokerage** as the **vital link**



“From **assumptions** to **reality**”

François Stepman



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Front cover: Ikhuba, by Michele Mathison (Exhibition Odyssées Africaines, Brussels, BRASS, 03/04-17/05/2015).

**Michele Mathison** is a sculptor and installation artist from Zimbabwe based in Johannesburg, South Africa. The Ikhuba (Ndebele for hoe) is the evocation of the action of raising and swinging down a hoe to dig up the earth and prepare a field for seed and the continuing effort needed to grow more food. Incessant flights to urban areas are condemning the small farmsteads of these countries. The artist uses the objects and symbols of the agricultural world to highlight not only its economic failings but also its human, social and elementary shortcomings. The objects, which embody harvest-to-consumer toil, includes workers' tools such as shovels, chainsaws, jerry cans and wheelbarrows, and the fruits of such labour, such as logs, bundles of wood, maize cobs and cow's heads piled into a shopping cart.

**The artist** uses an accumulation of such objects in the work Breaking ground (2014) a sculpture of some thirty steel pickaxes assembled together. The repetition of the tool creates a movement from top to bottom, from where the top of the worker's body would be down to the ground, represented by a heap of concrete fragments. Work is portrayed as dehumanized; the tool and its function replace the body. Movement is stuck fast in time and space, the work is static. With this use of tools and farming objects, the artist questions the survival of independent food crops as opposed to packaged, imported, industrially-produced good. He shows the disappearance of the world where time is measured by harvest and seasons and where man and women work the soil to sustain themselves and thrive.



## Acronyms and abbreviations

<b>AIF</b>	- Agricultural Innovation Facilitator
<b>ARD</b>	- Agricultural Research for Development
<b>ARF</b>	- Food & Business Applied Research Fund (the Netherlands)
<b>ASARECA</b>	- Association for Strengthening Agricultural Research in East and Central Africa
<b>AU</b>	- African Union
<b>BLE</b>	- Bundes Ministerium für Landwirtschaften und Ernährung: German Federal Ministry of Agriculture and Food
<b>CARBAP</b>	- Centre africain de recherche sur bananiers et plantains
<b>CCARDESA</b>	- Centre for Coordination of Agricultural Research and Development for Southern Africa
<b>CEEAC</b>	- Communauté Économique des États de l'Afrique Centrale
<b>CEMAC</b>	- Central African Economic and Monetary Community
<b>COLEACP</b>	- Comité de Liaison Europe-Afrique-Caraïbes-Pacifique pour la promotion des exportations horticoles ACP
<b>CORAF/WE CARD</b>	- Conseil Ouest et Centre Africain pour la Recherche et le Développement Agricole / West and Central African Council for Agricultural Research and Development
<b>EMBRAPA</b>	- Brazilian Agricultural Research Corporation
<b>GIS</b>	- Geographic information system
<b>ICRA</b>	- The International Centre for development oriented Research in Agriculture
<b>DevCo</b>	- Directorate General for International Cooperation and Development
<b>DFID</b>	- Department for International Development (of the UK Government)
<b>EAFF</b>	- Eastern Africa Farmers Federation
<b>EC</b>	- European Community
<b>EU</b>	- European Union
<b>FANRPAN</b>	- Food Agriculture Natural Resources Policy Network
<b>FAO</b>	- Food and Agriculture Organization of the United Nations
<b>FARA</b>	- Forum for Agricultural Research in Africa
<b>GIZ</b>	- Deutsche Gesellschaft für Internationale Zusammenarbeit (German Agency for International Development - previously GTZ)
<b>IAR4D</b>	- Integrated Agricultural Research for Development
<b>ICT</b>	- Information and communication technologies
<b>IDRC</b>	- International Development Research Centre
<b>LUANAR</b>	- Lilongwe University of Agriculture and Natural Resources
<b>NERPO</b>	- National Emergent Red Meat Producers' Organisation
<b>NGO</b>	- Non-governmental organization
<b>ROPPA</b>	- Réseau des organisations paysannes et des producteurs de l'Afrique de l'ouest
<b>PAEPARD</b>	- Platform for African – European Partnership in Agricultural Research for Development
<b>PAFO</b>	- Pan-African Farmers Organization
<b>PRASAC</b>	- Pôle régional de recherche appliquée des savanes d'Afrique centrale
<b>PROPAC</b>	- Plateforme régionale des organisations paysannes d'Afrique centrale
<b>RFO</b>	- Regional Farmers Organization
<b>RUFORUM</b>	- Regional Universities Forum for Capacity Building in Agriculture
<b>SME</b>	- Small-medium enterprise
<b>ULP</b>	- Users-Led Process



## Summary

The Platform for African European Partnership on Agricultural Research for Development (PAEPARD) supports research collaboration between a wide range of organizations in Africa and Europe.

Initially set up in 2007, PAEPARD was formed to question why agricultural research partnerships were often not balanced, and why competitive funding applications with African partners were also often unsuccessful. At the start of PAEPARD phase II (end of 2009), African and European partners – who, previously, only had a limited experience of working together – found themselves in a new platform funded by the European Commission Directorate General for International Cooperation and Development (DevCo). Partially in response to some donor disillusionment with regard to the low impact achieved by some international research institutions funded in previous decades, this new ‘forced cooperation’ of researchers, private sector, farmer organizations and non-governmental organizations (NGOs) was developed to test an alternative approach to agricultural research for development (ARD). Consequently, PAEPARD’s key objective has been to move from the previous largely supply-driven approach in ARD towards a demand-driven approach to nurture partnerships and increase the quantity and quality of joint proposals.

Since 2010, PAEPARD II has been working to:

- facilitate partnerships between farmer organizations, civil society groups, research institutes and higher education institutes, private companies and policy networks;
- support these partnerships through capacity strengthening and provide access to information on funding opportunities;
- help partners prepare competitive research proposals to address real needs at farm level; and
- advocate for increased support for demand-led, multi-actor agricultural research.

To facilitate demand-driven ARD partnership initiatives, PAEPARD actors (individuals and institutions) have undertaken a diversity of brokerage roles and activities.

This paper highlights lessons learned from the development of PAEPARD-supported consortia, which illustrate various impacts of brokerage. The preliminary conclusions and recommendations may appear obvious at first sight, but will be useful for informing the implementation of brokerage activities until PAEPARD activities come to an end in December 2017.





*The chili pepper consortium in Togo aims to use genetic diversity to improve the quality of its national production. (Photo credit: R. Kahane, CIRAD)*



## About PAEPARD, its partnerships and assumptions

In 2017, PAEPARD will mark 10 years of its activities. During this time, the generation and implementation of ARD projects between Africa and Europe has seen several initiatives evolve to become better organized, coordinated and participate more successfully in European and other research programmes due to more appropriate mechanisms such as innovation platforms and multi-stakeholder partnerships.

PAEPARD, in particular, has contributed to this process by strengthening the capacities of non-research stakeholders to effectively lead and compete for ARD grants. PAEPARD phase II (2009-2013 extended to 2017) has been built on lessons from phase I (2007-2009) which, it should be noted, interacted only with research actors.

A number of assumptions have been used in the implementation of PAEPARD II, which PAEPARD consortium partners have worked to refine over the years. The most important assumptions include:

1. Demand-driven agricultural innovation and research increases quality of results;
2. Innovation facilitators are key in multi-stakeholder partnership success;

3. An inclusive approach supports locally-led change, innovation and entrepreneurship;
4. PAEPARD supported-consortia have better balanced multi-stakeholder partnerships;
5. Improved call preparedness increases success rate of ARD proposals.

PAEPARD has come to appreciate the need to nurture and combine the efforts of business, civil society, government, and academia for the benefit of societies and the environment. Ideally, ARD partnerships should strive for a 'dynamic equilibrium' in which all involved parties are open to a multiple transformation process of mutual learning, cultural understanding, scientific upgrading, capacity building, and attitudinal behaviour (i.e. conservatism vs. innovation) towards all partners.

However, major constraints identified by African and European stakeholders in the success of ARD partnerships include:

1. Lack of information and knowledge on funding opportunities, and difficulties in finding appropriate partners in Europe as well as fully understanding complex and elaborate fundraising mechanisms. In addition, few funding opportunities exist for multi-stakeholder consortia.
2. The majority of partnerships are from universities and/or national research institutes with very limited participation from the private sector, extension/advisory services and civil society organizations (e.g. farmer organizations).



*The Citrus consortium in Ghana is targeting innovative technologies to control fruit disease during postharvest without health issues for the consumers or the environment. (Photo credit: R. Kahane, CIRAD)*

**3.** Diverse European Commission (EC)-funded ARD coordination mechanisms often confuse the different stakeholders instead of facilitating their interaction.

**4.** European institutes, who are naturally more familiar with EC-funding mechanisms, tend to be initiators of partnerships as well as the coordinators for EC-funded projects.

**5.** Dissemination of innovations is valued least amongst research partnership outcomes in comparison with peer reviewed publications, training and access to funding.

**6.** The EC-funding mechanisms supporting ARD (from DG DevCo and DG Research involving DG Agri) are based on competition or excellence and often difficult to access by African partners. In addition EC administrative and financial rules are often not easy to follow.

## PAEPARD's brokerage role

In the scientific and development community, the concept of 'broker' and 'brokering' has been developed in relation to multi-stakeholder processes. The roles and positions of PAEPARD individuals and institutions (brokers) in relation to facilitating ARD partnership initiation and support are diverse. Brokerage roles have been - and continue to be - taken on by institutions/organizations/firms that include consultants, government and NGOs, research departments and enterprises that support agricultural producers, processors and other affiliated agro-enterprises.

In practice, PAEPARD has singled out individuals from within and outside the PAEPARD consortium partners - through the training of 40 agricultural innovation facilitators (AIFs) - to organize the activities and mentoring of multi-stakeholder consortia (see section 5: Co-ordination vs facilitation).

## PAEPARD and partners as brokers

For multi-stakeholder partners, addressing a common challenge seldom happens spontaneously or smoothly. The process requires brokerage to bring the partners together, and facilitation to build relationships, which need to be based on shared objectives, efficient task distribution, effective communication and mutual trust.

In its role as a broker, PAEPARD connects different entities and individuals to share and exchange knowledge by bringing together actors with common interests that otherwise would not have any relationship and who would rarely interact with one another.

The PAEPARD partnership brings third parties together for mutual advantage but does so by intervening in a chain of existing brokerage activities and actors and does not necessarily initiate them. For example, in the case of the mango industry in West Africa, farmers and researchers had concentrated only on the issue of fruit fly control and had overlooked the economic value of the significant mango waste produced. Bringing in actors from other sectors into the partnership (e.g. the cosmetics and animal feed industry) led to private sector actors in four West African countries (Burkina Faso, Côte d'Ivoire, Mali and Senegal) being brought in to provide new perspectives and economic opportunities, as well as new constraints, which required cross-disciplinary research.

## 1

## PAEPARD's supported consortia

> **Burkina Faso** biofertilizer consortium - (effects of organic soil enriched with *Trichoderma* spp. applied to vegetable production in the sub-Saharan region). The farmer cooperatives (mainly women) involved are using biological fertilizers and compost. This consortium involves actors from the private sector (BIOPROTECT in Burkina Faso, BIOPHYTECH in France) and one NGO, ARFA (Association pour la Recherche et la Formation en Agroécologie). The innovation involves production of fungal microorganisms by fermentation and the popularization of its use to fertilize and protect plants. Farmers involved in the project have reported increased yields (of tomatoes and onions in particular).

> **In the Benin** soya consortium, new soybean-derived products have been produced for the market (initially milk and afitin, and then extended to powder and meat) and impacting food security (quality and productivity of products) and food safety (quality and household income through improving the food chain).

> **The Ghana** citrus consortium has been looking at innovative technologies in postharvest management, particularly the sanitary status of fruit in storage. The consortium put its efforts in developing a proposal to overcome the fungal Angular Leaf Spot disease through the use of a biochemical spray, in order for the national citrus production to regain market share. A promising collaboration with a South African partner illustrated the difficulty of managing public and private interests in a multi-stakeholder partnership.

> **In the Malawi** aquaculture consortium, the Lilongwe University of Agriculture and Natural Resources (LUANAR)-led project focused on technologies for fish production, the development of low cost diets, optimum feeding strategies and marketing for enhanced tilapia production to make aquaculture affordable.

> **Widely consumed in Togo**, pepper can be an income source for farmers, insuring cash and profit. This project worked to improve market opportunities for smallholder farmers through research to add value to pepper by improved small-scale processing facilities (drying, sorting and packaging) and by evaluating new varieties imported from Embrapa (Brazil).

> **In Uganda**, the African indigenous fruit and vegetables (AIFV) consortium focused on innovative processes for extending AIFV shelf life without degrading their nutritive value, taste and presentational characteristics. It aims at developing, mainstreaming and commercializing new products (jam, juices, marmalade and dried products) from these processes.

> **A partnership in Nigeria** addressed the critical issues of high cost and poor quality feeds in the Nigerian poultry industry. The solution has been to research the use of alternative feed ingredients, such as abundant cassava roots previously underexploited by poultry farmers.

> **The Burundi** consortium aimed to strengthen the informal potato seed system to improve quality. New selection techniques reduced the cost constraints faced by producers of certified seeds. The 'informal' seed production of potato is strengthened as an alternative to the (often not available) certified seeds.

> **In Kenya**, the aflatoxin management consortium tackled the problem of contaminated food and feed. Three innovative aflatoxin control strategies are promoted in Kenya to make grains safer: biocontrol using atoxigenic *Aspergillus flavus* (aflasafe™); use of good agronomic and postharvest practices; and use of decontamination processes for at least some of the maize. The impact of those innovations may be considerable when maize is grown by over 80% of rural farm households. In parallel to these innovations, communication around contamination risks is also an area of investigation.

> **In South Africa** the National Emergent Red Meat Producers' Organisation (NERPO) teamed up with the private enterprise GMP-Basic to develop a livestock information management tool linked to a RFI tag to capture and analyze the performance of the livestock sector and improve the fodder management practices of small-scale farmers to enable them to maintain their herds of cattle and flocks of small ruminants.





European researchers were also able to appreciate potential innovations based on the observations of their African colleagues, such as innovative techniques to extend the shelf life of indigenous vegetables in Uganda, locally processed soya milk in Benin or locally selected *Trichoderma* strains (a soil-borne biofertilizer and bio-protectant) in Burkina Faso, to turn each activity into a viable business. Nevertheless, European researchers' appreciation of these innovations often required brokerage provided by PAEPARD in order to fully understand and appreciate the business potential and its attraction for joint research (Box 1).

Several PAEPARD-supported consortia involved the private sector (soya in Benin, organic soil fertilization in Burkina Faso, aquaculture in Malawi, livestock and management of small ruminants in South Africa and mango exports from West Africa) in various value chains targeting innovation for small-scale farmers. The Burkina Faso consortium, for example, has actually been driven by the private sector company, BIOPROTECT, which has resulted in a business venture between ARFA (a Burkinabe NGO) and BIOPHYTEC (a private sector company based in Montpellier, France). In Malawi, MALDECO Aquaculture Ltd. was strategically engaged to bring in aquaculture, feed and marketing lessons from a private sector point of view and the company uses research findings in feed to enhance its fish production activities. In South Africa, the National Emergent Red Meat Producers' Organisation (NERPO)



*Livestock in Africa is of great value for farmers, for consumers, and for soil fertility management. (Photo credit: EAFF)*

collaborated with a private enterprise to apply radio frequency unique identification (RFI) tags for cattle.

Besides local entrepreneurs, local consumers as an accessible mass market were the scope of a number of consortia (e.g. soya products in Benin, including milk, afitin and also powder and meat; innovative chicken feed from processed cassava products in Nigeria, and quality Irish potato seed in Burundi). Processing of food on a bigger scale inevitably entails food safety risks for the consumer. Aware of food safety issues for consumers, the Eastern Africa Farmers' Federation (EAFF) worked on a proposal using storage sensors linked to mobile phone applications for tackling moisture levels which may cause aflatoxin contamination of the stored grains. The proposal also wanted to develop videos in local languages on aflatoxin in collaboration with ICRISAT and the McKnight Foundation.

The important role ICT can play in food production was taken up by a consortium in South Africa which uses a geographic information system to track cattle. It is said that that the commercial livestock sector of South Africa has reached its peak. However, attempts to quantify production in the livestock sector are usually short term snap surveys, which do not yield adequate and accurate information for long term market planning and satisfy the increased demand for red meat.



*Innovative soya bean products are good for women's empowerment and children's health. (Photo credit: P. Sewade, Sojagnon, Benin)*





## An inclusive multi-stakeholder approach

By working alongside grassroots farmer organizations, enterprises and NGO, PAEPARD has been able to gather in-depth experience of what partners need. To ensure participation of all partners, comprehensive support mechanisms are needed, which include building capacities, creating networks, stimulating communication, and assisting with financing. This inclusive approach supports locally-led change, innovation and entrepreneurship. For example, the regional farmers' federation in Eastern Africa (EAFF) is now invited to be involved in some proposals targeting aflatoxin contamination of maize grains, with health impacts on livestock and humans. Thanks to the PAEPARD Users-Led Process (see next section) in Eastern Africa, EAFF has learned how to prioritize, advocate and follow up on its research needs.

In one of the PAEPARD consultations, 'inclusive partnership' was defined as: all stakeholders that have an interest in the partnership are associated. However, the role of each partner must be well defined and balance found between inclusiveness and operational efficiency. It is also important to clarify if the partnership is mainly research or development oriented.

PAEPARD organized two calls for applications in 2011. From the 151 original concept notes received, 19

were selected to form the PAEPARD-consortia (Box 2).

Profiles of the 19 selected consortia indicated that non-research partners were, as required, the main applicants: farmer organizations, NGO and private sector actors were 21%, 32% and 5%, respectively (total = 58%). Despite their role as leader (applicant) or consortium coordinator, non-research partners, in particular, questioned their role as beneficiaries of scientific research. In a number of consortia it appeared that researcher institutions were, after all, taking the lead of the whole process from identifying the research priority to research implementation.

With these insights from partners, PAEPARD came to realize that despite its initial progress, its call for proposals in orientating ARD towards demand-driven partnerships and the way consortia were formed and selected remained still rather 'research driven'. In particular, insufficient time was given for non-research partners to articulate their needs in the timeframe required for a competitive call. In particular, regional farmers' organizations (RFO) were failing to adequately benefit from PAEPARD support with: (a) few RFO responding to the open calls in 2011-12; (b) few selected and, even when selected, it was difficult for Pan-African Forum Organization (PAFO) members to orient partnerships around their needs; (c) mobilized RFO members were discouraged as PAEPARD was unable to identify or solve RFO's constraints to participate in research.

## 2

### Selection process of the first open call for consortia of PAEPARD (2011)

> **Step 1:** A shortlist of concept notes was established using administrative criteria: (a) the legal status and stakeholder mandate; (b) at least three partners of which one must be European, one African research and one African non-research stakeholder; (c) an identified funding opportunity to submit a proposal to.

> **Step 2:** A technical review was carried out by an independent reviewer, external to PAEPARD, using three criteria: (a) applicant profile: required expertise and leadership experience, other partners' competence, division of roles in partnerships; (b) partnership suitability: clear definition of innovation challenges, demand-driven, improvement of existing initiatives, sustainability of proposed partnership; (c) expected impact: who are the beneficiaries of the action, question to be addressed by research partner, extent that expected outcome will be disseminated?

> **Step 3:** The review reports from Step 2 were analyzed by a committee of 10 reviewers selected from among PAEPARD partners.

> **Step 4:** A geographic balance was introduced between the three sub-regions (under the sub-regional research organizations: ASARECA, CCARDESA, and WECARD/CORAF) and between Anglophone and Francophone countries.

## Users-Led Process

By mid-2011, some PAEPARD non-research partners were critical of the selection mechanism that had been employed through the competitive call for partnerships (Box 2). This triggered the need to reflect and come up with a new brokerage approach that gave time to end-users to reflect on the multi-stakeholder partnership process and allow greater ownership.

As a result, and with an appreciation that each consortium is unique – from its individual internal needs to its contrasting and challenging environments – PAEPARD developed and adopted a needs-based approach known as the Users-Led Process (ULP). This aimed to give the lead to ‘research user’ partners (especially farmer organizations and the private sector) in the organization of brokerage activities.

However, it should be noted that the ULP was not, altogether, a new approach. During the internal and multi-stakeholder consultations<sup>1</sup> organized at the start of the PAEPARD project (2010-2012) the ‘research users’ (particularly the RFO) wanted to play a more central role in the brokerage activities: (a) the RFO were already involved in dynamic partnerships with research and other stakeholders at national and regional level; and (b) they were convinced that successful partnerships could only be based on long-term relationships between farmers’ organizations, research institutions and governments, instead of case by case cooperation.

The first step of the ULP (Figure 1<sup>2</sup>) was to start from the farmer organization’s needs and existing dynamics



Figure 1 – The Users-Led Process steps

and then elaborate the next steps around a united priority or ‘federating theme’ identified through the farmer organization networks. This step predominantly involved ‘brokerage activities’ on the chosen federating theme. The objectives of this step were to:

- a) reinforce existing dynamics at national/regional level;
- b) improve existing partnerships; and
- c) promote research based on users’ needs/ challenges.

Another crucial step of the ULP was the multi-stakeholder research question (MSHRQ) workshop (step 4 in Figure 1). The main objective of this step was to:

- i) help in partnership building;
- ii) validate the desk review report on the priority issue (federating theme) selected by the RFO;
- iii) prioritize and translate development questions to research questions;
- iv) analyze partners’ existing capacities and identify gaps; and,
- v) identify potential additional partners needed in the partnership to address capacity and competence gaps (e.g. West African mango producers had no prior experience of the cosmetic industry).

Finally, core group members were identified by the ULP constituency for taking the regional platform forward to develop the proposed concept notes and help form an African-European partnership to jointly develop full proposals and participate in the resulting research.

Through the ULP process, the foundation for effective multi-stakeholder partnerships was successfully established and five multi-stakeholder platforms were created. The ULP platforms were each led by four RFOs: East Africa Farmers Federation (EAFF); the Plateforme Regionale des Organizations Paysannes de l’Afrique Centrale (PROPAC); the Réseau des organisations paysannes et des producteurs de l’Afrique de l’Ouest (ROPPA); the Food Agriculture Natural Resources Policy Analysis Network (FANRPAN); and the fifth one by COLEACP, a European private sector-based organization (Box 3).

The speed of implementation of the ULP varied from one partner to another, ranging from six months to one year (or more). Setting the research agenda from a RFO or SME (small-medium enterprise) perspective is a rather recent and innovative approach, which requires much information exchange, communication and capacity building, as well as a redefinition of the required human resources to make this happen. In practice, issues such as the professional status of

<sup>1</sup> Flament J., Félicité-Zulma D., Mugabe J. and Kahane R. (2016). Findings from the consultations with stakeholders in agricultural research for development, conducted in the framework of PAEPARD between 2010 and 2012. Cartmell-Thorp S., WRENmedia (Ed.), FARA, Accra, Ghana (Pub.). ISBN 978-9988-8438-1-6

<sup>2</sup> Mugabe J. and Adekunle A. (2013). The Users’ Led Process: a multi-stakeholder partnership approach to articulate the research-users’ needs. <http://paepard.org/>

3

## Users-Led Processes (ULP) ULP lead institutions and their federating theme

**EAFF** - Extensive livestock value chains in Eastern Africa (specifically Kenya and Uganda)

**PROPAC** - Vegetable garden crops in urban areas in Central Africa (specifically Cameroon, Republic of Congo and Democratic Republic of Congo)

**ROPPA** - Rice value chain in Benin, Burkina Faso and Mali

**FANRPAN** - Groundnut value chain in Malawi and Zambia

**COLEACP** - Adding value to mango non-food uses in Burkina Faso, Côte d'Ivoire and Senegal

scientists, available skills/experience and human resources, and perceptions concerning the validity of research methods have arisen within the PAEPARD-supported consortia. Inclusive participation involves ensuring that people's knowledge and views are more equitably incorporated in decisions and this requires managing and reforming power relationships.

In addition, most ULP have stimulated their farmer organization to initiate (e.g. PROPAC), to finalize (EAFF and ROPPA), or to strengthen (FANRPAN) a formal

framework for farmer organization-research dialogue (see Box 4).

Strengthening of farmer organizations' role in the ARD strategy through enhanced farmer-organization-research dialogue was a benefit that was not initially anticipated by PAEPARD but which has emerged from the ULP approach. The second unforeseen benefit is that there is now an enhanced understanding of the role of private sector businesses in interaction with the public sector for sustaining innovation in agriculture at local or national level.

4

## Consultations overview supported by PAEPARD at a regional level

- ROPPA organized a workshop on the reinforcement of the consultation framework between farmers organizations and research in Monrovia (Sierra Leone, 18-20 June, 2013) and, with the support of the Belgian NGO 'Collectif Sécurité Alimentaire' (CSA), a workshop in Dakar on: 'Get to know the family farms and their transformations: assessment of the activities of the observatory of ROPPA and exchanges on partnerships between producers' organizations, research and the state' (Senegal, 24-26 June, 2015). This workshop ran in parallel to a conference to finalize the framework of a permanent dialogue between farmer and research organizations.
- PROPAC organized two consultative workshops in Cameroon between farmers' organizations and research actors in Mfou (6-8 August, 2014) and in Douala (Cameroon, 4-6 August, 2015). These workshops aimed to strengthen collaboration and consultation between the national farmers' organizations and the national or regional agricultural research institutions in Central Africa. A growing interest was generated between the two events and the second workshop gathered representatives from 10 countries and from regional institutions (CARBAP, CORAF/WE CARD, PRASAC, CEEAC and CEMAC). A resolution was produced, a taskforce nominated and a plan of action elaborated.
- EAFF organized two national consultations linked to the livestock research priority: (a) the National Livestock Dialogue in Kampala (Uganda, 2015) and (b) the avant National Livestock Dialogue workshop in Thika (Kenya, 4 February, 2015).
- FANRPAN organized national multi-stakeholder consultations of research and non-research institutions to discuss areas of collaboration in Kinshasa (Democratic Republic of Congo, 11-12 November 2010), in Mbabane (Swaziland, 17-18 November 2010), in Maputo (Mozambique, 23 November 2010), in Gaborone (Botswana, 29 November 2010), in Harare (Zimbabwe, 16-17 Feb. 2011), and in Johannesburg (South Africa, 19 November 2010).





*Charcoal cooler developed by the consortium on indigenous fruit and vegetables in Uganda, 2016. (Photo credit: NRI)*

## Co-ordination vs facilitation: an unexpected challenge

*Facilitation* is a purposeful intervention that enhances interaction and relationships of individuals, organizations, and their social, cultural and political structures through a process of network building, social learning and negotiation<sup>3</sup>. In high-income countries, specialized actors (private sector brokers, catalysts, activists, traders, processors) are increasingly taking on the role of facilitating agricultural innovation processes. In low-income countries, these roles are still dominated by specific types of organizations (extension, research, non-profit organizations). Specialized and skilled individuals are called for, as systemic intermediaries, facilitators or brokers – i.e. someone who can act as an intermediary in complex relationships<sup>4</sup>.

*Facilitators or brokers* are individuals working towards developing the trust and consensus between actors that enable the learning process and who support actors in tracking and reflecting on the process of transformation. Neutrality, assurance of clarity of roles, and networking abilities are key attributes of

facilitators. For example, thanks to PAEPARD lobbying<sup>5</sup>, German experts from the Max Rubner Institute, Federal Research Institute of Nutrition and Food who had not worked in Africa before, came on board for the Kenya aflatoxin project.

In the first call for proposals, in 2010, consortia suggested their own facilitator which was usually a researcher or the consortium coordinator. However, when the facilitator was also the consortium coordinator (as with the Togo pepper consortium or the Kenya aflatoxin consortium), this situation led to some tensions between partners until the leadership regained universal trust. For the second call for proposals, in July 2011, external facilitators were proposed by PAEPARD. And when PAEPARD embarked on the ULP with the regional farmers' organizations, the facilitator was always a non-research actor. For example, the facilitation for the PROPAC-ULP on urban vegetables was led by an NGO.

To solve this, PAEPARD sought feedback from the consortia on whether they would prefer independent facilitators. However, the consortia raised other concerns including: i) who would pay these facilitators; ii) how different are they from the coordinators; iii) will their roles differ; iv) can this facilitation role not be played by existing extension workers?

<sup>3</sup> Leeuwis, C. and Aarts, N. (2011). Rethinking communication in innovation processes: creating space for change in complex systems. *The Journal of Agricultural Education and Extension* 17(1): 21–36.

<sup>4</sup> Klerkx, L. Gildemacher P. (2012). The role of innovation brokers in agricultural innovation systems. In: World Bank (Ed.) *Agricultural innovation systems: an investment sourcebook*, Thematic note 4: 221–230.

<sup>5</sup> PAEPARD Policy Brief n°1 (2015). The role of multi-stakeholder partnerships between Africa and Europe exemplified by the issue of aflatoxin contamination of food and feed, 8 p.



At least four of the selected consortia identified senior managers of partner organizations as 'neutral facilitators' whilst three other consortia proposed people from non-partner organizations. The others proposed alternatives, including people from both partner and non-partner organizations. This mixed outcome led PAEPARD to determine that, where possible, external and/or neutral AIFs were needed to ensure that all stages of the partnerships' development process were based on consensus, common vision, mutual interest and commitment and to assist with developing the concept note into a formal proposal for submitting to specific financing agencies.

To find potential AIFs, PAEPARD sent out a call in August 2011 to experts across the regions according to set criteria. From 202 applications, 20 AIFs were selected with the majority, not surprisingly, having a research background. For each consortium of the second call, PAEPARD appointed a specific AIF, mainly to match facilitator country of residence with consortium country. However, for the regional ULP, it is interesting to note that the farmers' organizations nominated their own AIFs to steer the process.

To refine roles and responsibilities for coordinators versus facilitators at an AIF workshop in November 2011, it was decided that the consortium coordinator should take the lead for the consortia and be responsible for output and direction of the proposal. In contrast, the AIF's role was to connect stakeholders with each other to help them reach a consensus. Their role was to remain neutral and ensure that discussion was balanced, power was shared and all participants input was respected in order find a way forward that was beneficial to all partners.

However, a 2013 survey revealed that, whilst some

consortia were happy with the AIFs assigned to them, some had challenges as the AIFs were seen as not always having a clear understanding of the research problem and consortia priorities. In addition, only a few AIFs explicitly engaged in stimulating the interface between scientists and practitioners. The majority of AIFs limited their contribution to the facilitation of inception workshops.

In almost all consortia, the most successful 'broker' was the coordinator who initiated the consortium and who participated in the research proposal write-shop. They (only two PAEPARD consortia have a female coordinator) worked along the entire value chain, managing resources and building networks. Most of the time, the coordinator/broker took a view of innovation beyond traditional ARD to include organizational, institutional and policy dimensions. Brokerage in agricultural research collaboration comprised firstly, influence to mobilize actors relevant to the problem at hand, and secondly tacit knowledge to trigger interaction among stakeholders. These findings point to the importance of research organizations investing in, or collaborating with, innovation brokers that interface with users of their knowledge at various stages of conception, design and dissemination of ideas.

## Inception workshops

PAEPARD first organized inception workshops with facilitators from the International Centre for development-oriented Research in Agriculture (ICRA) and the Regional Universities Forum for Capacity Building in Agriculture (RUFORUM), then later with the African AIFs suggested by PAEPARD as detailed earlier. The purpose of the inception workshops was to create a foundation for effective partnerships between

African and European ARD partners and to:

- understand PAEPARD objectives;
- function effectively with a common purpose and clear objective of the consortium;
- establish working procedures and 'ground rules' and a clear understanding of the respective roles of different partners;
- agree on AIFs roles in the partnership;
- draft a concept note for each consortium which could subsequently be developed into a full proposal for funding and directed at specific financing agencies; and
- prepare an action plan for the consortium and the full proposal write-shop.

Each inception workshop has been the starting point for discussing factors



*Rice in West Africa: white rice produced in irrigated systems in Mali. (Photo credit: CIRAD)*





influencing the constraints of a specific value chain among multiple stakeholders at the micro, meso and macro level. By visualizing the influences and factors that affect stakeholders at multiple levels, research priorities could be better identified and strategies developed to enhance and promote more effective and efficient partnerships.

## Institutional challenges

While almost all the AIFs were involved in facilitating innovation networks or configurations and supporting learning processes within these networks, they did not address underlying institutional issues. These included organizational incentives and cognitive differences between the diverse actors that were likely to hamper demand-driven approaches to ways of working. This may be one of several reasons why the facilitation role was taken over – in most PAEPARD-supported consortia – by the consortium coordinators.

As the pool of AIFs was created for consortium creation and support, and not based on their expertise in, for example, facilitating proposal write-shops, this proved to be a key learning point for PAEPARD. Whilst brokerage is a key concept of PAEPARD, to facilitate the multi-stakeholder collaboration in selected value

chains, the role of a broker is not always evident and creates diverse expectations.

However, an exception to the above was noted in some consortia where a broker was needed. In Benin, for example, an external broker was important in the soya consortium because the different players in the soya value chain were not used to collaborating. In Ghana, the consortium benefited from two AIFs. The first, a Ghanaian researcher, had extensive field experience facilitating agricultural innovation in several palm oil initiatives, as well as strong experience in value chain analysis. The second AIF, also a researcher, had thirteen years of experience working with rural farmers and with the Ministry of Food and Agriculture in Ghana.

The Burkina Faso *Trichoderma* biofertilizer consortium provided an interesting example of a coordinator/facilitator who focused on agribusiness or enterprise development, guided by market demands. The value added by this coordinator/facilitator was in bringing together agricultural entrepreneurs with agricultural and non-agricultural business service providers. In contrast, in Cameroon, the broker limited his role to facilitating a meeting between the different



Young entrepreneurs will return to agriculture, as in Nigeria with poultry farming where innovations are providing a better business opportunity than moving to urban areas.  
(Photo credit: E. Clinton, Agro-preneur.aija)





## Brokerage in funding innovation: a major change in mindset

A key aim of PAEPARD has been to increase preparedness to respond before a funding opportunity or a call for proposals is made public. However, most European researchers are reluctant to be part of a partnership in a vacuum. For a European researcher to join a partnership, PAEPARD's experience demonstrates that there needs to be an open call for which the consortium will develop a proposal. In 2010/2011, this was probably the biggest challenge to engaging European research scientists in PAEPARD-supported consortia because the two calls launched by PAEPARD were not linked to a specific funding opportunity from a donor.

Public financing of ARD is more and more scarce, and the competition for public funds has become fierce. Competitive funding is a potential mechanism to improve partners' commitment, but there is a risk of incurring large transaction costs due to the procedure for processing calls and selecting proposals. In addition, sustainability of ARD partnerships is often limited by the financing mechanism; some organizations have to operate on full cost recovery and the funding available for staff time is insufficient. Nevertheless the development of new capacity, including new organizational and alliance mechanisms, is an important aspect for partnership sustainability.

Whilst there is clearly a need to target more than one funding window, PAEPARD's challenge going forward is that not all bilateral donors may be interested in funding EU partners. For example, the German Ministry for Food and Agriculture (BMEL) or the Dutch bilateral food and business Applied Research Fund (ARF) benefit national research organizations and actors with their African partners and, unlike EC funding, do not encourage intra-European collaboration.

Nevertheless, bringing partners together for consortium inception workshops and for concept note write-shops considerably increased the quality of the submitted proposals. Since 2010, some 55 concept notes and proposals have been submitted by PAEPARD-supported consortia. And, as of early 2016, 21 submitted proposals have been selected for a call



*Good harvest and postharvest practices are essential to prevent aflatoxin contamination during storage.  
(Photo credit: L. Matumba, LUANAR, Malawi)*

actors, but the expectation was that he would master very different domains like research, rural development and the logic of donors.

The coordinator of the Malawi aquaculture consortium, which did not have an AIF, expressed this expectation: "We do not need a facilitator to 'make the group work', that's not the kind of facilitation that we need. We need a facilitator who will link us to potential donors, who knows which donor would be interested in our proposal and who can assist in elaborating our concept note and proposal."

Refining the selection criteria of AIFs – to include greater experience of agricultural innovation and further capacity building in effective internal and external communication and collaboration processes – would undoubtedly enhance the effectiveness of their brokerage role. There is also a need for brokers who can bring Anglophone and Francophone researchers closer, especially as calls for proposals ask for sub-regional collaboration. However, the problem of how to identify potential brokers, and their incentive/remuneration to act in this capacity remains unresolved.

At one point, it was suggested that, if the role of the broker is to be taken seriously, PAEPARD should give consideration to making this a professionally remunerated activity.

## Scaling up innovative technologies

- > 1. The mechanical processor in Burkina to transform mango waste to feed is an interesting case because the fruit fly larvae are adding protein to the mango chips (used to feed pigs). This has high environmental impact potential and is affordable at a regional scale.
- > 2. The Nigeria cassava chicken feed processor machinery is using mushrooms on the cassava for increasing protein content. Applied research is needed on equipment fabrication for processing of fresh or pre-dried cassava roots for poultry feed and private finance to roll it out.
- > 3. The traditional charcoal cooler from Uganda – improved through applied research – for indigenous African vegetables, complements very well the powering agrifood value chains initiative of the renewable energy and energy efficiency Partnership (REEEP).

organized by a diverse group of donors. Successful calls were among others: the ASARECA 'Upscaling innovations for quality seed potato production in Eastern and central Africa', the AFRICA-BRAZIL 'Innovation marketplace', the Dutch Applied Research Fund (ARF).

In addition, not only has the number of outputs increased but the number of funding opportunities relevant to multi-stakeholder (research) partnerships has also risen. Besides the very competitive EU research calls, other funding opportunities with more specific criteria and a stronger participatory approach were targeted. These included the Canada's International Development Research Centre (IDRC), the US government's 'Feed the Future' call, the German BMEL processing and packaging call amongst others. The African Union research calls in 2016, like the EU Horizon2020 calls, also remained largely research-oriented.

However, PAEPARD was able to influence donors on the focus of their calls, lobbying for specific funding for an under-supported (participatory) research field such as, for example, the aflatoxin contamination of food and feed.

Last but not least, since most of the consortia selected by PAEPARD included a private sector partner, the sustainability of an innovation programme was often seen beyond the duration of a funded project. A private sector company's commitment in a consortium is not only for the duration of a project. Therefore, funding from various sources and at various times is necessary, although other forms of support are also crucial, especially public sector capacity to provide an enabling environment for innovation. For instance,

the Burkina Faso biofertilizer consortium would like to see a microbiological network hosted by a university in West Africa hosting various start-ups developing products and services for soil fertility management. The involvement of the private sector also indicates the importance to link up with private finance (local banks) if innovative technologies (such as processing machinery prototypes) developed with PAEPARD support are to be scaled up (Box 5).



*Processing locally agricultural produce to preserve the nutritional value and enable safe storage is central to many consortia supported by PAEPARD, like here in Rwanda. (Photo credit: R. Kahane, CIRAD)*





*Innovating in urban agriculture has been identified by PROPAC as a priority to benefit small-scale farmers in central Africa. (Photo credit: R. Kahane, CIRAD)*

## Lessons learned

### **A multi-stakeholder partnership takes time**

Multi-stakeholder ARD partnerships supported by PAEPARD offer a forum for knowledge co-creation, learning and innovation. However, good partnerships are not guaranteed. The time required to build trust and establish effective communication is a challenge. When it comes to sustainability and impact of multi-stakeholder research consortia, collaboration with other stakeholders, which centre on at least one identified and shared goal, is key. No single partner alone can solve the challenges of poverty eradication and environmental degradation, for example. Only multi-stakeholder partnerships driven by mutual benefits can deliver smart solutions based on the capabilities and resources of various partners. Other important lessons include <sup>6</sup>:

### **The need for an inclusive approach**

Comprehensive support mechanisms are needed for ensuring participation of all partners, which include building capacities, creating networks, stimulating communication, and assisting with financing. This

inclusive approach supports locally-led change, innovation and entrepreneurship.

### **Research users are central to defining priorities**

The potential for farmers and researchers to work together can be enhanced. PAEPARD's ULP has supported regional farmer organizations in defining research questions and themes based on their needs and priorities. The ULP gives research users ownership of the process and allows them to bring in other actors – including researchers – whenever they are needed in the process.

### **The brokerage role of consortia coordinators and agricultural innovation facilitators is central to effective communication, achieving consensus and building trust**

Whilst PAEPARD's expectations with regard to AIFs have not been entirely fulfilled, valuable experience has been garnered and lessons learned about the brokerage role of AIFs and consortia intermediaries. Refining the selection criteria of AIFs – to include greater experience of agricultural innovation and further capacity building in effective internal and external communication and collaboration processes – would undoubtedly enhance the effectiveness of their brokerage role.

<sup>6</sup> PAEPARD policy brief N°2 (2016). Facilitating innovation in agricultural research for development: Brokerage as the vital link., 8 p.





### The need to maintain the momentum of multi-stakeholder ARD partners

Financial investment in inception workshops and write-shops builds the foundation for more successful African-European research consortia. As a result of this approach, the capacity of African partners has been notably strengthened and the quality of ARD proposals submitted for PAEPARD funding has increased.

### The engagement of European researchers can be improved

Individual targeted support is needed to mobilize European researchers to participate more actively in multi-stakeholder ARD partnerships. The key constraints to their engagement need to be better identified.

### Need to tap multiple funding windows for ARD

Targeting one funding window is not an ideal strategy for multi-stakeholder research consortia; the broader aim should be to diversify funding sources – including own contributions and returns on investment – in order for scaling up and out the research initiative. The broker's role is essential not only to identify funding opportunities, but also to minimize financial risk for sustainable ARD partnerships for innovation and impact. As an additional brokerage service, the PAEPARD website should provide some guidance of the various requirements for multiple calls as soon as they are launched.

## Conclusion

The assumptions around PAEPARD brokerage activities have been reviewed and scrutinized in this paper and are related to understanding and fostering agricultural innovation in Africa, strengthening capacities, and striving for greater impact of research on value chains.

However, it is important to note that not all PAEPARD consortia and research projects were included in this review. Rather, selected consortia, launched in 2011-2012, have been singled out for analysis.

The multi-stakeholder consortia supported by PAEPARD have developed new products (soy milk, bio-fertilizers, indigenous crops, etc.) which remain close to farmers' concerns while exploring the opportunities of producing for a larger market.

One critical factor, on which PAEPARD consortia depend highly for success is the right partnership. Collaboration promotes sustainability and long-term impact through matching relevant resources and expertise and fostering participation of all groups affected by, and interested in, the operations of the enterprise. A research partnership can bring expertise on marketing, finance and entrepreneurial spirit; cooperatives ensure participation and commitment of beneficiaries; governments can promote regulatory change and initiate awareness raising campaigns in schools or among the broader public; NGO have the trust of local communities and knowledge of social and environmental problems; and research institutions can help develop new solutions for the local context or provide insights on markets and industry trends to name but a few of the resources to be shared. The most common partnership promoted by PAEPARD has been between researchers and farmers' organizations. Gradually, PAEPARD will need to consider intervening in new upcoming partnerships between businesses, NGO and policy makers; in many instances including additional partners.

*Promoting innovative products like biofertilizers is also part of the research work, to reach vegetable growers and to generate profits. (Photo credit: Bioprotect, Burkina Faso)*





However, partnership is not about playing a set of standard roles. Everybody needs to be perceived as a contributor in solving the problem: the researcher/non-research status then tends to disappear. PAEPARD has built the capacity of African stakeholders in facilitation of the multi-stakeholder partnerships and proposals writing. Nonetheless, it was difficult to engage African non-research stakeholders in the process (at the beginning) and the articulation of their ARD demand/needs took time. It was also noticed that there has been a disengagement of the European research partners who have not the time and the budget to lead multi-stakeholder consortia.

The capacity building strategy of PAEPARD has recognized the pros and cons of internal and external facilitators. The obvious disadvantage of an internal AIF is that they may be seen as biased, tending to favour the interests, or being beholden to the management of their particular parent organization. If this happens, the other partners do not easily accept or trust the role of the facilitator, or even the parent organization. But, as a subject specialist, the internal AIF is more knowledgeable about the specific challenges of a value chain and actor relations. The disadvantage of an external facilitator is that they may be (or perceived to be) distant and not sufficiently committed to the partnership. In addition, it is difficult to find ways of financing such a neutral person on a long-term basis.

## Brokerage is necessary, but leadership is key

Despite the challenges, PAEPARD's brokerage role has been to stimulate consortia and help them become successful in terms of gaining funding to take their proposal forward. The impact of multi-stakeholder partnerships in ARD goes beyond a specific research collaboration between different partners: PAEPARD is brokering for long-term partnership, linking donors to innovators, advocating sustainable agriculture, and encouraging public-private partnerships.

Whilst PAEPARD will continue to learn lessons about its brokerage role, it has been recognized for its contribution to applied ARD processes. Recent feedback from Didier Pillot, vice-president of Agrinatura highlighted how PAEPARD accompanied the evolution of the facilitator to a broker, and then from a broker to a leader, in each consortium. Even if the role of innovation facilitators phased out in the process of research prioritization (and proposal writing) to give a more prominent role to the project coordinator, continued brokerage by several players remains essential to keep the consortium alive.

In addition, lessons about PAEPARD's brokerage activities provide critical insights and lessons for policy- and decision-makers for further building and developing user's demand-driven multi-stakeholder ARD partnerships. This is particularly relevant for the post-2015 development agenda, which recognizes the need for locally-led change and entrepreneurship.





# PAEPARD



The Platform for Africa-Europe Partnership in Agricultural Research for Development (**PAEPARD**) is a 8-year project sponsored by the European Commission (80%) and partners' own contribution (20%).

It is coordinated by the Forum for Agricultural Research in Africa (**FARA**) since December 2009, and extended until end of 2017.

It aims at building joint African-European multi-stakeholder partnerships in agricultural research for development (**ARD**) contributing to achieving the Millennium Development Goals. On the European side, the partners are **AGRINATURA** (The European Alliance on Agriculture Knowledge for Development, coordinating the European partners), **COLEACP** (representing the private sector), **CSA** (representing the NGOs), **ICRA**, specialized in capacity building in ARD, and the Technical Centre for Agricultural and Rural Cooperation (**CTA**). On the African side and in addition to FARA, the partners are the Pan-African Farmers Organization (**PAFO**), the Regional Universities Forum for Capacity Building in Agriculture (**RUFORUM**) based in Kampala, and the Food, Agriculture and Natural Resources Policy Analysis Network (**FANRPAN**) based in Pretoria. PAFO involves its members that are the Eastern Africa Farmers Federation (**EAFF**) based in Nairobi, the Réseaux des Organisations Paysannes et des Producteurs d'Afrique de l'Ouest (**ROPRA**) based in Ouagadougou, and the Plate-forme Régionale des Organisations Paysannes d'Afrique Centrale (**PROPAC**) based in Yaoundé. The Southern African Confederation of Agricultural Unions (**SACAU**) is an associate partner of **PAEPARD**.



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