



Making things happen

Stories about the impact of DONATA Innovation Platforms and the eRAILS network on knowledge exchange for agriculture in Africa

Series 2







FARA

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Forum for Agricultural Research in Africa

12 Anmeda Street, Roman Ridge

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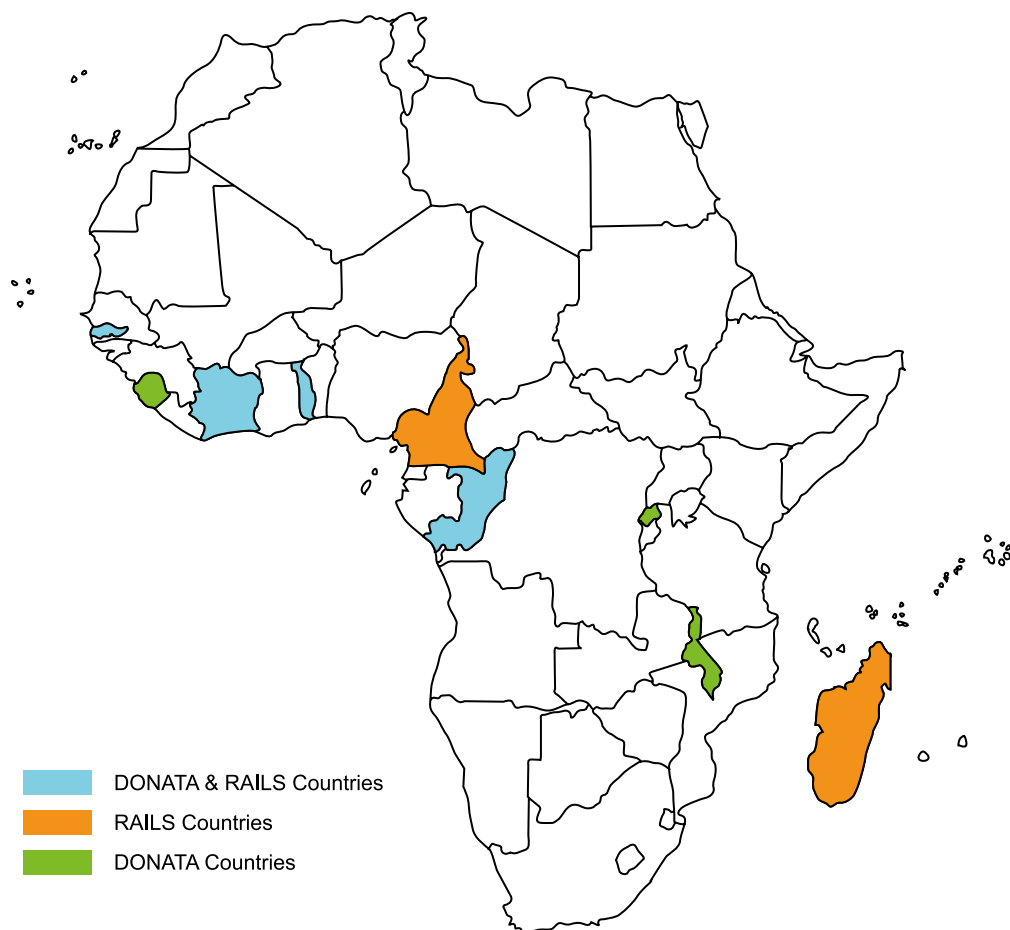
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- DONATA & RAILS Countries
- RAILS Countries
- DONATA Countries

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- Cameroun – Richard Awah (R)
- Cote d'Ivoire – Boni N'Zue (D) and Boniface Bouan (R)
- Madagascar – Andry Rasoanindrainy and Francine Rasolofonirina (R)
- Malawi – Agnes Mgomezulu (D) and Gilbert Malota (R)
- Rwanda – Jean Ndirigue, Kankundiye Lydie (D)
- Sierra Leone – Fomba Sahr (D) and Sanoh Mohammed (R)
- The Gambia – Jarju Ansumana (D) and Fatajo Fafanding (R)
- Togo – Kossi Koudjega (R) and Tsatsu Koku Domenyo (D)

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1. West and Central African Council for Agricultural Research and Development (Conseil Ouest et Centre Africain pour la Recherche Agricole en Afrique de l'Ouest et du Centre)

Statement from the Executive Director of FARA



Dr Yemi Akinbami, Executive Director, FARA

FARA is the apex organisation charged with the strategic role of coordinating agricultural research and development in Africa. FARA weaves together key networks and stakeholders on the continent and globally to reinforce the capacity of Africa to improve its agricultural science and innovation for food (and nutrition) security and poverty reduction.

In demonstrating its commitment, the FARA secretariat in Accra has facilitated initiatives that would enable it to fulfil this role, and it will continue to do so. One of the initiatives it promotes is using science and technology to build Africa's agricultural knowledge-management capacity, as well as support the dissemination and adoption of proven agricultural technologies in target countries. Under this initiative, the FARA secretariat works with its constituent sub-regional research organisations (SRO) and the national agricultural research systems (NARS) through different stakeholders, especially farmers, to touch many lives – bringing relief to people in critical situations. The stories of success and impacts recorded in this publication are modest testimonies of the result of this effort in some target countries.

The PSTAD project under which DONATA and RAILS facilitated the actions that generated these stories of impacts was funded by the AfDB. It also presents a good example of support and commitment by an African institution to another for the development of Africa. These stories in themselves are a testimony to the available unlocked potentials in our farming systems and what the impact of unlocking such potentials can generate in our economic systems. It is simply laudable.

DONATA teams in the various countries have worked hard to improve the livelihoods of African farmers and their families by building and supporting the Innovation Platform for Technology Adoption (IPTA). Nevertheless, as significant as these stories of impact may be, they need to be scaled-up to sustain improvements in broad-based agricultural productivity, competitiveness and markets. The journey has begun and with sustained commitment, there is light at the end of the tunnel.

DONATA and Innovation Platforms



Learning visit to OFSP platform in Tanzania

DONATA is an initiative aimed at catalysing wide spread adoption and use of new and proven technologies. This is to enhance agricultural productivity and growth for increased food security and poverty reduction on the African continent.

Its objectives include:

- To analyse the agricultural value chains in African countries and use proven technologies to address constraints with a view to scaling-up the adoption of these technologies.
- To identify promising dissemination pathways that will fit the prevailing social, environmental, and market conditions to enable profitable investments.
- To promote wide adoption of promising technologies along the agricultural value chain.

DONATA establishes IPTAs to facilitate wide spread adoption and utilisation of proven agricultural technologies and innovations. IPTA is a multi-stakeholder innovation platform comprising representative farmers and farmers' organisations, extension workers, agro-processors, marketers, agribusiness actors, transporters and researchers, and in some cases, media practitioners and credit-services providers. The IPTAs are facilitated by DONATA focal persons and assisted by other leaders selected by the stakeholders on the platform.

IPTA activities are often preceded by value-chain analyses by members with support from the focal persons and technical institutions with the requisite expertise. The analysis is to identify gaps, challenges and opportunities

To date there are over 140 IPTAs across the 24 countries participating in DONATA in Africa.



Platform members on a cassava plot in Cote d'Ivoire

as well as solutions, and activities to be implemented by members or stakeholders. IPTA members engage in dialogue to find solutions to the challenges that they face in trying to improve the productivity of commodity value chains. Very often, action begins from the point the stakeholders consider the weakest link in the chain or most valuable for them at the time. In many cases, the starting point is the seed or planting-material value chain.

On the platform, stakeholders also share and learn improved skills and knowledge for transforming individual agricultural enterprises. The quality of IPTA interventions depends on the commitment of members, the use of appropriate communications tools, and the facilitation skills of its leaders.

The platform activities under PSTAD are focused on two selected commodities per sub-region as shown in Table 1, and each country is obliged to promote one or both

commodities depending on its priorities. To date there are over 140 IPTAs across the 24 countries participating in DONATA in Africa. The stories of impact published here are based on activities in Congo, Cote d'Ivoire, Malawi, Rwanda, Sierra Leone, The Gambia, and Togo.

Generally, the shared understanding of the value-chain approach and the variations that are seen in practice in establishing IPTAs as learning and innovation platforms based on culture, environment and available resources, is facilitating change in agricultural production and productivity in the PSTAD project area. Although these platforms take different institutional structures, their form and operations depend on transactions made among members. The basic and initial objective in establishing IPTAs food security linked to development perspective. As they evolve, the commercial or business perspective increases. To enhance the process, documentation and effective monitoring and evaluation becomes critical in improving learning and drawing enduring lessons.

Table 1. Commodities being disseminated within the sub-regions and countries.

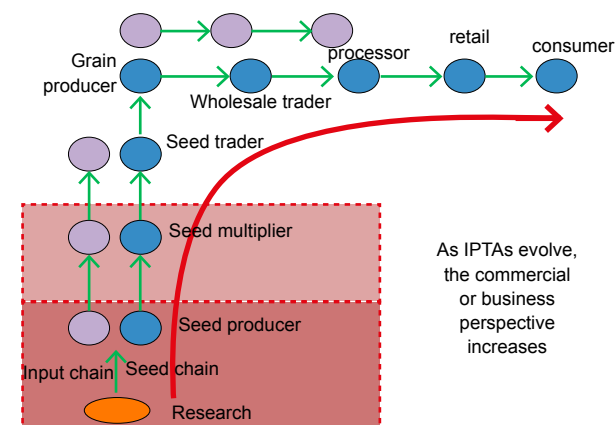
Region	Country	Commodity
ASARECA	D.R. Congo, Kenya, Tanzania, Uganda	Quality protein maize
	Ethiopia, Kenya, Rwanda, Tanzania, Uganda	Orange-fleshed sweet potato (OFSP)
CORAF/ WECARD	Mali, Burkina Faso, Senegal	Open-pollinated maize
	Sierra Leone, Côte d'Ivoire, Congo Brazzaville, Cameroun	Improved cassava cultivars
SADC-FANR	Zambia, Mozambique, Malawi, and Lesotho	OPV (Open-pollinated varieties) maize and sorghum

What are IPTAs?

DONATA work in the field is conducted largely through innovation platforms for technology adoption. IPTAs are networks of partners working on a common theme and using research knowledge in novel ways to generate goods or services that benefit all, especially the poor.

Dissemination of agricultural technology is effective when the technology is adopted and put into continuous use, and brings about improvement in the livelihood of the user. This calls for strong linkages and active participation among a range of actors. IPTAs facilitate linkage that includes researchers, primary producers, extension workers, NGOs, policy-makers, equipment manufacturers and suppliers, traders, processors and others. All are organised into a coherent platform with participants playing specific roles in a collaborative arrangement that benefits everyone.

Figure 1: Evolution of IPTAs



The RAILS and eRAILS networks



eRAILS network site

The Regional Agricultural Information and Learning Systems (RAILS) aims at connecting people for content development and sharing through effective use of information and communication technology (ICT). It provides an open space where agricultural information systems link agricultural research and development (ARD) innovations to users and learners. The objectives of RAILS are:

- To undertake advocacy to encourage increased investment in agricultural information systems (AIS) by African governments and institutions;
- To improve access to information and the ability of African stakeholders to contribute to global agricultural knowledge;
- To facilitate synergies by linking African information conduits to global providers of agricultural information;

- To develop an African platform for agricultural information and learning systems.

The PSTAD support to RAILS includes the creation of a functional African network for agricultural knowledge, information and learning systems, with the purpose of improving access to and sharing of the results of research (technologies) and agricultural practices, and avoiding duplication. In this respect, the project is supporting the upgrading and/or establishment of an ICT network by providing a faster and efficient accessibility to scientific databases, and by contributing to the effort of data collection and exchange, analysis and storage within the network established among the NARS, SROs and FARA.

This has been achieved through the establishment of the online eRAILS continental portal at www.erails.net. This platform ensures that lessons learned and best farming practices observed in one sub-region are easily transferred to researchers and extension staff and then disseminated and adopted by farmers in another sub-region. In order to reach the farmer that may not have access to the internet, eRAILS2 has been developed: www.erails.net/FARA/erails2/erails2/Home/eRAILS2. It focuses on content management of the eRAILS platform, specifically enhancing information flow from the scientists or agriculture experts in direct response to farmers' needs in 'question and answer' (Q&A) manner. An extension agent visits the farmer's field and formulates challenges into questions to which agricultural experts (scientists from NARS) give proven

and practical answers to meet the immediate needs of the farmers. The RAILS catalyses the establishment of Learning Teams which are capable of analysing information gaps of individual members and institutions within NARS.

RAILS is active in the 34 countries covered by the project and is being facilitated by learning teams from various backgrounds and disciplines, working together as information intermediaries. They are from research, extension and civil society organisations, and government agencies or international research and development organisations, all with the mandate relevant to RAILS. This series of Making Things Happen (MTH) features the work being done by the teams in Congo, Côte d'Ivoire, Madagascar, and Togo.

The online eRAILS continental portal at www.erails.net ensures that lessons learned and best farming practices observed in one sub-region are easily transferred to researchers and extension staff and then disseminated and adopted by farmers in another sub-region.

Congo: DONATA Innovation Platforms – a tool in the fight against cassava mosaic disease



A mosaic-infected plant

Many Congolese farmers complained of low yields, but most did not know this was due to plants being attacked by the cassava mosaic disease. With the DONATA project, not only did they learn to work together but also to use this project to fight against the disease, the decline of which means good yields and satisfaction of all.

Most farmers in the Republic of Congo face the scourge of the cassava mosaic disease (CMD), affecting their key crop. The disease drastically reduces the yields of cassava. The fight against CMD had become a national concern because the disease can reduce yields of susceptible varieties by as much as 80 percent. Congolese stakeholders involved in agricultural research who understood the devastating nature of CMD could not wait to use the DONATA project to confront the disease. Through DONATA, mosaic-resistant clones were given to farmers who are also trained on how to identify local varieties infected by the mosaic disease.

Steve Mapangou-Divassa, a researcher at the Loudima Agricultural Research Centre and also DONATA focal point in the Congo, explains: 'We trained farmers about the disease's symptoms, manifestation and control, as well as advised them on how to plant. They were advised to refrain from putting three or four cuttings in single hole as this leads to overcrowding and competition for soil nutrients and subsequent poor yields. Farmers are also taught to plant single cutting of 25 centimetres in a hole and in rows as a good practice that improves yields. This reduces the incidence of the disease as an outcome of good crop and field culture.'



Dr Grégoire Bani, Director, Centre for Agronomic Research, Loudima (CRAL)

Dr Gregoire Bani, director of the Loudima Agricultural Research Centre, known by its French acronym CRAL, affirms that the DONATA approach is welcome 'because it allows farmers to be trained in the management of cassava, including how to space the plants. This shows that already the problem [of mosaic disease] has been reduced by 60 to 70 percent. The fight against mosaic disease is a big challenge to farmers because cassava is the staple food crop of the Congolese.' For the farmers to obtain the expected results, researchers and extension officers had to rethink their approach. The use of the IPTA approach has, in fact, improved the interaction between key stakeholders in the cassava commodity chain.

According to Guy Kombo, a researcher in plant breeding and selection at CRAL, 'This project improved our approach to research work because we reach out to the final user of the product that we want the users to adopt. The reaction of farmers is very helpful to review our basic assumptions. We wish to keep to this



A researcher at CRAL, Loudima

approach for as long as we can, to be of greater service to agriculture in our country.'

Pierre Robert Mpiya, head of the agricultural sector in Loudima, adds: 'Honestly, the arrival of the DONATA project has brought a change in the way we do things. In the past we provided agricultural extension services information to work with, but under this project we work together with the target group. This approach facilitates collaboration with the stakeholders and enables work to proceed very well.'

Dr Lambert Moundzeo, a researcher in production systems at CRAL, adds: 'It used to be difficult to get the farmers on board. Despite the establishment of a formal programme with them, they were concerned with other things and were not always ready to receive you. Then, we went to the farmers to talk with them to find solutions to problems confronting them. But now we all operate in a common environment, the innovation

platform, courtesy of DONATA. They come with their problems and we try to look at what to do together to assist ourselves. We work out the plans together.'

Better knowledge of the mosaic

Jean Ngana is a cassava producer. He says: 'With the DONATA project, I realized that indeed mosaic is the disease behind the low yields we recorded from my cassava plot. The project has helped me to get cassava cuttings that I planted, and so far there have been no signs of mosaic disease. Meanwhile, in the same farm, I realized that the other varieties are attacked by mosaic and they cannot grow well.'

Jean Théodore Mfouaga, president of the Dolisie platform says: 'DONATA has taught us a new technique for cassava cultivation, and the advantage is that it uses fewer cuttings and we utilize the space better because the spacing required is a maximum of one metre as against two or three metres that we were using in the past. This has contributed immensely to increased yields.

'DONATA also taught us that there is a disease known as mosaic which attacks cassava and reduces yield. They taught us how to identify the cuttings attacked by this disease. We made a comparison between what we produced in the past and what the DONATA varieties provide and we noticed a great difference. But beyond training, what is noticeable is the direct impact of the project on the quality of life of the beneficiaries resulting from the increase in yields that we now receive from our cassava yields.'

“The resources given to us by the DONATA project have changed our lives and we can now take care of our needs and those of our families.” Pierre Mbako Kombo, president of the Ndounga platform in the Yamba District



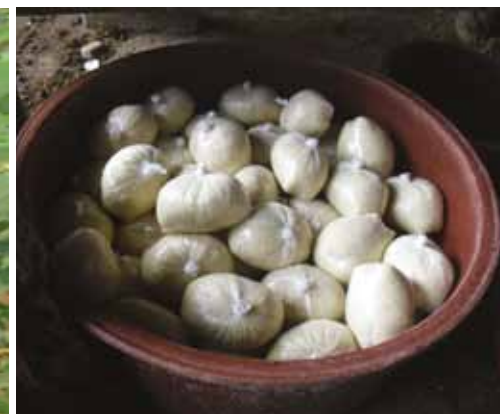
Bunches of cassava sticks as planting materials



A clean planting material



A healthy plant



Fufu is a product processed from cassava

Substantial income

In the Republic of Congo, cassava is often cultivated by women. Cassava is not only used to fight against food insecurity but also poverty as it provides cash surplus. Gaston Mboussi, president of the DONATA project platform in Loudima, says: ‘The project brought us many things. We have cassava chips. We produced 30 or 40 tonnes per hectare as against 12 to 15 tonnes per hectare from the local varieties. This gave us great satisfaction because, in our group, when we sold the 100 bags of cassava chips at the prevailing price in Pointe Noire, we got a lot of money. The bag is sold for between 30,000 and 40,000 [CFA] Francs². With this money, we have established other activities. For instance, I have established a restaurant called Joelpatrik, named after my children. I bought a pump

for irrigation of my vegetable crops. I went into onion farming.’

Pierre Mbako Kombo, president of the Ndounga platform in the Yamba District, adds: ‘DONATA supported us. We used to process cassava with our hands. The DONATA project taught us how to use machines and gave us one. This has really helped us because we used to produce two bags a month, and with this machine we now produce six bags of 100 kg per month. We sell more than when we used to work with our hands. The bag is sold for 45,000 or 50,000 Francs. Now we need a motor-driven machine for the production to be much faster. The resources given to us by the DONATA project have changed our lives and we can now take care of our needs and those of our families.’

Germaine Milandou, a member of the nutrition platform adds: ‘On the advice of the DONATA project, I

set aside the mosaic-infested cuttings and I found that as compared to what I was doing, there is a difference because the consumers liked it and I can now sell up to 7,000 Francs or more and sometimes sell all of my products. Previously, I was not processing the cassava into Mbala-pinda. I became interested in the processing after I participated in one of the DONATA trainings. I use the money for my health needs and to feed my family. I am married with 5 children. My husband is working and we support each other.’

A more dynamic machine

Despite the results, more work remains to be done in terms of interaction between the various members of the platforms in the Congo. Steve Mapangou-Divassa, the Focal Person for DONATA says: ‘We realize that there are still some groups where members do not support each

2. +Francs here mean CFA francs unless otherwise specified.



Steve Mapangou-Divassa, DONATA FP – Congo

other as they should. We are especially working on this aspect for these platforms to be more functional and interdependent so that they can depend on each other instead of working individually. In any case, we rely on the CRAL to continue the project activities.'

'We are organising ourselves so that the project can continue with government intervention, including perhaps other donors that we can identify later on,' says Dr Bani. 'Otherwise we will have to fight hard to have the means to continue with the activities of this project even after the end of the current funding.'

A sub-prefect fascinated by DONATA

While having discussions with various stakeholders of the DONATA project in the Loudima District, which has a population of more than 35,000 inhabitants, one name crops up again and again: Henri Mouaya, the sub-prefect. A very tall and athletic figure, he has shown a great deal

of concern to get an effective operational platform in his locality, and would take part in activities himself. 'I am in an agro-pastoral district and there is no major business that will drive development here except agriculture,' he says.

'The DONATA project is an initiative which tends to lift people out of poverty, and for this reason it has engaged my full attention and involvement. Our agricultural system is rainfed. Everyone produces *fufu* during the dry season. Then there is surplus at the main commercial centre, Pointe Noire. Prices drop and producers hardly make any profit during this period. They practically operate at a loss.

'The DONATA project has triggered innovation and generated a better nutritional platform with the diversification of processed products; it has also improved *gari* production, providing year-round access to these products. The *gari* can be produced in a shed, it's more easily preserved, and its price is two times higher than *fufu*. The choice is clear. The project is a very good one and we hope it will be continued and firmly established as a way to lift our people out of poverty.'

Henri Mouaya became a cassava producer himself because of the close relationship he developed with DONATA stakeholders. 'Congo launched a series of agricultural development support programmes,' he says. 'As an administrative authority, it is our responsibility to monitor these projects, remove any administrative bottlenecks and encourage farmers to be ready for changes in behaviour or practices that the project implementation would entail. Our duty is to convince them.'



Henri Mouaya, a policy maker

Thus this sub-prefect has cultivated two hectares of cassava and goes to look for healthy cassava cuttings at the CRAL, where he receives advice from the technicians. He explains: 'I am the sub-prefect and you see the psychological impact this could have in terms of the momentum it would give, if people see me engaged in cassava cultivation. I tell myself that I should lead by example. This convinces people all the more.'

"...The project is a very good one and we hope it will be continued and firmly established as a way to lift our people out of poverty."

Henri Mouaya, policy maker

Congo: RAILS strengthening interactions



Mr Mbemba, Focal Point, RAILS-Congo

In the Republic of Congo, the RAILS project was rolled out in 2010 after an internalization phase by local stakeholders. Since then, there have been four training sessions supported by the RAILS budget, as well as more than a dozen informal training sessions. With an average of 40 participants per training session, at least 160 people have been trained to handle the RAILS. It is expected that those who received the training will also train other people. 'This is the main difficulty we are facing here', says Noé Emmanuel Mbemba, the project focal point. He explains the problem of accessing the Internet: 'It is difficult. Only about one person in three can access it. Often they have to go to the cyber café and not all the public services even have it. Therefore people are finding it difficult to replicate the training sessions.' At the end of the various training sessions, almost 60 accounts were opened. Ten of these are active because the beneficiaries are based in Brazzaville or in Loudima, where there is a connection.

In 2010, FARA provided Congo with computer equipment, 4 desktop computers and 2 servers installed

in the focal institution in Brazzaville and 10 laptop computers. In addition to Brazzaville, RAILS Congo has a branch in Pointe-Noire with some equipment. Antoine Ngoma-Bakana, the Director of Development, Training and Extension Research, gives his assessment of the implementation of the project: 'Information must move from the researcher through us to the users and vice versa. The process is very long and the risk is so high that the information loses its value due to distortions. RAILS would prevent us from going through this very expensive process. With the RAILS, it is straightforward. We understand the interests at stake in this project. If it goes well, it will facilitate access to information by all stakeholders, be they users or researchers. It is an essential data collection tool which has not been put to full use because of problems of Internet access which is often not available. But the project is also working hard to connect the key operators to the Internet. When this happens, the difficulty would have been largely addressed.'

In spite of these difficulties, some stakeholders are able to benefit from the advantages of this tool. This is the case with Maixent Mombo-Moucketo, a maize researcher of the CRAL Foundation Seeds Department: 'I was able to open an account called "seed" because, after the political events in the country, all our conservation structures have been destroyed. We lost all the gene bank reserves. With the support of some development agencies, we rebuilt our basic structures. This account enabled us to inform others about what we are doing.'

According to Makosso Ebassidjin, a researcher at the CRAL, 'RAILS enabled me to keep permanent contact with colleagues and to get other partners. I am a focal point for AfricaRice in Congo. At this level also, we have

our platform, and many colleagues are part of RAILS. We have the same trials as those being conducted in various countries. The RAILS system enables us to have live online discussions with colleagues on the monitoring of tests. When we have a concern, we express it and people react. This allows us to make progress. It is very beneficial to us. It prevents isolation, exposes us to the world and enables us to see what is happening elsewhere.'

For Noé Emmanuel Mbemba Focal Person for RAILS in the Republic of the Congo: 'There is work to be done. The problem is to move to the fields to collect information. We have created a database of more than 3000 bibliographic and information references. We expect to find compatibility with FARA and eRAILS so that these data can be easily posted on the eRAILS platform.' But he adds that there is a need for more visibility for the activities of the project to further disseminate it and ensure benefits to more stakeholders.

eRAILS Learning Team in a training session



Cameroun: RAILS creating visibility for field work



Richard Awah, Focal Point, RAILS Cameroun

The RAILS project began in 2008 in Cameroun. The Institute of Agricultural Research for Development (IRAD) enjoyed continuous support from FARA. In fact, the institute received PCs, inverters, laptop computers, cameras, USB modems, a fibre-optic Internet connection, printers and servers to establish a local network and connections at the regional and sub-regional levels.

With the RAILS platform, the project management team trained some 30 people from NGOs, research bodies and producer organisations on the creation of websites. Minkem Martin, a computer scientist at the IRAD communications department, is a RAILS facilitator. He explains: 'The platform enables those who do not have the means to be hosted to get exposure, and acquire some knowledge as well as share information. We would have liked to travel around and decentralize the training programme by going out to the beneficiaries, but we do not have the means for that.'

In fact, the training was intended to be a 'training of trainers', who in turn would select the stakeholders, particularly small farmers, with whom they will work. But this did not work because people thought that the project

was better resourced than it was. All the same, there have been beneficiaries of these training sessions who have created websites which are popularizing the project.

Moto Young, an officer responsible for communications at the sub-regional platform of Central African farmers' organisations (PROPAC) comments: 'At my level, I was able to create a website named propacinfo2012 to post development information. It is not easy to update it, but we are trying. I think it is a good project. With eRAILS, the small holder farmers have the opportunity to express themselves, a situation which is not possible through the radio and television stations because they have their own priorities. This opportunity cannot be underestimated.' He adds: 'The direct benefit I derive is that if I produce my cocoa, I can present my produce. Someone else does not have to do it for me anymore. I do so by selling myself the way I want. And when people are interested, they will not see intermediaries, they will see me directly. It is important. I give my own information. That way, I cannot deceive myself about who I am and what I do. I say everything so that people know who I am.'

Dr Ndingeng Sali Atanga, a researcher at IRAD, talks about his own website: 'After this training, I created a website on the project which I am coordinating with AfricaRice. I can assure you that this impressed many people, particularly my partners, those who are financing this project. They were happy because, by going to this site, they could see what we were doing in Cameroun. From this site, we got many partnerships with institutions doing the same work as us. Thus, I can negotiate directly on issues everywhere in the world.'

Nforni Sondé Kinsai, a journalist with The Post newspaper, received training on the creation of websites under the RAILS project and is actively disseminating

agricultural information. 'As a media man,' he says, 'I did not know how to work on Internet until then. After the training, I created a site where I post articles. We already had a website for the newspaper, but I also post all the articles I write under the DONATA project on the site. Anytime there is information on the RAILS, I am informed and we share the information.'

'This project contributes something to agriculture. I know that in our hinterland, there is no Internet network for small farmers to be truly integrated, but there are extension officers. If there are research findings and if we post the new methods for the cultivation of cassava on the site, the officers can use them to work properly with the small farmers.'

Richard Awah, the focal point of the RAILS project in Cameroun, is calling for 'the continuation of the training of trainers in all the regions and the establishment of a network of agricultural production stakeholders who are part of the eRAILS platform.'

A member of the LT using the equipment provided by the PSTAD Project



Côte d'Ivoire: DONATA project contributing to food security

In Côte d'Ivoire pressure on land is high. Large tracts of land are being used for perennial crops, such as cocoa, rubber and oil palm to the detriment of food crops such as cassava. Declining cassava production poses a threat to food security, and leaders in the agricultural sector have understood this. It was necessary to take measures to maintain the sector and continue producing this strategic crop. DONATA platforms are very welcome. It is a well thought-out strategy and it is implemented with a view to involving state agriculture agencies.

Four zones were earmarked for the DONATA project in Côte d'Ivoire: Dabou, Man, Bouaké and Azopé. New improved varieties of cassava (*bocou 1* and *bocou 2*) underwent an adoption test for project start-up. The National Agricultural Research Centre (CNRA) produced the *bocou 1* variety, while *bocou 2* is from Nigeria's International Institute of Tropical Agriculture (IITA). This variety was tested for adaptation to the local

Dr Boni N'zue, Focal Point DONATA, Cote D'Ivoire



environment to ascertain its agronomic and cultural performance. Bocou is a name derived from the names of the researchers who worked on these varieties: *Bo* for Boni N'zue and *Cou* for the late Coulibaly N'dri, who was one of the first Ivorian researchers to work on cassava.

The yield of these two varieties is better than that of local varieties. Dr Boni N'zue, a researcher and cassava breeder at the CNRA, and the focal point of DONATA in Côte d'Ivoire, emphasizes that 'the average yield of the varieties given out for distribution at the station is about 30 tonnes per hectare. In farming areas, which use traditional varieties, there is a gain in yield of at least 25 percent'.

Agence nationale d'appui au développement rural (ANADER) technicians and CNRA researchers collaborated in testing and monitoring these varieties. Following this, ANADER organised agricultural open days, which attracted a large number of stakeholders who embraced these varieties due to their yield. This presence of actors promoted their dissemination. Using this approach, cassava plots increased year on year. Selection, identification of eligible villages, choice of groups or associations for the management of the cassava plots, preparation of soil for harvest, and training of producers on coppicing techniques were all monitored by ANADER. An adoption test was conducted in each village, and when results were conclusive cassava cuttings for the test were used by ANADER to set up 4 plots in each zone. ANADER doubled the number of plots on a yearly basis, and so since start-up

in 2009, 140 plots have been established, 40 of them community-based.

ANADER was able to get a good stock of cuttings to feed the 4 DONATA platforms of Côte d'Ivoire: one in the south at Dabou, the second in the west at Man, the third in Bouaké in the central part of the country, and the fourth at Zopé in the east. On the basis of cassava production, consumption and sale, platforms were set up on the basis of those value chains with good linkages between stakeholders.

Vibrant diversity of platform stakeholders

It was clear from DONATA platform visits in Côte d'Ivoire that the new technology dissemination approach had been entrenched. From the Dabou region in the south to Man in the west, positive outcomes have been achieved, pointing to the strong involvement and broad diversity of stakeholders, who enjoy the support of local

Dr Tiemoko Yo, D-G CNRA



“The story of the DONATA platform, financed by the African Development Bank through FARA is seen as a model for all technologies.” Dr Yo Tiémoko, Director General, CNRA



Flourishing cassava plot

officials and representatives. Over 80 hectares across the 4 regions have been cultivated.

The Ivorian experience is attractive inasmuch as almost all stakeholders have been adequately integrated into the scheme, and so it is not surprising that the results are tangible and praiseworthy, according to Dr Yo Tiémoko, director general of CNRA. ‘The story of the DONATA platform, financed by the African Development Bank through FARA is seen as a model for all technologies,’ he adds.

‘In view of the successes recorded under the DONATA project, we decided to put in place platforms to disseminate new plantain varieties, having had the agreement and support of the World Bank to finance

these new platforms. This cassava technology is in high demand. I believe we are moving toward attaining one of our most important objectives.’

But according to Dr N’zué there are still problems with lengthy disbursement procedures. The need to buttress the financial autonomy and sustainability of platforms becomes more obvious, and there is also the need ‘to improve on road networks for the transport of farm produce from rural areas. If producers grow improved varieties, including cassava, but the roads do not allow access in and out, it’s of little use. Stakeholders are calling for additional financing because demand for cassava cuttings is very high in the country, but DONATA financing alone is not enough to address the problems raised.’

Off-loading cassava roots in a processing Centre



Processing cassava roots into various local dietary products



Acheke’ – a processed cassava product



Cote d'Ivoire: RAILS networking for improved cassava production

In Côte d'Ivoire, the activities of the RAILS focused on those of the DONATA. About 35 accounts were opened and 46 sites created. All stakeholders are involved. The Ivorian Agricultural Science Association (AISA), ANADER, and others all have accounts on the eRAILS website site. But some are inactive because all the stakeholders do not have access to the Internet and most departments do not have computers, and this prevented stakeholders from activating accounts – a situation which obliged them to go to Internet cafés and pay to work.

Bouan Boniface, focal point of the RAILS project in Côte d'Ivoire, believes that the project is making a huge contribution to agriculture in Africa in general and Côte d'Ivoire in particular. Information sharing is very important. At the level of the ANOPACI, an agricultural producers' association, all activities undertaken are

online. This ensures visibility of the work and the results achieved.

Since October 2011, the RAILS project has had a platform in the hinterlands, particularly at Man. This platform is managed by a team of five, led by Edmond Brim Kouao. All the members of this platform have been trained and some of them have been able to open accounts on the portal. The mission of the team is to share information on agriculture and particularly the new cassava varieties. According to Kouao, the main difficulty is connectivity and lack of computers. He is glad that, thanks to FARA, Internet connection and mini-laptop for mobile connectivity has been made available.

Bouan Boniface congratulates FARA for providing ICT equipment and hopes it will increase the RAILS



Boumi Bouan, Focal Point RAILS, Cote d'Ivoire

budget, currently set at 5 million francs for a year, not enough to cover the entire country. The quantity of equipment should also be increased, particularly laptop computers, and the capacity of managers strengthened.

The mission of the team is to share information on agriculture and particularly the new cassava varieties.

Madagascar: RAILS and video for versatility in farming

In a country where going to bed on an empty stomach is becoming a norm for poor smallholder farmers, providing extension services is a challenge for government and the private sector.

Providers of extension advisory services in Madagascar have to be innovative and resourceful in freeing farmers from poverty through, for example, video training to improve farming techniques, add value to produce, and diversify.

More than 70 percent of Madagascar's population of 22 million live on less than a dollar a day. Many of them are smallholder farmers who grow rice. According

to a World Bank briefing, the country's political crisis increased poverty levels by above 9 percentage points between 2005 and 2010, affected nearly 80 percent of households – the highest rate in Africa by 2011 World Development Indicators.

To enhance livelihoods and assist poverty reduction, FARA supported the Knowledge Management Platform (KMP), facilitated by Farming and Technology for Africa (FTA), to boost extension activities in Madagascar. The FTA initiates and facilitates the IPTA in Madagascar. KMP, which also includes the IPTAs, is an effort to strengthen agricultural research and extension. The platform produced low-cost participatory farm videos

that have helped close the information gap on how to improve farm productivity. The goal is enough food, of the right kind, for everyone.

FARA gave KMP USD 40,000 to develop 40 DVDs in Malagasy, covering subjects such as how to improve rice growing, quick compost-making, and growing potatoes. They run between 5 and 30 minutes and were produced by researchers and some farmers.

The project established eight viewing sites within a 100-kilometre radius of the capital, Antananarivo, where farmers meet regularly to view the videos and implement some of the advice. Each of the videos is adapted to a particular region of Madagascar, making them versatile for the different challenges that farmers may face. Without farm schools in Madagascar, the videos have become an important teaching aid and will provide a basis for the resuscitation of institutional extension training which has been hampered by lack of government funding and personnel.

The 6-month programme trained researchers who entered the competition on writing scripts for both radio and TV. This enabled them to explain technical concepts in simple language for farmers that are unable to read or write. The criteria for producing the videos were: relevance, affordability, technical quality, and accessibility. The training imparted multimedia skills to researchers and farmers including using web-based platforms like Facebook and Drupal used by the UN Food and Agriculture Organization (FAO). They also learned how to use Cool Edit and other open source software.

‘Meeting the project deadline to produce something innovative with a transformative impact on Madagascar agriculture was a feat,’ said Andrianjafy Rasoanindrainy, the FTA manager. ‘And producing the videos as a kind of competition was the carrot which got the researchers thinking about how to ensure that the products were understood by the farmers.’

Field exercise during the training



‘The main food in Madagascar is rice, but once you start telling farmers about sweet potato, they begin to say let’s learn’. Andrianjafy Rasoanindrainy, FTA manager

Rasoanindrainy added that in terms of applicability and affordability, the videos had to offer something farmers can apply that did not need a lot of investment. Compost-making, for example, usually takes two months, but one video illustrates a technique for making it in 7 days.

A challenge encountered during the production of the videos, said Rasoanindrainy, was that researchers found the production time too short to illustrate some techniques. It takes more than three months to capture the full cycle of potato growing, for example. ‘One of the major challenges was to bring appropriate information with practical techniques from the research centres and extension agencies directly to beneficiary farmers in a relatively short period of time,’ he explained.

The original KMP target was 100 videos, but owing to cost this was revised to 40. The major achievement was to get researchers and extension specialists together on a common platform as Madagascar does not have a NARS. Statistics for the project show that 65 people were

A review of the video produced



trained in the production of the videos and multimedia materials, 47 were from extension services including five model farmers, and 18 were from research centres.

‘In the future we have to invest more in this project and find incentives for people to share information, not just worry about what they will eat tomorrow,’ said Rasoanindrainy. ‘The main food in Madagascar is rice, but once you start telling farmers about sweet potato, they begin to say “let’s learn”.’

Rasoanindrainy explained that they were still assessing which has the greater impact: face to face explanation or videos. ‘We are still trying to understand that, but what we know is that many of the techniques shown in the videos have been adopted by farmers, instead of hiring 40 people to explain 40 techniques,’ he said. ‘We can’t yet evaluate the economic impact of the project. Knowledge cannot be easily quantified, and it will take 2 years or so to determine this at farm level, but a change in habits and techniques is important.’ The videos have been uploaded on YouTube and there are plans to make them available on the internet too.

KMP produced a virtual platform – agriculture-madagascar.net and blog.agriculture-madagascar.net – highlighting key events. There is also a virtual forum and mailing list, a document and media space, and a database of researchers and extensions agents. An online system for monitoring the project is combined with Web 2.0 tools, enhancing the possibilities.

Building linkages between researchers and extensions agents, and between both of them and farmers, was a serious challenge. ‘Like many other societies, Malagasy

institutions are very hierarchical,’ said Rasoanindrainy in his report on the project. ‘An informal, flexible networking initiative can easily be interpreted as destabilizing influence to be avoided, especially in the unstable political conditions of Madagascar since 2009.’

The project aligned its objectives to FARA’s Framework for African Agriculture Productivity (FAAP) and the

Use of the compost to fertilize vegetables



African Union's Comprehensive Africa Agriculture Development Programme (CAADP). The two initiatives are focused on fighting poverty and famine, improving farmers' livelihoods by increasing production and productivity. Rasoanindrainy says a major result of the project was bringing researchers and extensions agents together to disseminate research results and new techniques.

The Secretary-General in the Ministry of Agriculture, Philibert Rakotoson, is confident that Madagascar has the potential to improve its agricultural productivity by promoting sector-wide approaches that increase farmers' capacity and boost investment in the sector. 'We expect to sign the CAADP compact process in Madagascar soon,' he said. 'This should enhance investment in agriculture and enhance our technical

work.' Rakotoson's vision is for Madagascar to be self-sufficient in food by 2025.

He adds: 'The FARA programme is useful for Madagascar, and by building the capacity of our farmers to improve their productivity, I am convinced that we can achieve food self-sufficiency. The beauty of the project is that it also shares knowledge from researchers down to the community level in improving the livelihoods of farmers. That is why we support it, even if there is no funding for it from our ministry.'

Agriculture, fishing and forestry form the backbone of Madagascar's economy and provide most of its population with employment, while the main exports and foreign currency earners include coffee, vanilla, sugarcane and a variety of beans and spices.

The beauty of the project is that it also shares knowledge from researchers down to the community level in improving the livelihoods of farmers. That is why we support it, even if there is no funding for it from our ministry.

Philibert Rakotoson, Secretary-General,
Ministry of Agriculture

Vegetables: products participatory video can help develop



Participants at various points in the process



Malawi: money for production-savvy smallholder farmers



Moses Chipikile, Nkhanga village

For Billy Volonje, a smallholder farmer in Village S5 in Malawi's Salima District, making about 165,000 Malawian Kwacha (USD550) in a season is a big difference. This was the surprising windfall after he sold 37 bags of sweet red sorghum crop to Chibuku Breweries in the 2011 farming season. Volonje's livelihood is dependent on weather and yield, and the ability to earn new income is thanks to an innovative project being promoted by FARA.

Volonje, who has been growing sorghum since 2009, is one of 100,000 smallholder farmers in Salima, who have



A field of red sorghum used by Chibuku Brewery

benefited from the PSTAD funded by the AfDB. The project is promoting red sorghum in the Chinguluwe Extension Planning Area (EPA) under the Salima Agricultural Development Division (SLADD). Salima, a traditional sorghum-growing area, is witnessing a small revolution as farmers enjoy the fruits of better management in growing the cereal.

Red sweet sorghum is ideal for beer production, making it a favoured cash crop in Salima, a district 120 km east of Malawi's capital, Lilongwe. Now with a secure market, farmers are looking to the future and turning their 0.2-hectare plots of *mapira* (the Chichewa word for sorghum) into profitable fields.

'I have been growing sorghum for three years and I learned that if you do not thin down your crop,



Billy Volonje, a smallholder farmer from Malawi's Salima district

the harvest would be poor,' Volonje says. 'Doing this enabled me to produce enough grains, some of which I sold for 165,000 kwacha – my best result in recent years. I have used the money I earned from my sorghum crop to buy 10 acres [4.4 hectares] of land to build my house. I currently live in a government settlement area.'

Volonje harvested 62 bags of sorghum and sold 37 bags to Chibuku who offered a higher price than the traders who took his crop in 2009 for 52 kwacha a kilogramme. In the 2012 season he was planning to increase his acreage. 'Getting sorghum seed is a challenge,' says Volonje, 'but I have some saved from the last season, and I wish the government can, in future, include sorghum seed as part of its subsidy package. This will change my farm forever.'



Gilbert Malota, Focal Point RAILS-Malawi

Gilbert Malota, focal person for the RAILS project in Malawi, says that if sorghum is to demonstrate impact in terms of income for farmers, there is a good chance it can be included in the government voucher programme that allows farmers to buy maize seed and fertilizer.

‘PSTAD has brought together all stakeholders and made people open up and share,’ says Malota. ‘Through the programme the department will be connected to the Internet with a server and other ICT equipment and accessories, which should strengthen the platform to discuss and share information within the sorghum and maize value chains.’

Another farmer, Grace Chapota Liwonde, harvested 20 bags of sorghum in the last season from her 0.4 hectare plot. She would have harvested more had it not been for a dry spell in 2011. ‘This year I plan to increase the land on which I grow sorghum,’ says Liwonde, who is also a teacher at the primary school in Mkukhi, her village. ‘I have put my two boys through school with the proceeds from sorghum and I intend to see them through university as this crop is providing good



income.’ Liwonde said sorghum has also been an easy crop to grow as a woman farmer, because it is not as heavy work as maize. ‘Sorghum is not just for money but for food as well, and an opportunity for women to do better in farming,’ she added.

In Malawi, the PSTAD programme whose two projects include DONATA and RAILS has supported sorghum production with inputs and knowledge sharing, resulting in yield increase from 0.8 tonnes to 1.1 tonnes during the first year of the programme. The programme has helped bridge the gap between research outputs and farmers’ adoption of new technologies.



*Stella Kankwamba,
Director, Agric
Extension Services*

“...If we share information that should be in the public anywhere, it is the same as telling a good story because we are living in a different world now in which information is an asset.”

Dr M Phillimon Banda, Ministry of Agriculture

Agriculture is Malawi's economic mainstay, says Stella Kankwamba, Director of Agricultural Extension Services in the Ministry of Agriculture, noting that the PSTAD programme was a timely intervention in Malawi's quest for food security and drive to equip smallholder farmers with agribusiness skills.

‘For some of our farmers who have never earned enough money to think of saving, the production and marketing opportunity that PSTAD has offered sorghum farmers is life changing,’ she says. ‘The programme helped us improve information sharing, and more importantly access new technologies to smallholder farmers.’ Kankwamba believes that linkages created and promoted by PSTAD are not only transforming the livelihoods of smallholder farmers but also strengthening her department's capacity to deliver better extension advice.

‘PSTAD has come at the right time by providing us with the tools for information sharing – a critical component in developing our agriculture,’ she adds. ‘The impact on farmers is obvious. They are earning more income and buying assets. There is increased use of fertilizer by sorghum farmers, something unheard of in the past; better planting methods have been adopted, leading to high yields; and the market linkages developed with companies like Chibuku also drive production.’

The Deputy Director for Agriculture Research Services in the Ministry of Agriculture, Dr M. Phillimon Banda, concurs with Kankwamba on the improved information sharing triggered by the PSTAD programme. But he regrets that inflexible policies have limited information

sharing and collaboration between researchers and farmers.

‘One of the solutions PSTAD should pursue is sensitization of policy-makers because they have not shown enough concern about sharing information,’ says Dr Banda, speaking at the Chitedza research station. Through this programme, he says, FARA has facilitated ‘a paradigm shift among researchers by offering a welcome window for putting their research up for scrutiny and discussion.

‘The rate of adoption of our technologies is low because most scientists are poor communicators. But if we share information that should be in the public anywhere, it is the same as telling a good story because we are living in a different world now in which information is an asset.’

According to Dr Banda, the adoption rate of maize hybrids was below 30 percent until recently. But of late it has increased due to the subsidy programme as well as greater awareness. The adoption rate is now up to 50 per cent. Sorghum is grown in the low-lying Shire valley and in the highlands, where it is a popular snack. With climate change, sorghum is a viable cash and food crop. The challenge is to find appropriate language to convey the information to farmers, many of whom cannot read or write.

‘PSTAD can help us craft better approaches to be implemented at the village level to boost technology adoption, and subsistence agriculture is not really development,’ he says. ‘Agribusiness is the way to go. Almost all inputs – fertilizers and pesticides – are



Good seeds required for good production



Ploughed, harrowed and ready for sowing

imported, except seeds. The seed is grown by multinational companies and the price is high, and that is one of the factors that affected production. Hence the need for the programme on seeds subsidy.’

Agriculture contributes 80 percent of Malawi's GDP and employs over 90 percent of the population. Salima is known mostly for maize, cotton and red sorghum. Sweet red sorghum is grown mainly for cash; white sorghum is consumed at home.

“...farmers have benefitted from yields of 3000 kg per hectare compared to 500 kg per hectare.”

Martin Kausi, programme manager



Busani interacting with a group of farmers

With a short rainy season, from December to March, the country is vulnerable to dry spells. Salima is perfect for sorghum growing and can survive low rainfall, unlike maize, says Martin Kausi, programme manager for the Salima Agricultural Development Division, who oversees the sorghum project involving 100 farmers.

Smallholder farmers have been trained on seed selection and improved farming methods. ‘Previously farmers had a mentality that you do not need to apply fertiliser to this crop, but the project introduced the idea, and farmers have benefitted from yields of 3000 kg per hectare compared to 500 kg per hectare,’ Kausi says. ‘With extra to sell, we have sought to impart negotiating skills to our farmers to deal with traders and companies for a fair price.’

Kausi adds that farmers have learned the importance of thinning their crop to ensure better yields. The project is the start of better farming prospects for farmers, if only it spreads throughout Malawi.

He adds: ‘We should not say maize is our staple – let’s go for diversification and promote cash crops such as sorghum, cotton and rice apart from tobacco. In Salima we have less reliable rain, and we need to promote drought-tolerant crops where farmers are assured of harvesting something, even during a bad season. Sorghum offers that opportunity.’

Farmer Blinite Kalima, from Village 5 in Salima, says he built his house through earnings from sorghum. This year he is aiming to have more than a hectare under sorghum, and become a top sorghum grower for Chibuku Breweries. ‘I make traditional beer with part of my sorghum and sell it, and in addition I make sorghum flour for sale,’ he says. ‘If we can tackle the issue of seed, I am convinced we will be better farmers and enjoy an even better lifestyle when we sell our sorghum.’

Daison Mafiyo, from Mkukhi 2 village, said storage was an issue because he often has to sell his maize crop first in order to have money to buy bags for the harvested sorghum. ‘I have made a good income from selling my sorghum and am planning to open a bank account so that I can save,’ says Mafiyo, who has used his earnings to buy goats and pay school fees.

Maxford Moloseni, Agricultural Extension Development Coordinator in the Chinguluwe EPA under the Salima district, echoes farmers under the Chinguluwe Green

and Legume cooperative who have made financial and knowledge gains through growing sorghum. ‘On an average each farmer who received 2 kg of seed which was enough for just 0.1 hectare realised about 36,000 kwacha after selling their crop – more than they would have got for maize,’ he says.

The other phase of the PSTAD programme has been the promotion of open-pollinated maize (OPV) in the Mpenu EPA of Lilongwe district, 50 kilometres south of the city. MZ 721 is newly released, high-yielding maize with a potential yield of 6 tonnes per hectare in a country where most smallholder farmers barely harvest 2 tonnes of maize per hectare. About 100 farmers are participating in the programme with 0.2 hectares each. About 20% increase in yield has been recorded on farmers’ field (2.5 mt/ha to 3mt/ha) since the programme started in 2011.

Natan Jemulo, from Mzongo village outside Lilongwe, found that growing OPV maize boosted his harvest to 16 bags last season, up from 11. The father of 5 said



*Natan Jemulo,
Mzongo Village*



Enita Dayoni, Chilima village



Mzondwase Mgomezulu, Focal Person, DONATA-Malawi



A team of facilitators meets regularly to support DONATA activities

the OPV was also easily ground into flour. ‘I have seen a big change and have also bought livestock, goats and chickens,’ Jemulo said. ‘If I have a bumper harvest, I will sell the surplus in the capital city and as a group we will convert our grain into flour for income.’

Enita Dayoni, from Chilima village, now prefers growing OPV which produces tastier flour, matures early and gives better yields. Her main challenge is currently accessing enough seed, something Edward Katunga takes seriously.

Katunga, Chief Agricultural Information Officer in the Department of Agricultural Extension Services, has responsibility for disseminating information on new technologies to farmers at grassroots level. Working with 200 farmers for maize and sorghum, he says demand for the programme means it will be extended

in two new areas of Dova – a maize-growing region in the central part of Malawi – and to Balaka, in the southern sorghum-growing region.

‘The PSTAD programme has ensured that farmers access the new technologies we have released,’ says Katunga. ‘It was unheard of to put fertilizer to sorghum. Now farmers practise one plant per station and we now talk of 75 cm between ridges and 25 cm between plant stands. This has seen movement from 37,000 plants per hectare to over 50,000 plants per hectare in under a year, and that means more plants and higher yields for the farmer, making it easy to promote the technology.’

DONATA focal person Mzondwase Mgomezulu says the PSTAD programme has motivated farmers to grow more maize and sorghum. ‘The biggest lesson has been the training that imparted skills on farmers to do what is

expected of them, and in this way deepened the trust between stakeholders,’ she said. ‘The programme is a model for empowering farmers because once they have been trained they are motivated to work without constant supervision.’

The financial independence of the smallholder farmer is the goal of the Malawi government’s push for agribusiness and the consolidation of market value chains.

Noel Sangole, Coordinator of the Malawi Agriculture Partnership (MAP) working with the Netherlands-based International Centre for Development Oriented Research in Agriculture (ICRA) understands market value chains well. An ICRA alumnus, Sangole is a key partner in the PSTAD programme, backstopping IPTAs for maize and sorghum.

‘We wanted farmers to have a value chain approach by starting with the market, identifying the key players, what are the quality issues and how to bring the right partners aboard so that farmers can know the break-even price and determine price based on production costs,’ says Sangole. ‘We have also shown farmers that we are bringing new technology to help them increase their production and that we can link them to the buyers, as with sorghum farmers and Chibuku brewery.’

Sangole says the value chain approach helps farmers map out key service providers and direct actors, and understand the challenges at each point in the chain, and plan adequate responses to them: ‘We think a farmer can gain by producing more from a unit area. Why should farmers lag behind when there is the potential that the same area they are cultivating can produce three tonnes instead of one tonne?’

Chibuku Malawi Breweries, a subsidiary of SABMiller, has partnered with the PSTAD programme to buy

red sorghum from farmers around Malawi. Sorghum constitutes a major ingredient in brewing, and red sorghum is preferred because it gives a brown colour to the traditional commercial beer enjoyed mostly by low income earners.

Operations Manager for Chibuku Lilongwe, Barter Chunga, believes that with the right support there is no reason why smallholder farmers in Malawi should not supply the bulk of the 1.5 million kgs of red sorghum required by the brewery. Half of this is currently imported. Working with experts in the Ministry of Agriculture, Chibuku has signed contracts with farmers to supply sorghum of the best quality.

‘We believe if our farmers really look after their crop, they can get up to three tonnes per hectare,’ says Chunga. ‘Our aim is for farmers to gain financially and for us to get the best sorghum. This must be a win-win situation: we do not have to import sorghum and money stays in the country.’ Chibuku is also importing

sorghum seed from Zimbabwe; something it hopes will not be necessary when local production is boosted.

Sipriano Wiscot, a farmer from Masotudzu village in the Mpeni EPA, has improved his skills as a result of the PSTAD programme. He has increased his yield of maize, beans and groundnuts, and has also gone into livestock. Practising pit planting, composting and mulching has made a big difference in his farming, explains Wiscot, who last year harvested 15 bags of maize which would last him until the next harvest season in April.

Grace Thengezu has been farming maize for the last 8 years in addition to beans and groundnuts. But switching to OPV last year, she got 18 bags of maize from 0.8 of a hectare. Previously she had harvested 10 bags.

For Namalezo Kamingi, of Chakwawa village, growing maize secures the family food needs. When there is a bumper crop, he sells the excess to raise income. For him switching from planting three seeds per stand to one has improved his yields. Last season he got 12 bags of maize compared to ten in the previous year. ‘I need skills in legume production and livestock keeping so that I can improve our food security as I believe applying better techniques gives more yields,’ says Kamingi.

The food success of other farmers has made an impression on those who have not adopted OPV, like Falisi Baluki, a farmer in Chimphonongo village. ‘I saw the gains made by other farmers in our group and this season I am planting OPV. I would like to realise the same harvests as my neighbours and that is why I have signed up. I plant soy bean, groundnuts and maize.’



Barter Chunga,
Operations Manager,
Chibuku Brewery,
Lilongwe



Local sorghum brew

“...even if you bring any new technology you find that it is the men who grab it, and it is usually difficult for them to pass it to women.” Evelyn Chima, Principal Agrarian Extension Officer



Good yield and market drive production



According to Paul Fatch, Extension Methodology and Systems (Training) Officer in the Ministry of Agriculture, ensuring that information from researchers reaches farmers and vice versa is a key change that has been boosted by the PSTAD programme. Demonstration plots have been used to teach farmers the whole process from ‘seed to seed’.

‘We have noted with demonstrations in Africa that people go on and appreciate the good practises, but it ends there and there is no guarantee that they will be applied,’ says Fatch, who is also a member of the Malawi Forum for Advisory Services (MFAAS). ‘PSTAD

is creating a platform for the marketing of agricultural produce and reducing the market chain of middlemen, and the prospect of money brings in young people as, in Malawi, we have family farming. Our aim is to move sorghum from a food crop to a commercial crop, and that is where gender issues come in.’

Farming is not complete without a specific focus on the major food producers: women. While the PSTAD programme has ensured that smallholder farmers have access to new technology and practices like compost manure-making and pit planting, more should be done for women farmers.

‘More women should be involved in this programme because in Malawi 80 percent of farmers are women and we want more to practise improved technologies in agriculture,’ says Evelyn Chima, the Principal Agrarian Extension Officer responsible for women’s programmes in the Lilongwe Agricultural Development Division.

‘Government should bring in more technologies to reach female farmers. We forget that women have their own challenges such as cultural beliefs and come second after men,’ says Chima. ‘So even if you bring any new technology you find that it is the men who grab it, and it is usually difficult for them to pass it to women. Yet women are the custodians of our farming technologies and we want policies to target women farmers. Planting a hectare or an acre of land means she still has to forgo some of her responsibilities at home.’

The success of the programme in its initial year has seen farmers eagerly enlisting in the next phase because of the benefits, some of which are immediate while others will take time to realise.

According to Ken Tindwa, Agricultural Extension Coordinator for Mpenu EPA, ‘I expect farmers to change their practices. We hope they can have a mindset of opening farmers’ own accounts so that they are able to source their own inputs and implement better farming practises like minimum labour and minimum use of land, rather than a lot land for a low harvest.’

World Vision Lilongwe, impressed with the concept of the PSTAD programme, has come aboard as one



Field interaction among some IPTA members

L-R: Various farmer members of IPTA in Malawi



of the project partners by promoting seed production among smallholders and linking them to commercial suppliers of seed. 'Seed production on its own is not enough,' says Esau Mwendo Phiri, a food-security manager at World Vision in Lilongwe. 'We need information dissemination to the farming communities and working with DONATA in the Department of Agricultural Extension Services (DAES) has enabled our front-line staff to learn more methodologies of extension.'

Phiri said World Vision, as a partner to the PSTAD programme, is working with 350 farmers in 2 cooperatives who produce seed: 85 tonnes of seed sorghum has been produced and 20 tonnes of maize seed. 'Through the PSTAD programme we have brought technology and services to farmers' doorsteps that have enhanced their livelihoods,' said Phiri. 'We are now able to access and share information from the eRAILS website.'

Rwanda: orange power



*DONATA yacu nziza turayikunda
Yaduhaye ibijumba turayikunda
Imirire mibi yaracitse burundu!*

Loosely translated from Kinyarwanda, the words of this song of women farmers of Bugesera mean:

*We love our DONATA
It gave us sweet potatoes that we like
Malnutrition is no more!*

A more eloquent summary of technological innovation is difficult to imagine than the words of this song. Since 2009 FARA has been promoting the cultivation of orange-fleshed sweet potato (OFSP) in Rwanda. Although traditional sweet potato is a solid staple, it is not particularly nutritious. OFSP, on the other hand, is full of vitamin A – sadly lacking in the diets of many farming families in Rwanda.

Good nutrition is important for everyone, but for the TT Mwogo Cooperative in Bugesera, it is literally life-saving. The thread that binds the members of this platform together is that most of them are HIV-positive and can live full lives only if they eat healthy food.

Costanzia Uzamukunda, leader of the cooperative, is 32 and has been HIV-positive for the past three years. But she is quite healthy and so is her vegetable garden. She is a very successful farmer. OFSP has changed her life.

Faustin Musonera, president of the cooperative, says: 'We grow a variety of crops here, mostly vegetables.'

OFSP roots





Facilitators pose with some IPTA members at a DONATA site



Good packaging and transportation eases root production



But OFSP has won us over completely. Gorretti Nyirahabimana is only 26, but her eyesight started failing last year. She was terrified about losing her sight. But once the cooperative started cultivating OFSP and she started eating it and her eyesight returned.'

Patricia Kankindi, 51, who has been HIV-positive for several years, adds: 'OFSP is different. It tastes very good and our children love it. Now when we weed our fields, we sing together.'

Copamanya Cooperative is the other cooperative working with DONATA in the Bugesera area. Rahab Uwimana, the senior woman in the group, extolled the virtues of OFSP. She says: 'This orange vegetable is very healthy. We use its flour to make cakes and bread. We even make a drink from it. It tastes good and our children love it.'

Ruth Mukankagara, 36, is shy by nature. Speaking very quietly but articulately, she talks about how OFSP had improved her family's livelihood far beyond her expectations. Her neighbour, Emerita Musabyimana, is



Baking with OFSP flour at Sina's at Nyagarama

clearly delighted at hearing Ruth speak so eloquently and confidently with strangers. Laughing, she says: 'Ma Mukankagara hasn't spoken that many words at one time in years – you see how OFSP makes her talk!'

The farmers of Duhange Cooperative in Rwamagana District, about 100 km east of the capital, Kigali, have been spectacularly successful. The cooperative was



Various confectionaries from OFSP flour

established in 2006 and includes 36 members, 21 of them women. Unlike most Rwandan farmers, including Bugesera's, these farmers collectively own the land they cultivate. They also own an impressive Hyundai truck and are in the process of building a sizable bakery to prepare their own products for sale, cutting out the middlemen who traditionally siphon off much of the profit of farming.

‘Ma Mukankagara hasn’t spoken that many words at one time in years – you see how OFSP makes her talk!’ Emerita Musabyimana, her neighbour



Bunch of OFSP vines

But a big bakery needs a reliable supply of electricity and their village has never had it. Undeterred, the cooperative members exhibited remarkable business expertise and recently succeeded in brokering a deal with the government, with assistance from the Rwanda Agriculture Board (RAB), to install electricity in the village.

Dativa Mukanyandwi, a vivacious 26-year-old cooperative member, provides a tour of the new bakery for OFSP products. She shows the various pieces of equipment the cooperative has purchased in preparation for supplying an array of baked products to neighbouring villages. ‘Until now’, she says, ‘we all had to travel to the town of Rwamagana to buy bread. Now we will supply it right here. Let the people of Rwamagana come to us instead!’

Martin Karemera, 60, uproots several sweet potatoes to show that they are ready to be harvested. Although all varieties of OFSP are characterised by their orange colour, there is considerable variation. The cooperative grows them side by side.

The village of Nyirangarama, in Rulindo district, 30 km north of Kigali, is where DONATA first introduced OFSP. Cultivation of the crop there, and throughout the country, has brought new prosperity to the farmers as well as improved nutrition. The significance of this village to FARA, and to Rwanda, was clearly demonstrated when FARA’s board visited in May 2012. After seeing the fields, they visited Sina Gerard Urwibutso, a private company that uses OFSP to make various products. The factory is a world-class operation employing nearly 100 staff and business is booming.

But DONATA is not the only FARA project operating in Rwanda. The Sub-Saharan Africa Challenge Programme (SSACP), an initiative of the Consultative Group on International Agricultural Research (CGIAR), is coordinated by FARA at its secretariat in Accra. The SSACP has been working with farmers in northern Rwanda for the past three years. The farmers of Gataraga village in Musanze district, near the Ugandan border, cultivate Irish potatoes. Here, the emphasis is on integrated agricultural research for development (IAR4D), an initiative that takes seriously the maxim that a chain – in this case the value chain – is only as strong as its weakest link.

In Gataraga, the weakest link was marketing – specifically, how to get the potatoes to market



Prof Monty Jones, former Executive Director of FARA shows off a cut section of OFSP root

and present them to customers in an attractive way. Potatoes are good to eat, but they are heavy. Moreover, once they are harvested, they are dirty and unattractive.

The SSACP team strengthened the ‘weakest link’ by identifying a creative whirlwind named Josephine Mukankusi. Together they developed an ingenious packing method for selling potatoes made from freely available local materials. Josephine has prospered significantly through this technology, recently buying a car and employing several neighbours to help prepare potatoes for market. They wash the dirt off and then package them in convenient baskets that are attractive and easy to carry.

Eunice Ishimwe, Health and Nutrition Coordinator for World Vision International, FARA's partner in promoting OFSP in the southern part of the country, has been working closely with DONATA since the project was initiated. She told the DONATA team that the farmers of the Copamanya cooperative in Bugesera composed the song that features at the beginning of this chapter by themselves, the complete words of which are as given in the box.

*DONATA yacu nziza turayikunda
Yaduhaye ibijumba turayikunda
Imirire mibi yaracitse burundu*

*We love our DONATA
It gave us sweet potatoes that we like
Malnutrition is no more!*

*Ibi nibyo dushaka ninabyo byiza
Gufatanya nabandi ninabyo byiza
Tumenye yuko kandi turabavandimwe*

This is what we want and it is good
Working together is good
Remember we are brothers

*DONATA yacu nziza turayikunda
Yaduhaye ibijumba turayikunda
Imirire mibi yaracitse burundu*

We love our DONATA
It gave us sweet potatoes that we like
Malnutrition is no more!

*World Vision yacu turayikunda
Idukorera ubuvugizi turayikunda
Yatuzaniye DONATA idukungahaje!*

We love our World Vision
They advocate for us and we love them
They linked us to DONATA and we are now rich!



Sierra Leone: cashing in on cassava



Mrs Doris Kpadeyenge, Leader of Mawufia IPTA

Yes, the new cassava is good. It's healthy, there's no mosaic disease and it grows fast. But we can't eat it. Here in Moyamba we boil cassava and this stuff has to be roasted!' So says Doris Kpadeyenge, leader of Mawufia IPTA in Kori chiefdom of Moyamba District.

Doris enthusiastically describes the efforts made to form the IPTA and the positive experiences the members have shared. She explains that having



Ismael Bangura, Chairman of Pate Bana IPTA and Manager, Binkolo Growth Centre, leads the discussion in Makeni.

overcome the challenge of bringing 15 men and women together in the IPTA, they have been able to cultivate 3.5 ha with improved cassava varieties SLICASS 4 and SLICASS 6, both of which were developed by the Sierra Leone Agricultural Research Institute (SLARI). She went further to say that even though the crop has yet to be harvested, the yield will clearly be much better than the local variety.

However, she is concerned that since the variety cannot be boiled and eaten in the local way, more assistance is needed to facilitate processing the cassava. Meanwhile, the new varieties are under cultivation by IPTA members in individual plots of about 1.5 ha each.

The DONATA project activities are prominent in three provinces (Northern, Eastern and Southern). In Northern and Eastern Provinces, IPTA stakeholders meet regularly to discuss the IPTAs, the key interventions being implemented, and roles and responsibilities.



The IPTA meetings give the farmers a chance to air their problems and seek common solutions.

At Makeni, in Northern Province, the Pate Bana Marank IPTA is led by Ismail Bangura. A total of 10 IPTAs have been established in two chiefdoms in Bombali and Tonkolili districts. Mr Bangura says: 'Pate Bana Marank, like the other IPTAs in Sierra Leone, is an association of DONATA stakeholders promoting cassava value chains. The chains include production, processing, marketing, transportation and consumption within each village. The DONATA approach has helped move these stakeholders from fragmented centres of operation to cooperatives and a collaborative style of working.

'Committed to each other in this way, the IPTA members in the area see themselves as equal partners who must act together to enhance agricultural productivity for increased income and better livelihoods. I previously served as a politician, but when I saw the benefits the DONATA IPTA was bringing into cassava production here, I decided to go back to the farm!'

According to Dr Sahr Fomba, director of the National Agricultural Research Centre (NARC) at Njala and the DONATA focal person for the country: 'The platform activities of Pate Bana Marank began with cultivation of SLICASS 4 and 6 as well as timely planting to escape grasshopper attack at the end of the rains. The activities have expanded into processing of the root tubers into various products such as *gari*, *fufu*, cassava flour and chips. Currently, there are seven cassava processing platforms with installed equipment and facilities for adding value to the root tubers.'

Dr Festus Massaquoi, a NARC cassava breeder, says: 'Despite major problem of transportation, most of the cassava production platforms are connected to processing centres thanks to transporters who are on the platforms. These centres are also linked with market outlets for sale of processed products. Sales are facilitated by the traders on the platforms. The activities of the IPTAs are coordinated by a focal person in charge of handling extension programmes for SLARI.'

Training in improved agronomic practices for farmers with a view to improving yields is organised by Dr Fomba and his team. Trainings have been organised on agribusiness techniques and procedures for cassava processing. 'Gender issues are stressed with regard to role-playing at the platform,' says Mr Bangura. 'Men handle land preparation and harvesting while women manage the planting, transportation, peeling, washing, drying, and frying or roasting of *gari*.'

In the Kenema district in eastern Sierra Leone, the DONATA platform is similar. Lasana Sesay, District

Extension Officer and IPTA coordinator says: 'The platforms here also promote the use of SLICASS 4 and 6 with yield potential of 20–25 tonnes per hectare. A total of 5 platforms have been formed in the region. Not all have progressed to the collaborative stage of operation, but they are involved in producing, processing and marketing cassava products, mainly *gari* and *fufu*.

'They also sell and distribute planting materials to other farmers. In addition to farmers, processors, traders, extension workers, researchers and policy-makers (chiefs), other actors include drivers and micro-finance institutions.'

All IPTA members are welcome to contribute at regularly held meetings



While researchers provide improved planting materials to the producers, NARC extension agents share technical information with farmers. The processors, still few in number, use mobile graters to assist platform members.

At Adamaris Farms in Teko Village, the Binkolo Growth Centre in Makeni (which is managed by Mr Bangura), and the Upwards Cassava processing plants, processing is doing a roaring trade. Adamaris and Binkolo are part of DONATA IPTA platforms.

Before joining the Pate Bana Marank IPTA, the Adamaris processing centre had difficulty getting adequate root tubers to process. But since joining, not only are

Members of IPTA meet in Kenema





Yet another added value from IPTA cooperation—employment for handicapped blacksmiths who make agricultural tools.



Sesay (L) is a journalist member of IPTA

producers linked to the processing centre, but it has also been linked to markets and consumers. The centre processes about 1.3 tonnes per week, yielding about 200 kg of *gari*. The relatively meagre output, says Dr Fomba, is due to a dearth of cassava root peelers. 'At Binkolo,' says Mr Bangura, 'cassava is processed into *gari*, *garivita*, flour and chips. The centre also engages some disabled people in its blacksmith section to produce farm tools like hoes and cutlasses from scrap metal. Most of the cassava roots processed at the centre was obtained from farmers linked through the IPTA.'

During field interactions with some farmers in the Pate Bana Marank IPTA in Teko village, Makeni, Ahmadu Salilou Sesay, a journalist, says: 'Because of my coverage of IPTA activities, I became interested myself and began cultivating SLICASS 4 and 6 to augment my income. I plant the crop for leaves, sticks and tubers.'

In Kenema district, Alhaji Massaquoi, District Officer for the Ministry of Agriculture, praised the activities of IPTA. 'The Tamaraneh [self-help] IPTA, with over 150 farmers, so impressed the ministry with its cassava production activities that it is preparing a support

'The Tamaraneh [self-help] IPTA, with over 150 farmers, so impressed the ministry with its cassava production activities that it is preparing a support facility worth USD 40,000 to enable the IPTA to acquire processing machines.'

Alhaji Massaquoi, District Officer

facility worth USD 40,000 to enable the IPTA to acquire processing machines.'

Camara Ardou, IPTA Public Relations Officer, stressed that the platform is now a formal association registered with the government. 'IPTA members now plant new varieties of cassava with better yield and income,' he says. 'We are now in the process of acquiring equipment to process cassava into various products through our linkage by DONATA to the Ministry of Agriculture and the Rural Smallholder Project.'

Suleima Momo, a primary school teacher and IPTA member, adds: 'The additional income I realised from planting varieties of improved cassava through my involvement in the IPTA has enabled me to easily pay the fees for my distance-learning programme.'

The DONATA project has significantly popularised the cultivation of improved cassava varieties and helped farmers evade grasshopper attack. Cassava crop is now seen primarily as a cash crop. Dr Fomba says: 'Processing of the tubers into products other than traditional ones, and with longer shelf life, has improved the food chain for the people of Sierra Leone.'

Similarly, SLARI Director General Dr Alfred Dixon is elated with the widespread adoption of the new cassava varieties arising from IPTA activities. He urged Dr Fomba to ensure that more platforms are established to take the technologies to more farmers throughout the country.

The DONATA project has significantly popularised the cultivation of improved cassava varieties and helped farmers evade grasshopper attack.

Packaged SLARI gari



Showcasing products of Adamaris processing centre



Interactions at Adamaris factory



Packaging processed gari



The SLARI brain trust: L-Director General Dr. Alfred Dixon. R- Dr Sahr Fomba, Director, NARC Njala & DONATA Focal Person.



Togo: 'Obatampa' for improved nutrition and income



Improved seeds of QPM maize

A study of the well-being of families in Togo indicated poverty and malnutrition in northern Kara and Savanes regions. Togo joined the DONATA project in 2011 with the aim of promoting Quality Protein Maize (QPM) in areas hit by poverty. Innovation platforms were established to facilitate the promotion, production and utilisation of the crop, and quickly generated tremendous progress.

IPTAs bring together a number of stakeholders who are striving to develop and disseminate QPM, particularly obatampa variety, which means 'good mother'. This maize variety contains essential amino acids which makes it highly nutritious and potentially profitable for farmers. The stakeholders' meeting on the innovation platforms get expert support from the Togolese Agricultural Research Institute (ITRA) and the Counselling and Technical Support Institute (ICAT), the extension agency.

Seeds

For DONATA steering committee members, the top priority was the availability of QPM seeds. Bénédicte Sama, a seed producer of the Kozah area and chairperson of the Cereal Seed Producers' Association, said: 'This year, I cultivated seven hectares of maize and three of rice. With the help of the technical departments like ITRA, we obtained seeds, fertilizers and advice.'

'When we meet, I see that the platform members are all the stakeholders who assist in the production of obatampa right up to processing. We have discussions; we learn. After that, it is easy for us to sell our seeds; there is a link between consumers and producers.'

Tambaté Doguiba is a Savanes seed producer and a member of the Totil-man union. She says: 'I cultivated 0.5 hectare and the seeds were given to me by the ITRA. I had a yield of 2.5 tonnes per hectare. I sold a large part of my produce and consumed the rest. I promoted QPM and through Totil-man I can easily sell the produce. This seed production relieved me a lot. I have 16 people to look after, including children and grandchildren. It was with these funds that I was able to pay their school fees easily.'

Tambaté Amadou says he cultivated 0.5 hectare of maize: 'I got nine 130 kg bags or 1.17 tonnes. The production of obatampa seeds has a lot of benefits because this variety is in great demand. I have improved the quality of my family's food. I easily sold that one in comparison with the other varieties. I got more than 150,000 francs in savings from the sale besides what

we consumed. I bought two oxen and I hire them out. I have also bought school supplies for my children. People come to me a lot, and many pin their hopes for the seeds on me.'

Some strong testimony

Many stakeholders of the QPM platforms are grain producers. While launching the IPTA activities, the ITRA provided maize producers with support in the form of a kit made up of QPM seeds and fertilizers to produce half a hectare each. More than 160 producers were mobilized and cultivated more than 80 hectares of obatampa. With an average yield of two tonnes, the 80 hectares produced 160 tonnes of maize. The following year, other producers were trained and some peasant farmers who had support in the previous year produced the maize themselves. Consequently, more producers have been reached than the number registered by the extension services.

Some members of the IPTA in Togo





Cleaning QPM maize before processing into flour

Ouro-Salim Saliou, a maize farmer in the Kara region, said: 'At first I was cultivating maize, but since DONATA, things are different. In fact, we have been taught how to hoe, fertilize and clear the land, and everything is going well. The ITRA gives us seeds and fertilizers. Last year, I cultivated half a hectare and I saw the change. My family consumed part of the harvest and the rest was sold. When we prepared dough from this maize, there were no problems. The women say the maize is good.'

Yacoubou Nassindja is a maize producer in the Cinkassé area. He says: 'I was cultivating Ikénin maize. I harvested 9 to 10 bags from 0.25 hectare. But last season, when I cultivated obatampa maize, I had 13.5 bags of 130 kg. First, there was a change in the yield and then the

nutritional quality of the maize. I experienced a lot in my family. My children were funny-looking, but when I began to give them obatampa maize their build changed. At first, I was using a substantial part of my money to treat the children: malaria first then anaemia. But now, this is no longer the case. I have peace of mind'.

Mariama Kountone is a farmer at Biankouri. She cultivates maize, groundnuts, cotton, and okra – a little bit of everything. 'When the DONATA project came,' she says, 'I tried the variety we were given on my farm and the yield was high. We really sold the maize we produced, and I was happy because I have a child who had to go to the university. It is because of what I got that I was able to do that, and I am counting on



Package of processed QPM as weaning diet

this maize to support him in through his studies. The DONATA project has helped us take care of my eight children'.

Zindjina Aboubacar, a maize farmer in the Kara region, says: 'Last year, I cultivated 0.5 hectare of maize, but this year, I cultivated 2 hectares. We are given fertilizers and seeds. At the end of the harvest, they deduct 5 percent for the fertilizers. The extension officers support us. They come before sowing and also towards the harvesting period. We work with other stakeholders in the platform – the radio stations, micro-finance institutions, some processors and traders.'

Mintré Gbaltabe is a maize and groundnut farmer in Savanes. She is a widow with 17 children and grandchildren under her care. She speaks about what the project has done for her. 'The DONATA project

helped us with the maize and fertilizers and enabled us to sell the maize at a decent price. We were able to feed our families. The quality is better than other varieties. Children eat obatampa-based noodles without asking for sauce, and it is nutritionally very good. Our children were very funny-looking. I tell you, if you see my children now, they are chubby! We at Biankouri are going to extend the cultivation of this crop.'

In the IPTA platform, there are traders like Yaya Aridja at Bafilo, a town in the Assoli sub-area in the Kara region. She says: 'When I started selling this maize, I noticed that people were more interested in it. I make 3000 francs extra profit.'

The sentiment is shared by Ati Atcha Betré, a grain-seller in the Kara region who says: 'I can assure you that this maize sells easily because it is not sorted like the others. The quality is good. We sell the other maize varieties here. We buy a bag at 16,000 francs and sell it for 17,000. If people are looking for QPM,

we try to increase the price a little. During the lean season, we sell it at between 19,000 and 20, 000 francs per measure, instead of 18,000 for the other maize varieties. However, our problem is looking for financing to improve our sales'.

Ouro Bouthou Birikissou, a processor in Kara region, sells *kafa*- and obatampa-based food products. 'We get the maize from the farmers,' he says. 'It is very advantageous for those of us who are into processing because, for example, when we buy two bowls of the other maize to crush, we can get between 2000 and 2500 francs. But with obatampa, we get between 3000 and 3500. This is an advantage, particularly because those who know ask for a lot of it. That brings more money. With the money, we get the new maize and we store it. We also buy seasoning which we add before sale.'

'With the resources generated from the processing of the obatampa maize, we were able to get electricity

supply to our house. It is also with this money that I pay the school fees of the children and feed five people'.

According to Tsatsu Koku Domenyo, an agro-economist and focal point of the DONATA project in Togo, there were some difficulties. 'It is not easy to bring together stakeholders with common interests who do not necessarily see things the same way,' he says. 'The public and private sectors are at stake. Therefore, there are difficulties with understanding and the equitable sharing of added value. However, we think that with the confidence of the various stakeholders, the system should be able to work'.

Domenyo reckons 'there should be real synergy and exchanges so that the stakeholders can assume ownership of the process. This is because we cannot confidently say, after an activity campaign, that all stakeholders are truly involved. And, we are looking for the involvement and collaboration of all the stakeholders.'

'When I started selling this maize, I noticed that people were more interested in it. I make 3000 francs extra profit.' Yaya Aridja, trader

Togo: RAILS – shared knowledge



Kossi Koudjega, RAILS Focal Person, Togo

It was in 2008 that the RAILS project started with the formation of a team of facilitators made up of stakeholders of the agricultural sector: researchers, extension officers, NGOs and farmer organisations. Also called a 'learning team', the facilitator was tasked with disseminating agricultural information, which is now flowing well. Togo's portal is www.erails.net/tg.

Koudjega Kossi, RAILS focal point, provides more details on what is being done: 'There are some 40 websites on the eRAILS Togo portal. About 30 people representing various bodies know how to use this platform. The problem, however, is that some of these sites are not well maintained and we are working to ensure they get fresh news. We intend to organise regional training sessions which will enable the other stakeholders to create more sites and provide agricultural information'.

Beyond the site is a system which enables the management team to see the profile of those who visit

it and their area of interest. It is on this basis that the administrator knows which information to post. Koffi Ganyo Somenutse, an agricultural engineer and national facilitator for Phase 2 of Togo's eRAILS, said some work has been done at the national level and that a Q&A format will be used for practical advice. He concludes: 'This is a good system which allows us to help small farmers to find solutions to their problems on the basis of advice and guidance from the most appropriate persons. We have also plotted the GPS locations. We meet the members of the farmer organisations. Everyone is proud to welcome someone to his home to tell him his problems. It is a good project, but we face some financial problems.'

Koudjega Kossi, the RAILS focal point in Togo, believes we must continue to train the stakeholders, but connectivity remains a serious difficulty. But he intends to continue promoting the portal by distributing brochures and through radio and television.

'This is a good system which allows us to help small farmers to find solutions to their problems on the basis of advice and guidance from the most appropriate persons.'

Koffi Ganyo Somenutse,
agricultural engineer

The Gambia: better crops with better agronomy



Maize: the main food staple of the Gambians



Dr Sait Drammel, Director General of The Gambia's Department of Agriculture

I'm not alone!' says Baiah Mahmud Saho, a member of the Fassou IPTA in The Gambia. 'Many of us have had such good fortune from our membership of the Fassou IPTA that we've increased our cultivated area of maize several times over. In my case, I now cultivate 2.5 ha – before I only cultivated 0.5!'

'This is typical,' says Ansumana Jarju, DONATA focal person in The Gambia. 'This DONATA intervention has enabled many farming families to produce more and use the proceeds to meet their needs. They are eating better, sending more children to school – even purchasing vehicles and building better houses. While only 10 families participated in the IPTA in 2011, the number has grown to about 350 families by mid-2012.'

These successes have drawn the attention of the officials in charge of executing the PSTAD project. Dr Sait Drammel, Director General of The Gambia's Department of Agriculture, said: 'DONATA has been very successful since its inception in the country. What I love about DONATA is its transparency and visibility. Everything is on the table. And the approach works! As a direct result of the project, yield for maize farmers involved in the DONATA IPTA have risen from 1 t/ha to 3.5 t/ha in a single year.'

Dr Babou Ousman Jobe, Director General of the National Agricultural Research Institute, concurs: 'DONATA is now a household name. It has brought various stakeholders together, linking farmers to

markets for inputs and produce.' He added that at a recent retreat for government staff, it was suggested that the DONATA model be adopted for an array of projects. He says: 'Our farmers are producing more than ever. The main problem is that they have been disconnected. DONATA's magic is the link that connects them.'

'Agriculture,' says Dr Drammel, 'is our first priority in The Gambia. We have five agricultural districts, each led by a director, and each director has a hotline to the governor.' The district officials participate in some IPTAs and this is how word of DONATA activities reached the Country's President, Dr Yahya Jemmeh.



Drammel & his staff: Ansumana Jarju is first from L-R in front row

Political support required for success of any development intervention



The convergence of stakeholders in the IPTA has ensured transparency, visibility and success, resulting in the dramatic yield improvements that have impressed senior policy-makers. Fafanding Fatajo, the RAILS focal person, said the President suggested the IPTA approach has been introduced to other Local Government Areas (LGA).

In both the Pakau-Njoguba and Fassou Saho IPTA clusters in the North Bank LGA, farmers testify that DONATA interventions have helped maize production. The paramount intervention, according to Mr Fatajo, was organising the farmers into an IPTA. Once they had formed the platform, members were introduced to new varieties of maize, proper spacing, and the combined use of organic manure (especially cow dung) and fertilizer.

A key farmer explains a point



The IPTA leader in Pakau-Njoguba, Abdou Asis Secka, says: 'Last year, only 6 farmers applied the DONATA practices. All of them achieved impressive yields. Since then, over 100 farmers have adopted the practices and knowledge is spreading to other farmers. The old practices are now viewed as wasteful and less productive.

Another farmer, Omar Jallo, said that with his increased yields, he was able to periodically sell bags of maize to buy the rice he needed to feed his family. Oumar Ceesay and Momodou Aida Bah, two of his neighbours, confirm that with increased yields, they were able to raise seed for the current planting season for themselves and other farmers. They were also able to put some money aside to purchase chemical fertilizers.

The recommendation and its impact



Another farmer, Alhaji Saho, puts it like this: ‘Many members of the IPTA have increased their maize cultivation threefold during the current season. Our IPTA sold about 14 tonnes of maize seed to the Ministry of Agriculture from the previous year’s harvest. I shared about 200 kg for sale as seed to my neighbours for planting during the current season.’

Such has been the success of the DONATA intervention in the North Bank LGA that the Deputy Governor and the Regional Director of Agriculture are now personally involved in assisting farmers to adopt the DONATA approach elsewhere.

Abdou Secka, IPTA leader in Pakau-Njoguba



Needless to say, problems and challenges remain. Ansumana Jarju says: ‘Chemical fertilizer availability during the current season has been low. But our farmers remain enthusiastic about adopting DONATA interventions. For example, many of our women farmers tell us that their work has been made much easier through the DONATA intervention about spacing. Now that the plants are properly spaced and in rows, weeding has become less arduous. With more such interventions, the sky’s the limit.’

‘Last year, only 6 farmers applied the DONATA practices. All of them achieved impressive yields. Since then, over 100 farmers have adopted the practices and knowledge is spreading to other farmers.’

Abdou Asis Secka, IPTA leader, Pakau-Njoguba

The Omars agree: Maize farmers Omar Jallow (left) and Omar Ceesay (right), report resounding success with the DONATA project.



Less drudgery, higher yields—a good combination for these hard-working women.



The Gambia’s geography frequently obliges extension workers and farmers to travel by ferry.



Gambia RAILS: networking networks

Another success story from The Gambia has to do with the hard work and enthusiasm of the RAILS learning team, who are responsible for making important information available to the IPTAs and other users of information technology that affects agriculture. The 21 team members are very pleased with the netbook computers they have received, courtesy of the PSTAD project funded by the African Development Bank. Marie Adams, Coordinator of the National Farmers' Platform, says: 'Once we receive modems for connectivity, we'll be able to become more efficient in content development and sharing of information through the eRAILS platform.'

L and R: eRAILS Learning Team in Banjul, The Gambia



About FARA

FARA is the Forum for Agricultural Research in Africa, the apex organization bringing together and forming coalitions of major stakeholders in agricultural research and development in Africa.

FARA is the technical arm of the African Union Commission (AUC) on rural economy and agricultural development and the lead agency of the AU's New Partnership for Africa's Development (NEPAD) to implement the fourth pillar of Comprehensive African Agricultural Development Programme (CAADP), involving agricultural research, technology dissemination and uptake.

FARA's **Vision**: reduced poverty in Africa as a result of sustainable broad-based agricultural growth and improved livelihoods, particularly of smallholder and pastoral enterprises.

FARA's **Mission**: creation of broad-based improvements in agricultural productivity, competitiveness and markets by supporting Africa's sub-regional organizations in strengthening capacity for agricultural innovation.

FARA's **Value Proposition**: to provide a strategic platform to foster continental and global networking that reinforces the capacities of Africa's national agricultural research systems and sub-regional organizations.

FARA will make this contribution by achieving its *Specific Objective* of **sustainable improvements to broad-based agricultural productivity, competitiveness and markets**.

Key to this is the delivery of five *Results*, which respond to the priorities expressed by FARA's clients. These are:

1. Establishment of appropriate institutional and organizational arrangements for regional agricultural research and development.
2. Broad-based stakeholders provided access to the knowledge and technology necessary for innovation.
3. Development of strategic decision-making options for policy, institutions and markets.
4. Development of human and institutional capacity for innovation.
5. Support provided for platforms for agricultural innovation.

FARA will deliver these results through the provision of networking support to the SROs, i.e.

1. **Advocacy and resource mobilization**
2. **Access to knowledge and technologies**
3. **Regional policies and markets**
4. **Capacity strengthening**
5. **Partnerships and strategic alliances**

FARA's major donors are The African Development Bank, The Canadian International Development Agency, European Commission, the Governments of the Netherlands, United Kingdom, Italy, Ireland, Germany, France, Norway and Denmark, the Consultative Group on International Agricultural Research, the Rockefeller Foundation, Bill and Melinda Gates Foundation, the World Bank, and the United States of America Agency for International Development.



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