



GOOD PRACTICES IN BUILDING
INNOVATIVE RURAL INSTITUTIONS
TO INCREASE FOOD SECURITY

CASE STUDIES



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Enabling poor rural people
to overcome poverty



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ENHANCING ACCESS TO NATURAL RESOURCES AND LOCAL GOVERNANCE





PARTICIPATORY FOREST MANAGEMENT AND COMMUNITY-BASED FOREST ENTERPRISE: THE CASE OF GAMBIA

CONTEXT

With a gross national income per capita of US\$290, Gambia is considered to be among the least developed, low-income, food-deficit countries. It is one of the smallest countries in Africa, with a land area of 11 300 km². Forty-three percent of this area is forest, but 78 percent of the forest area is severely degraded.

The consequences of deforestation (and other forms of environmental degradation) and heightened poverty of the rural population were recognized by the Gambian Government in the early 1990s. In response, the Community Forestry (CF) concept was established through the Gambian Forestry Act. The basic idea of CF was to transfer ownership rights back to villagers to stimulate an attitude change towards one favoring forest protection and to encourage the sustainable utilization of resources through the creation of benefits for the communities.

INSTITUTIONAL INNOVATION

Participatory forest management

The CF approach was formally embraced with the development and adoption of the 1995-2005 Forest Policy and puts special emphasis on community involvement in forest resource management. The Forest Department helps each Community Forest Committee to set up Community Forestry Management Agreements (CFMA). The communities must demonstrate their ability to manage the forests and protect them from fire and illegal exploitation during a period between 18 months and three years; the local Forestry Department and NGO staff provide continued advice and assistance throughout. At the end of this period, if the evaluation is satisfactory, final ownership is awarded for sustainable and exclusive use according to yearly village plans.

The Forest Department then helps the Community Forest Committee to develop a five-year management plan focused on fire protection, enrichment planting, and sustainable utilization of forest products. Also, as soon as the Community Forestry Management Agreement (CFMA) is concluded, the villagers are able to generate income from their forest according to the provisions of

their forest management plan, which is supported by their enterprise development plan. The community is thus ready to embark using the so-called Market Analysis and Development (MA&D) process.

Developing community based enterprises using the Market Analysis & Development (MA&D) methodology

The MA&D approach enables local people to identify potential products and develop markets that will provide income and benefits without degrading their resource base. Poverty alleviation is addressed by identifying forest products that could be commercialized, and then developing/identifying markets for them. This increases individual and community revenue while at the same time encouraging people to protect forest resources through participatory forest management.

Once the products and resources have been selected and thoroughly investigated, the target group members start forming interest groups/enterprises¹ around the potential enterprises.

Out of the net benefits for the participating community, 40 percent have to be reinvested on CF development activities and the remaining 60 percent for community or village development activities. Additionally, communities involved in CF management receive 50 percent of all fines collected after the penalty of an offence in a community forest, including fees paid for any forest product removed or damaged.

IMPACTS

Better living condition of communities in relation to forest management

As a result of the MA&D trainings at village level, 72 enterprise development plans have been effectively implemented and corresponding enterprises established. The income of CF management allows the communities to finance development initiatives such as: the purchase of commercial vehicles to ease transportation in the community, construction of new village mosques and rehabilitation of old ones, provision of loan facilities to villagers to encourage rural entrepreneurship, village electrification and provision of clean village water systems, funding of yearly vaccination for the livestock, road rehabilitation, schools, farm inputs, and many more.

¹ Interest groups/enterprises are the business arms of community forest committees or co-management partner.

Improved livelihoods

In the 26 villages actively employing the MA&D methodology, 11 products are being marketed effectively: fuel wood, logs/timber, honey, palm-oil, handicrafts from Rhun palm-based products, Rhun palm splits, ecotourism (forest walks), tree nurseries, and kembo posts. By the end of 2004, 484 interest group members were engaged in MA&D activities.

Household incomes have increased considerably especially in areas where eco-tourism, handicraft, branch firewood production and honey enterprises exist. The eco-tourism enterprises offer employment opportunities to indigenous members on a monthly basis during the tourist season (October to April), improving their household income. The Interest Groups trained in handicrafts are compensated with cash payments, and they sometimes take up individual contracts to supplement their income. Honey production also attracts individual bee farming in the communities. Large quantities of honey and honey by-products are produced by individual bee farmers, thus increasing their income base. Branch firewood production is done on individual bases and mostly women groups are involved.

Protection of natural resources

There is a clear indication that with local forest ownership transfers and the linked economic benefits of it, people are willing to change their attitudes positively towards the forests and its resources. Most people see the causing of forest fires as a grave offence and are in favour of severe punishment. Many communities are now taking active measures to better maintain their forests, for example by setting firebreaks and patrolling to prevent illegal felling.

Empowerment of women

Women are highly involved in small-scale forest product commercialisation. They sell firewood (branched firewood in particular), fruits, herbs, and leaves. Though these items are of low economic value in comparison with high value products like the timber and split firewood sold by men, they provide an important alternative source of income for women. Women filled key positions in the CF Committee such as treasures/ cashiers. "There's a secret in The Gambia that ladies don't embezzle communal funds". They are also fully involved in decision-making process for the enterprises.

Forestry department benefits

Any revenue realised from sales of forest products extracted from the Community Forest is subjected to tax of 15 percent levied by the FD and paid in the

National Forestry Fund (NFF). Out of the net benefits for the participating community, 40 percent have to be reinvested on CF development activities, the remaining 60 percent for community or village development activities. Additionally, communities involved in CF management benefit from 50 percent of all fines collected after penalty for an offence in a CF including fees to be paid for any forest produce removed or damaged. The Forestry Fund enables the forestry department to resolve problems including the lack of mobility, inadequate training, and equipment shortages.

KEYS TO SUCCESS: WHY DOES IT WORK?

Internal factors

■ Locally driven action

Action plans are developed by Village Development Committees, which are the supreme organ of a village. Once the products and resources have been selected and thoroughly investigated, the target group members begin to form interest groups around the potential enterprises. While the formation of interest groups is left entirely up to the community, potential members with certain skills and strengths are encouraged to take prominent roles. Such people include those with experience of managing small enterprises or those with a strong business background; individuals with a sufficiently high level of education, experience of village affairs, or a respected position within the community; those with specific technical knowledge; and those with strong motivation or experience in a similarly related field.

■ Participation in decision making and accountability

Every household in the community contributes labour and has decision making power in the operation of the enterprise and the management of the forest. The CFC also consists of members from all the clans in the community to encourage equal representation and popular participation in forestry related activities. Monthly CFC meetings are held alongside annual village general meetings to inform about and conduct public accounting for CF village funds.

The approved CF management and enterprise development plans, created with the support of the field facilitators from the Department of Forestry and NACO, serve as the guiding principles or tools for the management and utilization of raw materials from the forest. The 1998 Forest Act and Community By-

Laws regulate the mobilization of human and material resources. The By-law is formulated and reviewed with the participation of the communities.

■ Transparency in the use of community forest village funds

Upon receiving the proceeds of the sales of forest products/ services extracted from the Sustainable Managed Forest areas, the Interest Groups then hand over the amount to the CFC cashier during village committee meetings. The CFCs then deposits the amount in a bank account that is administered by three elected members of the respective CFCs. Any expenditure from the Local Fund is agreed upon by no less than two thirds of the CF Committee members (CF as well as community development activities), in accordance with the priority areas identified in the Community Action Plans.

Factors related to the alliances/linkages between the institution and key stakeholders

■ A multi-stakeholder approach

The multi-sectoral approach adopted in the implementation of MA&D, involving local NGOs and local associations, resulted in enhanced partnerships among various institutions, from village-based entrepreneurs to NGOs working at the administrative level.

Actors involved in the production and the local markets are: producers/processors (respective community members), the Department of Forestry (responsible for technical forestry advice and issuance of removal permits), labourers (performing loading and unloading), transporters (using vehicles/ oxen/ donkey carts), municipal council (involved in market taxes and fees), and vendors.

■ Partnerships with other socioeconomic actors

Partnerships with other socioeconomic actors have been achieved. For example, the National Beekeepers' Association of the Gambia (NBAG) together with the Jamorai Timber and Firewood Federation (JATIFIF) have made possible the marketing of forest products in rural communities where they would otherwise not have had the same access to the marketing channels enjoyed by their urban counterparts. Continuous collaboration with these institutions is essential to the success of MA&D-related projects.

■ Identification of local/national “champions”

Participatory forestry and enterprise development normally requires a multi-sectoral approach, as single institutions may not have all the capacities needed for successful implementation. To overcome this, the

Forestry Department contracted NACO² to support the project. This national “champion” proved to be particularly competent and proactive, especially in adapting training materials, organizing sensitization workshops, and training field facilitators and Community Forestry Committees. NACO’s involvement was vital to the success of the project.

External support

■ Donors’ support and Forestry Department technical support

At the departmental level, the MA&D concept was integrated into operational concepts such as the Gambia forest management concept. A series of in-depth, step-by-step training workshops on Community-based Enterprise Development for extension staff and field facilitators (from Forestry Department and cooperating NGOs) were conducted in the three country divisional areas. In addition, village sensitizations meetings were held to promote the approach and training materials in local languages were developed (Mandinka, Wolof, and Fula). Finally, the extension staff and field facilitators trained and guided the Community Forestry Committees in the actual implementation of community enterprise development activities.

These different modalities played an important role in enhancing capacities of institutions as well as of individuals. Furthermore, most of the training provided to MA&D villages was only feasible thanks to the technical and financial support of various donors. Most MA&D communities benefited also from the formation of multi-disciplinary facilitation teams, consisting of extension workers from various technical departments such as village development, agriculture, livestock, forestry, health, and education. The teams advised Village Development Committees on issues related to general village development and facilitated the planning and implementation of village based development programmes and projects. Staff of the Forestry Department and the local “service provider” NACO played crucial roles in the village adaptation process. Additional efforts were also made to make the materials as visual as possible so that illiterate farmers could participate fully in the training sessions.

² NACO is the national NGO which worked with the Forestry Department as the primary facilitator during the piloting of the MA&D methodology in the Western Division and was responsible for the organization and implementation of the project at local level.

Enabling environment

■ Conducive markets trends

Demand is growing for handicraft products, such as furniture made from Rhun palms, and many people in the tourism industry are making a conscious effort to support community-based enterprises. This trend offers an opportunity for the rural population to diversify their income generating activities while preserving their natural resources.

■ Enabling policy environment

Gambia’s government has played a pioneering role in establishing community forestry in Africa since the 1990s. The Forest Act took into consideration the sustainable utilization of forest resources in 1998. The 1st National Forestry Action Plan (2001-2010) includes the permanent transfer of ownership rights of forest resources to communities. The Local Government Act in 2002 outlined the responsibilities of regional institutions and envisaged “the promotion of community participation in micro project planning, implementation and management of local resources”. In 2006, the Forest Policy was revised to take into account the new development of the CF concept such as Community Forest Enterprise Development using the MA&D approach, Community-Based Fire Management, and the Gambia Forest Communication Concept among others. The integration of the MA&D approach into the Gambia forest management concept allowed MA&D activities to become a routine part of the field activities of Forestry Department staff. Thus, ownership of land is now clearly defined, as are regulations regarding land use.

This positive policy environment empowers local communities and promotes their development. Community Forestry has been ongoing in The Gambia for the past eighteen years. Since it was first piloted in Berefet in the Fonis in 1990, it has gradually been extended to all parts of the country. Over 350 villages countrywide participate in CF. These villages are managing about 34 000 ha of natural forestland (Feb. 2009).

CONCLUSIONS

Major lessons learnt

The devolution of power and authority over forests to the villagers alongside the provision of adequate extension support services are a pre-condition to develop efficient forest-based enterprises.

The experience in participatory forest management in the Gambia has shown that once local communities have recognized the value of trees and forests, they will develop a vested interest in forest protection, as forests become representative of permanent sources of income and/or livelihoods. The main strength of the process is its **systematic inclusion of social and environmental concerns** alongside the consideration of the technological, commercial, and financial aspects of a product.

Small-scale entrepreneurs, **interest groups and stakeholders need to actively participate in all stages** of the MA&D approach to ensure that projects will be sustainable long after the MA&D facilitators have concluded their provision of both guidance and technical support. This prerequisite for enterprise development is in line with the Forestry Department's approach to securing the continued participation of forest users through CFs. An enterprise that outsiders have designed and initiated cannot be viable in the long term. Through the MA&D process, Community Forest Committees have taken the lead in product selection, as well as in carrying out surveys and organizing meetings with stakeholders, allowing them to plan their enterprises accordingly.

Building the capacity of all parties, from village-based entrepreneurs to NGOs working at the administrative level, is vital in all areas of development. Entrepreneurial and management skills are often traditionally lacking in the Gambia, and additional efforts to address this gap must continue.

To **enhance trust**, the MA&D process promoted collaboration between the forestry service and local communities. The process provided local forest managers with economic prospects and gave the forest a clear and easily understood value, helping to reduce cynicism regarding the financial benefits of participatory forest management, and encouraging other communities to become involved in the CF process.

MA&D has been successfully applied/replicated in different countries. It is important to stress that the MA&D is not a rigorous methodology but rather should be adapted to each context, in a **flexible replication of methods**, and for different purposes and products. This flexibility can also be considered a factor of success, together with the active participation of all stakeholders in each phase of the enterprise development.

The MA&D training approach has been applied in several African countries such as Mali, Burkina Faso, Ghana, Uganda, Mozambique, RDC, Cameroon and The Gambia, in addition to several countries in Asia (Viet Nam, Nepal, Laos, Mongolia, Philippines, Kyrgyzstan,...) and Latin America (Colombia, Guatemala, Nicaragua, Chile).

Implications and recommendations

To support such initiatives, authorities should:

- Provide market assistance programs (technical forestry skills training, marketing courses, group management and strengthening training and strategic alliances) targeting Interest Groups
- Enforce the Forest Act and Regulation in order to eliminate or reduce illegal forest products in the markets, which still generate unfair competition with legal CF products
- Maintain and continuously update market information systems for forest products and services and make this information available to communities
- Reduce administrative procedures for handing over forest management and ownership responsibilities to communities
- Allocate more funds from the National Forestry Fund to the Department of Forestry to be able to complete the kind of work necessary to support these initiatives
- Enhance the capacity of field staff to respond to communities interested in participating in Participatory Forest Management regimes

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STRENGTHENING LOCAL GOVERNANCE FOR IMPROVED MANAGEMENT OF NATURAL RESOURCES

CONTEXT

The department of Lempira, located south-west of Honduras is one of the poorest and most isolated regions of the country, with a population of 120 000. In the early 90s, when the project was initiating, the situation in the region was worrisome, as 85% of the population lived below the poverty line, malnutrition was chronic and 80% practiced subsistence slash-and burn agriculture, a legacy from pre-colonial times which used to be sustainable as long as people could migrate freely after each crop season. However, with a growing population and less land, slash and burn was depleting the soils and heavy rains exposed them to erosion. Consequently, families were no longer able to feed themselves, even if they had land. Migration to coffee plantations or to other cities became the norm. Furthermore, infrastructure was limited to a few unpaved roads and poor educational and health services. In general, the soil was poor, yields were low and erosion and drought were common due to the prevailing slash-and-burn farming and extensive cattle ranching systems. The traditional community structure of the *patronato* (board of management) was very weak or had collapsed totally. This village-level

representational unit was not seen as representative of all the development interests of the community, and a more embracing structure was much needed.

In 1998 (an El Niño year), the region was hit by drought and a food relief programme was mounted. The Lempira Sur Programme was implemented by the National Government, with technical support from FAO and financed by the Netherlands from 1990 to 2004. Initially, the priority of the project was food security, given that the majority of the population were subsistence farmers. It was necessary to ensure greater stability of local food production systems.

INSTITUTIONAL INNOVATION

Strengthening of local governance institutions

The Lempira Sur project played a key role in promoting a bottom-up approach in the governance of the municipal chain. Because rural families are the primary users of natural resources, strategies for their sustainable management started at the level of the homestead and scaled-up through the community to the watershed

level. For this purpose, the project adopted an approach which used the rural families as the entry point for control over the decision-making processes within the municipalities. A chain was built, that connected the families into communal life and decision making through the establishment of sectoral committees that enabled the emergence of new leaders. This helped disseminate power away from traditional leaders (*cacique*) who controlled power over generations.

The need for a mechanism to articulate the community interests at a higher level arose as well as the idea of creating a “Community Development Council” (CODECO): this structure had the advantage of connecting the rural family upward with higher levels of decision-making and impose practices that improve the management of natural resources. In the case of Lempira Sur, Communal Development Councils were at the heart of the project’s success in eliminating the use of fire in agriculture.

At the municipal level, the traditional Municipal Development Council (CODEM) used to be constituted only by a few traditional leaders selected by the mayor. With the assistance of the project, workshops were held and Community Development Council (CODECO) obtained the resolution that the membership in the CODEM would be broadened also to include village representatives from across the municipal territory, and the CODEM was re-baptized as CODEM *ampliado* (broadened CODEM). In addition, municipalities gathered into inter-municipal associations (mancomunidades). The establishment of mancomunidades helped to overcome the limited scale of municipalities, increasing the geographic coverage in such a way that the association could cover an entire watershed. On the other hand, this large scale enabled mancomunidades to exert pressure on influential actors, so that services could be provided downstream. In 2005, 127 communities were organized in CODECOs and developed Plans for Communal Development. These plans were participatory, managing the demand of villagers on natural resources management, health, education, production, infrastructure, etc.

Improving production and storage systems

The Lempira Sur Project chose a demand as opposed to a supply driven approach to technology transfer. That meant analysing crop production problems in the field with the farmers and testing possible alternatives with them. The project professionals looked at the solutions that local farmers had developed to their problems, and the project and the farmers together developed a system-wide response which is now known as the *Quesungual*

Agro-Forestry System. The *Quesungual System* is based on planting annual crops (maize, sorghum, beans) under an indigenous slash and mulch management system. Farmer-to-farmer transfer of lessons on the management of natural resources in the framework of the CODECO also played a crucial role in the improved management of fragile slopes.

This system has contributed to the natural regeneration of the soil and an increase in water retention capacities. The *Quesungual System* demonstrated that natural resources could improve while improving production. Measurements in Lempira showed a loss of soil of 223 tons per hectare under any hillside land use system, while under a mature *Quesungual System*, the loss was reduced to 14 tons per hectare. With grazing cattle, this erosion figure rose to 23 tons per hectare.

IMPACTS

Adopted new technologies

The most important impact of the first phase was the large-scale adoption of hillside technologies for sustainable land use (improvement of soil quality, water retention capacity and reforestation) and an increase in grain production (increase in yields of beans and maize). Incomes were increased through diversification of income generating activities and the creation of community banks. Furthermore, the introduction of improvements in the system of grain storage (replacement of the storage loft system with silos and replacement of existing stoves with improved varieties to carry the smoke outside) led 3500 homes to adopt the improved stove technology.

In order to counter balance the urban bias of the educational curriculum in local school, the project helped establish some five agricultural technology schools, where teenagers were trained to become agricultural technicians while developing a sense of pride and ownership over rural life. Many of the alumni of these schools later became cadres of inter-municipal units of technical assistance for agricultural development and other public institutions, including the Lempira Sur project.

Natural resources preservation

Over the project lifespan, the landscape of South Lempira showed significant improvements due to the abandonment of slash-and-burn agriculture, and its replacement with more sustainable practices, such as the one documented in the *Quesungual System*. The

soils have increased their fertility and slopes are less prone to erosion and thus, protected from landslides, floods and droughts. In 1998 adoption was widespread and the capacity of the new system to resist the floods of Hurricane Mitch proved Quesungual to be a successful practice. South Lempira had come through the El Niño drought and Hurricane Mitch floods with a grain surplus.

Building of social capital

The heart of the Lempira Sur strategy was to strengthen social capital by reinforcing the municipal structure. Communities organized willingly around CODECOs and beneath them around sectoral commissions, empowering families to participate in communal life. On the other hand, the emergence of communal-level leaders provided a tool for rural families to participate in municipal decision making, especially as far as budgetary decisions were concerned.

As the CODECOs grew, they enabled rural families to increasingly connect upward with higher levels of decision-making. Such committees were effective in imposing practices that improve natural resources management, livelihoods and farm production. In 2009, 670 communal leaders – 43% were women – were including in their agendas sustainable local development, centred on natural resources management.

inputs such as seeds, plants etc. Again, inputs were not free, but were provided at a cost and the money was used to create community savings groups so that accumulated capital could begin to create a culture of savings and investment based on local control and decision making. As the project evolved and further emphasis was placed on strengthening governance structures, a local taxation system was set in place with the purpose of increasing financial availability at the municipal level from land taxes. Farmers were willing to pay these taxes for two key reasons: a) because the payment receipt constituted an evidence of land possession and b) because their taxes were returned by the municipality in the form of infrastructure improvements (roads, markets, watershed management) and services (technical assistance, cadastre and land tenure administration). Local taxation did, in fact, help municipalities to more than double their financial assets, thus enabling them to increase their relevance through the provision of improved services. On the other hand, it also increased the ownership of local populations over the municipal structure and, thus, ensured accountability of the mayor and his staff towards rural producers, including those formerly disempowered and unprotected landless populations living in remote communities.

SUCCESS FACTORS

- **Long-term commitment** to rural development and support to the action area. All actors involved recognized the need for long-term commitment and investment. Thus, the original project of five years was extended for a further five years with additional funding. This long-term commitment allowed for a multi-disciplinary team of technical staff to be built. This team adopted a learning approach based on local processes which enabled the project to build a relationship of trust with local partners and a planning framework which extended beyond political terms.
- **Financial participation:** From the beginning the project introduced a concept of asset building under local peoples' own control. This implied the elimination of donations, even food assistance. On the other hand, based on a strategy of households testing new ideas on their own fields and back yards, the project guaranteed technical assistance and

- **Entry points:** The Lempira Sur project identified entry points for household improvements that benefitted the entire community, including both the disadvantaged and the better-off. Including the better-off proved strategically important to avoid the risk of sabotage.

CONCLUSIONS

Institutional building

Small-scale farmers only adopt new land use strategies that conserve soil and reduce landslide incidence when they can see that the changes will actually benefit them, will increase their food security and productivity and reduce their vulnerability, risks and costs. For that to take place, the **most efficient mechanisms are farmer-to-farmer transfers of knowledge and experience.**

The municipal chain is well positioned to link poor rural producers and their families with higher decision-making levels. The closer public institutions are to their users, the more effective they can be. In Latin America,

the public institutions that are closest to civil society are the municipalities. However, whereas municipalities are too *small* to reach central government policy makers directly, they are too *large* to reach all families, especially those residing in remote rural areas. For this reason, a chain built to connect rural producers and their families with representational communal institutions in their villages, through municipal decision-making processes and further up-the-line with regional inter-municipal associations, and finally national associations of municipalities was critical in empowering rural producers to establish a dialogue as equals with central government decision-making bodies.

Where social capital is in place, communities can be well positioned to respond to crisis, both during the emergency post-disaster moments and in the rehabilitation phase.

Decentralization processes require strong (well founded) institutions at sub-national level. Transferring responsibilities down the line to local level authorities requires having previously built the political, administrative and financial capacities of municipalities.

Institutional strengthening at family and community level is a key component of successful decentralization as well as being an important ingredient for building environmental sustainability, food security and resilience and reducing local peoples' vulnerability to natural, economic and political shocks.

Natural resources preservation

The Lempira Sur project showed that **agro-forestry systems, designed to reduce food insecurity of the rural poor, can also increase soil stability and greatly reduce the incidence of landslides** even during extreme weather events. This experience shows that **ensuring both sustainable livelihoods and slope stability is possible and of relevance to many tropical regions of the world**. Slope stability comes from maximizing soil coverage based on a strategy of water management. But it is not forest coverage per se that is critical, as has been pointed out in various studies. The *Quesungal system* maximizes soil coverage from organic materials but also facilitates deep root penetration, eases the impact of heavy rains and ensures maximum water absorption.

Watershed management requires governance structures that go beyond the political territorial division, given that watersheds frequently cross administrative boundaries and even national frontiers. Historically, during the colonial and post colonial periods, settlers simply imported their land use models from their countries of origin, ignoring indigenous populations and

their territorial management systems. Settlers inherited a lack of vision of the integrality of watersheds and disregarded the connection between the origin of the watershed and the way the river behaves down-stream. Due to this lack of awareness, rather than addressing the real issue, settlers tended to get into quarrels with their immediate up-stream neighbours blaming them for scarce water supplies rather than jointly addressing the real problem.

The connection between local institutional capacity building, food security and natural resources management begins at the family parcel, since natural resources are often a main source of cash income for rural families. Given the scarcity of financial resources from central governments, municipalities are increasingly relying on locally-raised taxes. However, the capacity of local populations to contribute financially to the municipal tax base depends greatly on their use of natural resources as well as income obtained from alternative off-farm economic activities.

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HERDERS IN NORTHERN BENIN BECOME MORE PROFESSIONAL

BACKGROUND

General context

The agricultural sector is an important part of the economy of Benin, contributing 32 percent of GDP and providing employment to 50 to 70 percent of the workforce.

Borgou and Alibori Departments are the main pastoral zones of the country, with 57 percent of its ruminant livestock, using 45 percent of its land area. Depending largely on the exploitation of natural resources, the livestock system is basically traditional, extensive and semi-sedentary, inasmuch as herders practise transhumance in the dry season in order to relieve the shortage of water and food.

As part of the policy of State withdrawal, supervisory staff were reduced, with herders and their organizations assuming greater responsibility.

Situation to be addressed

Various technical and institutional problems and constraints hamper the development of livestock production in Borgou and Alibori Departments.

With regard to technical aspects, after the agricultural service was restructured, it became apparent that there

was insufficient training in the sphere of livestock health monitoring. The high mobility of herders and their herds and the formers' low educational level make it hard to mobilize them for training in livestock health.

The extent of the areas covered by livestock and the major expansion of cultivated areas are leading to increased competition for the use of space and natural resources, sometimes leading to conflict between farmers and herders and also to serious environmental risks.

With regard to institutional aspects, the herders' lack of organization is a major constraint hampering the marketing of cattle, optimization of livestock products and access to veterinary and livestock protection products for herders. It also means that herders are poorly represented in economic and social consultation and coordination bodies, so that their interests are not taken into sufficient account.

INSTITUTIONAL INNOVATION

Given these numerous difficulties and the State's withdrawal, herders considered the matter and succeeded in implementing several innovations, both technical and institutional.

Creation of self-managed livestock markets

In traditional cattle markets, herders do not deal directly with buyers. Intermediaries known as dilanis negotiate a price with each party, without the purchase or sale price being made known. This asymmetry of information in livestock markets is detrimental to both buyer and seller, so that these markets are poorly attended.

In 1976, herders from Gogounou discussed the situation and came up with the idea of self-managed livestock markets. Since then, sellers have dealt directly with buyers, with dilanis becoming witnesses to the transactions, issuing bills of sale that authenticate the transaction and recording the tax, each party paying half. The result is a transparency in transactions and a rise in the volumes sold and in herders' income.

Based on this extremely positive experience for herders, in partnership with the NGO French Farmers and International Development (AFDI) and with a view to establishing self-managed livestock markets, the herders drew up an action plan and implemented it between 2004 and 2007, with support from the European Commission.

The action plan has six main thrusts:

- promotion of the herders' (both male and female) community and improvement in their representation;
- improvement in the technical conditions of livestock production;
- improvement in livestock health;
- improvement in land management;
- improvement in the marketing of livestock products;
- improvement in the information, communication and financing of professional ruminant herders' groups, professional women ruminant herders' groups and their unions.

Partnership agreements were signed among the local communities containing the self-managed markets, the herders and the market management committees.

Organization of herders

As a result of the innovation of self-managed livestock markets and the mobilization of herders to which it gave rise in order to defend the model, the movement to organize Benin's herders has been accomplished

through a bottom-up approach and through progressive incorporation of local potential at village level (GPER³ professional ruminant herders' groups), district level (UAGPER⁴ district unions of professional ruminant herders' groups) and then at commune level (UCOPER⁵ communal unions of professional ruminant herders' organizations). In 2001, the six founding communal unions were able to create the Borgou-Alibori Departmental Union of Professional Ruminant Herders' Organizations (UDOPER⁶).

The representation of all the herding communities (Peulhs, Gando Peulhs, Baribas and Dendis) in UDOPER gives it legitimacy in discussions with other socioprofessional groupings and the State.

UDOPER thus plays a representative role in defending herders' interests in State consultation and discussion bodies and in bodies supplying socioprofessional services (professional training, literacy training, vaccination, conflict management etc.), taking into account the needs of herders from the six founding communes, so that the herders and the State have recognized it as the first organization representing Benin's herders. This recognition is seen in the presentation of requests for membership from other communal unions of professional ruminant herders' organizations outside Borgou and Alibori Departments.

In response to these applications, the National Association of Professional Ruminant Herders' Organizations (ANOPER) was established in February 2007, grouping 24 communal unions from six departments, covering more than half of Benin's land area. Membership of herders from various regions of the country has given ANOPER legitimacy in speaking on behalf of herders at the national level. Thus it represents herders in the national platform of Beninese farmers' and agricultural producers' organizations, in the same way as do the Federation of Agricultural Producers' Unions of Benin, the national network of regional farmers' organizations and value chains, and the Agricultural Producers' Group in particular. The platform is a member of the Network of Farmers' and Agricultural Producers' Organisations of West Africa (ROPPA).

In April 2007, ANOPER started to draw up an action plan as part of a broad process of consultation and coordination with the various levels of the organization

3 GPER Groupement professionnel d'éleveurs de ruminants

4 UAGPER Union d'arrondissement des groupements professionnels d'éleveurs de ruminants

5 UCOPER Union communale des organisations professionnelles d'éleveurs de ruminants

6 UDOPER Union Départementale des Organisations Professionnelles d'éleveur de ruminants

and its special partners in order to define its mission, objectives, spheres of intervention and strategy for the next five years.

It is an ambitious plan, inasmuch as it not only extends to all the 24 communes, the services that gave it both its legitimacy in herders' eyes and its reputation (socioprofessional services, training and representation), but also incorporates new spheres of intervention (technical innovation, establishment of economic services etc.) in a move towards the professionalization of herders and the structuring of the value chain. ANOPER seeks to expand its share in the self-financing of the structure. Thus, for example, the profits from communal veterinary pharmacies should eventually finance communal extension workers.

Apart from the action plan, ANOPER has drawn up its procedural handbook and is seeking to apply rules of transparency.

The organization of vaccination is a clear illustration of the role and responsibility of each of these organizational levels in managing the issues challenging the development of livestock production in Benin:

- ANOPER discusses, organizes and plans the campaign, fixes the price per dose directly with the Livestock Directorate and informs the communal unions of professional ruminant herders' organizations of the dates and locations of vaccination.
- The extension workers and elected officers of the communal and district unions are responsible for raising awareness among grass-roots groups regarding the need for vaccination and the obligation to bring their animals on the specified days. They also ensure the monitoring of vaccination by government officials (re-counting to verify the recorded figures and prevent embezzlement). At the same time, they recover subscriptions for ANOPER. An elected ANOPER officer and a livestock health expert are generally present to monitor each department's vaccination teams. A wrap-up report and final figures are drawn up jointly by ANOPER and the Livestock Directorate.

One of the main reasons that encouraged herders to organize themselves is their need for recognition, especially for the resolution of conflicts with farmers and foresters. The herders, who are nomadic or have been sedentarized for only a short time and who lack education, are often the losers in negotiations. ANOPER's capacity for lobbying and its relationships with local and central government mean that it can now exert pressure in advocating the cause of its wronged members.

IMPACTS

Herders launched on the path to professionalization

Improvement in the organization of Benin's ruminant herders has facilitated their access to support from technical and financial partners. In partnership with AFDI since 1997, UDOPER has enjoyed the financial support of the European Commission for implementation of its 2004-2007 action plan. The various innovations have led to an improvement in the technical conditions of livestock production, livestock health and the marketing of livestock products.

Improvement in animal health

The AFDI-UDOPER partnership has made livestock health (training and vaccination) one of the pillars of intervention in support of herders. The proportion who have applied their training in basic livestock health is estimated at 70 percent for men and 30 percent for women. During the project, six vaccination campaigns (two per year) against pasteurellosis and contagious bovine pleuropneumonia and six campaigns to treat parasites in calves were organized. Thus, 471 526 animals were vaccinated in the June 2007 campaign, representing a presentation rate of 64 percent and a vaccination cover rate of 61 percent. This means a 13 percent increase in the rate of presentation and a 15 percent increase in the vaccination cover rate over the period.

Improvement in access to inputs

Over the period of the project, two pharmacies were set up in livestock markets. The direct impact of this highly appreciated service appears to be less on price than in terms of improved access to products due to its presence in a place regularly visited by many herders.

UDOPER decided to invest in shares in the Véto Service SA purchasing centre, enabling it to authorize the opening of new shops, which had been blocked by the National Veterinary Association. Thirteen shops were to be opened during the period 2008-2010.

Establishment of nurseries and fodder banks

This activity got under way only recently (for lack of political encouragement, the need for awareness-raising, and technical difficulties). However, herders have shown great keenness, seen especially in the sharing of the seed batches distributed to fodder bankers during on-field training and the increase in sown plots. The strong shift towards sedentarization and the desire to pursue intensification

and integration with agriculture is increasingly leading herders to seek alternatives to transhumance, which many of them now feel to be a constraint.

Improvement in herders' receipts from the sale of their livestock

The establishment of self-managed livestock markets has helped to increase herders' receipts from the sale of their cattle.⁷

Today, self-managed markets are thus attracting increasing numbers of people and are helping to raise the visibility of the communes where they are located. Their impact on communal income means that local councils that were initially hesitant are now showing considerable interest in self-managed markets, as can be seen from the diagram below.

Improvement in lobbying and advocacy skills

With the termination of subsidized vaccination in 2006 and in the face of the urgent need to organize a livestock vaccination campaign, a memorandum drawn up by UDOPER succeeded in making vaccination of cattle throughout the country obligatory and simultaneous, with the State recognizing its duty to protect Benin's livestock against major diseases. This memorandum, combined with negotiations with the Livestock Directorate of the Ministry of Agriculture, Livestock and Fisheries on the price of vaccine, has been effective in preventing major livestock diseases.

Improvement in land management and conflict management

The groups that carried out self-assessment recorded 283 conflicts in the period 2006-2007, mainly over damage to fields and thefts of livestock. However,

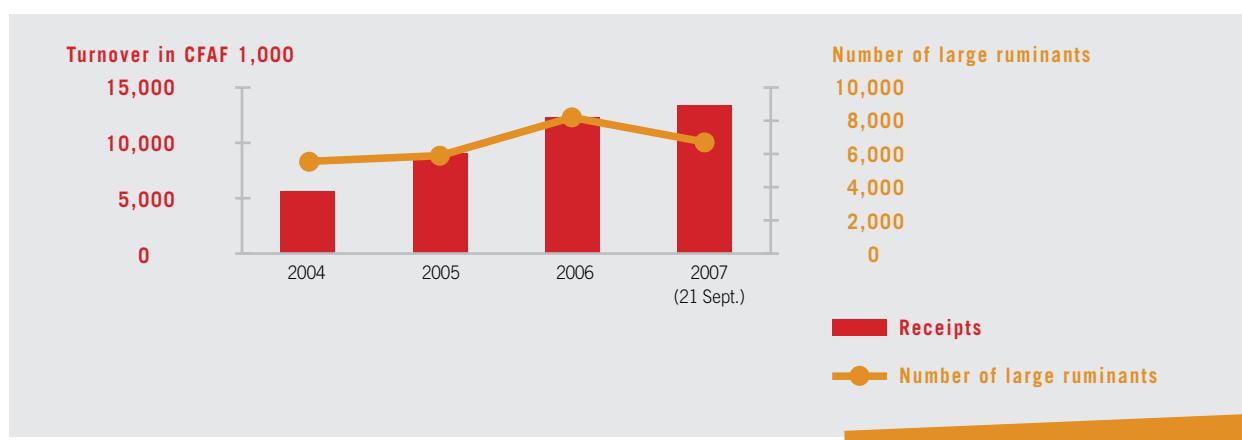
89 percent of these conflicts were settled amicably. At least 53 conflicts were settled amicably thanks to the intervention of the elected UDOPER officials who took part in 37 mediation meetings between 2004 and 2007. The majority of the groups help in the amicable resolution of conflicts between herders and other groups with interests in the same areas. The Bembereké, Gogounou, Nikki and Sinendé police forces say that the amicable resolution of conflicts by UDOPER has led to a significant reduction in offences involving physical violence. This improvement is seen as the outcome of collaboration between UDOPER and the police.

To achieve these results, UDOPER revived multi-stakeholder communal consultation and coordination bodies concerning land management (community transhumance committees) and supported representation of the communal unions of professional ruminant herders' organizations. Livestock corridors totalling 175 kilometres were established in 27 communes. A communal land management plan was drawn up for four communes in Alibori bordering the W Park. Lastly, UDOPER promoted fodder crops.

The communal unions participate in the formulation of communal development plans, the work of the communes' consultation and coordination bodies and the transhumance committees. UDOPER has made a major contribution to the opening of corridors for ruminants, basing its work on the communal committees.

Inasmuch as this activity is included in the communal development plans but often lacks a budget allocation or political encouragement, the collaboration of UDOPER or directly of the communal unions tends to foster good relations with local councils, thus contributing to herders' integration.

Figure 3.1 Evolution in turnover and numbers of large ruminants in the Gogounou self-managed livestock market



7 Although herders say that their receipts have increased, no precise figures are available.

KEYS TO SUCCESS

A variety of factors can explain the successes resulting from the innovations implemented.

Mobilization of leaders. The strength of the self-managed livestock markets is that they are based on the mobilization of leaders: external support arrived only later (in the 1990s). From the start, attention focused on the real needs expressed by the members, an approach that has been continued. All the direct stakeholders were mobilized (*dilanis*, traditional authorities, processors, women caterers, transporters etc.) in order to establish a new way of working. Moreover, government services, local authorities and even NGOs and private businesses **were involved in its development in a spirit of partnership**.

This wide range of partners is also a strength of UDOPER, in that it allows it independence in its decision-making.

Representation of all the herder communities sharing the same territory. This is the basis for the authorities' recognition of UDOPER as representing herders.

The will and capacity of UDOPER's elected officers to defend herders' interests.

The establishment of **socioprofessional services, taking account of the herders' major aspirations**.

The very definite choice of those elected to surround themselves with **salaried technical staff who are themselves herders** or children of herders reflects the desire not to cut the organization off from herders' real-life situation and also to avoid bureaucratization.

CONCLUSIONS

In the face of the problems that arose following the policy of State withdrawal, herders have succeeded in setting up well-structured organizations meeting their members' needs. ANOPER has emerged as an organization well integrated into the local context. Elected members have remained at the helm of this organization, with the support of many technical and financial partners.

The model of self-managed livestock markets is now known and has contributed greatly to improving the marketing of livestock.

Evaluation shows that UDOPER's actions contribute especially to the increase in incomes, the acquisition of knowledge and know-how, and the taking of the herding community into account in development activities.

The creation of ANOPER, following requests for membership and the universal endorsement of the activities conducted by UDOPER, shows that these needs for representation and also for professionalization of activities, are not confined to one ethnic or geographical context, but are felt by all ruminant herders in Benin.

Furthermore, ANOPER's structure is a response to a major need for professional representation that goes beyond the local management context. The main feature of transhumant herding is its mobility in time and space, not only on a national scale but also on an international one.

UDOPER's experience clearly shows that in this context it is vital to manage activities not just at the local level but also on a larger scale in order to ensure the sustainability of the results obtained locally.

The essential problem for an organization with a very definite territorial anchoring, is that of being capable of **offering its services sustainably over an increasingly wide geographical zone**. Management of the organization, which was based on strong charismatic figures with local authority, will have to make the major shift in scale.

Although the organization is assisted for this purpose (financially and methodologically) by AgriCord, the path to financial autonomy is long, and donors must take into account the immensity of the task facing farmers' organizations.

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SEWA'S MODEL OF INSTITUTION BUILDING: EMPOWERING SMALL-SCALE WOMEN FARMERS

CONTEXT

Indian agriculture employs almost 60% of the population. The female share in agriculture exceeds those of males, as 72.8% of women are involved in agriculture activities compared to 48.9% of men⁸. Small and marginal farmers account for about 82% of total farmers in the country. For small-scale women farmers, agriculture is often the only source of income. Their economic development is limited by the lack of economic assets, human and social capital (very low level of literacy among smallholders, particularly women). All these factors lead rural women to be very vulnerable to climatic, agronomic and economic shocks.

The Self-Employed Women's Association (SEWA) is an Indian membership-based trade union, founded in 1972, in Gujarat State. In 2009, the organization had 1, 256 million members across 9 states with over 50% of its membership in Gujarat. Until 1994, SEWA's members were predominantly from urban areas. This was partly due to its origins and office base in the city of Ahmedabad. However, in the late eighties, SEWA intensified its

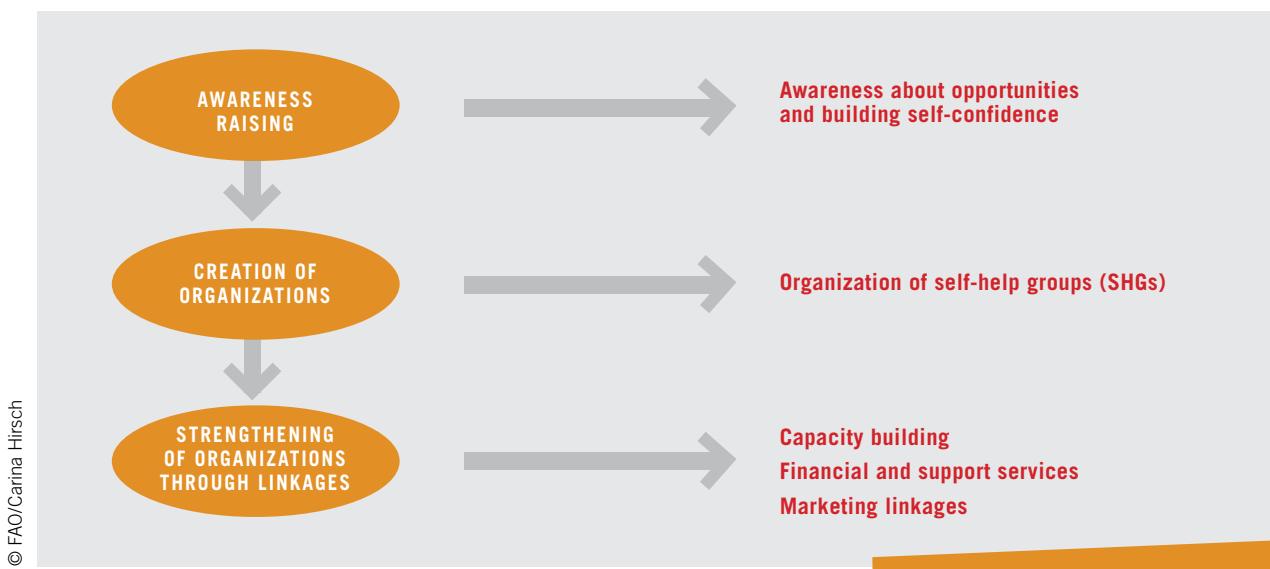
activities in rural areas, resulting in increased rural membership. In 2009, two third of SEWA's membership is from the rural areas out of which 54% of the members are engaged in agriculture.

SEWA's main goal is to organize women for full employment and self reliance. For SEWA, full employment means employment whereby women obtain work security, income security, food and social security (at least health care, child care and shelter). By self-reliance SEWA means that women might be autonomous and self-reliant, individually and collectively, in terms of their decision-making ability.⁹

INSTITUTIONAL INNOVATION

SEWA built a dense network of successful members own organizations through an integrated and comprehensive approach, addressing the numerous constraints that small-scale and marginalized

Figure 4.1 SEWA's steps in organization and institution building



8 National census report (2007)

9 SEWA annual report (2008)

women farmers face. SEWA's approach includes a set of activities to simultaneously increase farmers' economic, human and social capital and enable them to overcome poverty and exclusion. In particular, the SEWA model combines:

- Interventions in multiples areas: capacity building, market linkages, as well as financial and support services.

■ **A gradual and cumulative process over a long period.**

This process ranges from raising awareness among small and marginalized farmers' about opportunities, to empowering farmers within self-help groups and supporting the institution building process.

SEWA's organizational model brings women farmers out of isolation. Women are connected to a dense network of social relationships which reduces the risks associated with the change process. These women are organised which brings collective strength and helps in increasing the bargaining power of these women. This brings an identity to the women as workers and they also have a voice and representation. All this brings solidarity.

Raising awareness and self-confidence: mobilizing small-scale women farmers

The first step to any change process is to raise women farmers' self-confidence, as change creates uncertainty and instability that are associated with risks. Sometimes, marginalized and small-scale farmers might resist change (risk aversion situation) and hence it is necessary to create an atmosphere in which women farmers understand how they will benefit from change.

SEWA initiated a mass mobilization through the "agriculture campaign" to educate and generate awareness among small-scale and marginal women farmers on technical advancement, inputs requirements, advanced research and marketing trends. A small and marginal farmer needs market information, linkages, and access. He/she also is required to develop bargaining power to get a fair price. Currently, he/she is devoid of all of these. As a result, a small and marginal farmer in India remains hungry. SEWA, thus initiated the agriculture campaign. This campaign involved regular meetings at village level. SEWA began the process by listening to women, presenting SEWA and raising awareness on existing opportunities.

For example, in the Sabarkantha district of Gujarat State – a semi-arid region heavily affected by soil erosion – SEWA supported small-scale women farmers to create a federation, the **Sabarkantha Women Farmer's Association** and conducted a watershed conservation

campaign in 7 villages. SEWA supported this process along the following steps:

- Door-to-door visits of households in the 7 villages.
- Meetings involving the Panchayat (local government) and the GLDC (Gujarat Land Development Corporation). These meetings gave villagers, for the first time, an opportunity to come together, share their concerns and discuss potential solutions.
- Farmers' visits to villages where watershed conservation techniques were employed so that farmers could have a first hand exposure to the benefits of these techniques.

Awareness raising has been therefore a major preparatory and fundamental step in promoting a successful self-driven development strategy.

Empowering small-scale women farmers with self-help groups (SHGs)

Once a relationship of trust has been created and villagers understand the benefit of being members of SEWA, the next step is to support the new members to create self-help groups (SHGs), formed by a limited number of farmers. This helps in establishing a rapport among the members. In a SEWA SHG farmers choose to join with others to share mutual interests and concerns, and to solve their problems. SHG usually meet monthly, in members' fields and homes or in community rooms. Members share their experiences, feelings, issues and successes. They are encouraged to express and discuss their views on different topics. They understand that they are not the only ones facing a certain problem, which reduces the isolation that many economically and socially marginalized farmers experience. This brings collective strength among the members and also increases their bargaining power. As a result of being organised, the members collectively have a voice. This increases the solidarity.

Strong grass-roots groups are the foundations on which SEWA's approach is based. In 2010, there are about 2,140 SHG of SEWA with a focus on agriculture development.

An action-learning approach

SHG provide a structure that enables small-scale women farmers to encourage and support each other in facing change by identifying common problems and solutions and by establishing a platform for collective problem solving. The more experienced members help the newer ones. However, both parties benefit from this sharing of experience and information. A SHG enables also collective

recognition of solutions and the building of collective strategies to cope with risks. Together members identify hidden opportunities for income-generating activities and encourage each other to think in an entrepreneurial manner, to learn how to calculate risks and to find the right balance between strengths and weaknesses.

Initially, SEWA had been working with cooperatives. However, the cooperative form of organization has its own limitations. It is a very formal organization and a proper management of co-operative requires registration, maintenance of records, formal elections which is very difficult to maintain for each and every village especially for illiterate women. Also there can be only 1 cooperative in 1 village. Having Village Development Groups or the Self Help Groups there can be multiple groups in 1 trade and multiple trade groups in 1 village. Also these groups include only the poor women and hence a clear focus on the poor women can be maintained. As against this in the cooperative all the women would be included and the powerful and strong would take away the lead.

A SHG is a platform where action towards solving problems initiates. Within groups **women identify their own challenges, learn to take decisions and calculate risks**. The SHGs demonstrate how smallholders can develop a culture of learning with experimentation and local adaptation. Through the sequences of problem analysis (solution identification – decision), they understand better the underlying mechanisms of "how things work". Ultimately, this step of exchange and mutual aid is the first milestone to build small producers' self-confidence and their capacity to drive their own development.

The grass-root leader as a *change agent*

The SHG needs a leader whom the other members trust and with whom they can discuss their needs: the grass-root leader, called *Aagewan*. She is chosen based on her personal skills, ability and commitment to implement the solutions agreed upon collectively. Together, the SEWA members have come up with the following criteria to select the *Aagewan*. These criteria are

- She should be ready to travel to the District Office
- She should be fair and just
- She should be ready to sacrifice her work, give time, spend money.
- Should be bold, understanding.
- It will be good if she is slightly educated.
- She should be able to speak up in front of any guest or official.

On the basis of these criteria, they select one woman having all or some of these qualities to be their group leader. But they feel that one person alone will not be able to do all the tasks, so a committee of three to five members depending on the size of the group is formed to handle and manage the operations. The tasks are assigned to each member of the committee.

Within each group, she has a major responsibility for the institutional building process facilitating members' participation, addressing interests and concerns, and leaving choices open. Change implies uncertainty, which is a strong factor for resistance. By providing clear information about the direction followed, the grass-root leader reduces uncertainty within the groups.

She therefore acts as a change agent, by:

- creating a common vision in the group,
- mobilizing members to support each other
- allowing time to adapt to the change

Strengthening small-scale women farmers capacity and access to assets

To allow the self-help groups to reach resource necessary to get more opportunity created a dense network between the SHGs and its own organizations as well as linkages with external organizations at local, regional and national level to provide the SHGs with a whole set of services, from capacity building to marketing linkages, financial and support services. Access to credit and other financial services like insurance, pension, etc helps in asset building. Asset building is done when the poor have access to savings, tools and equipments, license to sell the agricultural inputs like seeds.

Linkages to improve small-scale women farmers human capacity

SEWA's facilitation approach includes capacity building provided by professional organizations such as **SEWA Academy, SEWA Manager's School and "life schools"**. They train grass-roots members in managerial and leadership skills, providing in particular collective trainings for self-organization and collective action such as to become confident leaders.¹⁰

The low level of literacy among small-scale women farmers is a major challenge to deliver effective training and empower women. SEWA has developed the "**life school**" to deliver its functional literacy training, which is group-

¹⁰ Examples of training include: training and guidance for group formation; training for group governance: decision making procedures, leadership structure, record keeping, accountability and transparent management; training in leadership, negotiation and conflict management.

based, organized in the women's houses and facilitated by a local trainer from the community. Literate members help non-literate ones. The training focuses on reading skills and is designed around women's specific needs.

Finally, SEWA's **Village Resource Centres** help farmers through the SHG to identify the potential benefits of new technologies, evaluate the viability of technological solutions and eventually adopt them, and participate in technology development process. SEWA realized 187 tele Agriculture sessions where farmers present directly to experts theirs problems and discuss solutions. About 4 200 farmers participated in tele-training for farmers. To this purpose SEWA has built partnerships with Anand Agriculture University (Gujarat) and India Space Research Organization to involve both farmers and researchers in planning for technology development. SHG can thus be directly linked to researchers via video conference and researchers be aware of farmer's priorities. **Village Resource Centres** began to make use of satellite imagery services for fertilizer field planning. In addition, women farmers attend 'Tele-agriculture' sessions with scientists from selected Universities to control diseases and make agricultural activities more viable.

Linkages to improve small-scale women farmers' access to productive assets and markets

Access to productive assets and markets is facilitated by the **Saving self-help groups, Village Resource Centres and the Rural Distribution Network (RUDI)**.

In a country where women have a main role in cultivation, Sewa's **saving self-help groups** help women members to *access to productive assets, in particular land and secure their land rights*. The saving groups provide credit facilities to 12 736 farmers. Kapilaben from Rasnol village in Anand district, testifies "*I own a small piece of land that was mortgaged. However, 5-years-ago, I took a loan from one of SEWA's savings cooperatives, where I am a member, and reclaimed my land*". Moreover, acquisition of land titles is crucial to secure women land rights over time. "*Thanks to SEWA, my name was also incorporated in land documents; so last year when I lost my husband I did not have to worry. Since I was the joint owner of my farm, I could continue cultivation and production in peace*".¹¹ Moreover in a country where small and marginalizes farmers are highly vulnerable to climatic shocks (dependant on the Indian monsoon) SEWA's weather Insurance mitigated climate risk. SEWA's weather Insurance covers **256 villages**.

¹¹ Developing agriculture as an industry. The SEWA's Agriculture Campaign. Self Employed Women's Association.

SEWA's Village Resource Centres enable access to good quality agriculture inputs, market information and technical advice. Quality seeds are crucial input to increase productivity at farm level, but seeds available in rural markets are generally of low quality and outdated. **91** SEWA's groups are authorized seeds, fertilizers, and pesticides distributors providing reasonably priced quality inputs at the beginning of each season (up to 20% below local market price¹²). A SEWA's woman says, "With the seed and fertilizer licenses for my farmer group and District Association, my agriculture productivity has improved by almost 40%. Earlier, the seeds I bought locally from traders had a low germination of only 50%. Today I buy certified seeds from Seed Banks, where the germination is almost 90%".¹³

In 112 villages, the Village Resource Centres communicate current market prices to rural communities in each village cluster. Every Saturday the women's leaders receive an SMS message with the current prices in nearby markets. Thus, SHG are in a better bargaining position when they market their products.

Among the SEWA's organizations enabling market access to small-scale women farmers, the rural distribution Network (RUDI) plays a special role. RUDI links the farmers to the end consumers making available goods of regular use to the villagers. Grains, spices and salt from various districts are transported to a processing center and dispatched to selling centers. Rudi provides an outlet to farmer groups and employment to saleswomen.

EXAMPLES OF SUCCESS

In India, most small-scale and marginal farming households have an annual earning of less than 32 500 Rupees and hold less than five acres of land.¹⁴ Their level of expenditure is higher than their income and they are unable to meet their basic consumption needs. Invariably they resort to borrowing money, which often means mortgaging their lands. The 2 140 SEWA's SHG have radically improved women's livelihoods, increasing their members' income and food security by enabling them to seize new opportunities. SEWA's activities improved the food security at household level and generated surplus for the market contributing to local and national food security.

¹² Direct testimony of Nandaben, Aagewan women in ARDI Village, ANAND District.

¹³ Direct testimony of Nanduben of Kukana, Vadodara (2010).

¹⁴ 8 National Sample Survey Organization.

For example, the creation of the **Sabarkantha Women Farmer's association** enabled women farmers to reclaim 3 000 hectares of ravine lands in 73 villages. With the creation of the association, women farmers' income increased from an average of 5 000 rupees to as much as 15 000 rupees a year.

Surajben Shankasbhai Rathwa, from Vadodara village (Vanki district) explains how SEWA's changed her life: "I was only 21 years-old when I got married and started a family the following year. Born, raised and married into poverty, I tried to make a living as a casual labourer, but failed miserably. There was hardly enough food to get by and I could not afford to send my growing children to school. I became a member of SEWA in 2003, life changed and how! I began to save money within our savings group, and got involved in its administrative activities and was promoted as group leader! Soon, SEWA introduced us to other livelihood options such as forestry and vermi-composting¹⁵. We now earn over Rupees 15 000 per season, an amount we had never dreamed of earning in a lifetime."

As Surajben, in SHG small-scale women farmers usually reach an array of results which improve their food security, namely:

- Improving yields and number of crops per year (from 2 to 3 with wheat, rice and millet)
- Diversifying their consumption diet with a new production of vegetables (red chillies, carrots, tomatoes) and fruits. SEWA organized Kitchen Garden Demonstration with 365 members in 92 villages;
- Increasing household financial capacity and improving their diet with edible oil, iodised salt, tea, which are not produced at farm level

CONCLUSIONS

The development of SEWA small-scale and marginalized women self-help initiatives has led to collective capability building and resulted in economic, political and social empowerment. Economically, SHG have allowed women farmers to create and seize new opportunities that respond to their needs and to increase their financial, human and social capital. Politically, these initiatives are a basis for active participation in local governance. Socially, self-help groups can successfully overcome many of the "dilemmas of collective action" and enhance the local

¹⁵ SEWA is providing support and guidance to women's in 16 villages for vermicompost production to reduce the dependency on high price chemical fertilizers.

bargaining powers of small-scale women farmers vis-à-vis other social groups.

The process of building organizations can thus be regarded as an exercise of collective empowerment that leads to the generation of new collective capabilities and promotes a sustainable development process. The impact of SEWA on women farmers is well described by Amartya Sen¹⁶: "No longer the passive recipients of welfare-enhancing help, women are increasingly seen, by men as well as women, as *active agents of change: the dynamic promoters of social transformation* that can alter the lives of both women and men".

Finally, the major strength of SEWA's approach is the creation of an integrated process, in particular through the complementarities among the SHGs and other SEWA institutions such as their microfinance and insurance agencies, their training facilities as well as their communication facilities like the SEWA radio station. Together, they constitute a sustainable system, accountable and inclusive due to its root-based foundations and the effectiveness of service provision through the SHGs organization, but also sufficiently powerful because of its internal cohesiveness and its linkages with external partners: government departments, universities, research and development agencies, NGOs, private companies.

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¹⁶ A. Sen, Development as Freedom. Oxford University Press (2001, p. 189).



FACILITATING ACCESS TO PRODUCTIVE ASSETS AND MARKETS





INPUT SHOPS: A MADE-TO-MEASURE SOLUTION FOR THE POOREST FARMERS

BACKGROUND

A system to supply quality inputs suited to the conditions of small farmers is indispensable for any improvement in agricultural productivity and food security in countries where farming is the main source of income for most of the poor.

In Niger, most small farmers' demand for inputs involves very small quantities because of their meagre financial resources and also because the erratic nature of rainfall increases the risks of poor harvests. This situation is compounded by the geographically scattered demand (demand atomicity) and the lack of organization, making it hard for small farmers to obtain supplies of inputs. Moreover, the packaging of fertilizer in 50-kilogram sacks is ill-suited to the small demand of such farmers, particularly the poorest, who purchase a few kilograms at a time at most.

In the face of this situation, input banks were set up on outside initiative at farmers' organization level in order to ensure local supplies. However, the operating model of input banks, based on benevolent management by a local management committee, a seasonal supply and distribution system, and sale on credit, very quickly revealed its limitations in terms of a supply unsuited to the

poorest farmers who are often not members of farmers' organizations, a failure to assume ownership and a lack of financial viability because of the risks of non-repayment.

With the support of the FAO Project for Promotion of the Use of Agricultural Inputs by Producer Organizations (usually referred to as the Inputs Project), innovations were implemented in order to adapt the input supply to the needs of the poorest farmers through the **input shop** model.

INSTITUTIONAL INNOVATION

The input shops are cooperative- or association-type shops selling agricultural inputs (fertilizer, seed, crop protection products, livestock and veterinary products etc.). They are autonomous bodies, sometimes grouped into a network, and are owned by producers' groups (farmers' organizations, unions or federations).

The input shops have a variety of activities and services, the main ones being:

- cash sale of agricultural inputs (fertilizer, seed, pesticides, veterinary and livestock products, and small farm implements) (*with no sale on credit*);

- rental of small farm equipment (plant protection equipment, hand hoes, donkey-drawn hoes, wheelbarrows, carts, motor pumps etc.);
- support and advice to farmers regarding fertilizer, pest control, livestock health protection etc.;
- pooling of input orders;
- crop protection treatment in collaboration with authorized overseers;
- multiplication and sale of improved seed;
- demonstration linked to research + farmer field schools.

The working capital of each input shop is made up of the contributions (in the form of shares) of members of the farmers' organization that started it, possibly boosted by outside contributions (to a maximum of 50 percent). Sales are strictly cash only and credit is not permitted. The aim here is to guarantee:

- security of the working capital by avoiding the risks of non-repayment that reduce the financial viability of input shops;
- availability of inputs thanks to regular restocking;
- cover of running costs;
- consignment for sale: a wholesaler who is reassured by the fact that an input shop has the reputation of making strictly cash sales may deliver sacks for sale and expect payment only once they have been sold.

The input shops are not intended to produce a profit, unlike the case with private distributors. They also differ from input banks, which give credit and offer their service only to their own members. In the case of input shops, all farmers, both members and non-members of the farmers' organization in question, have access to

the service at the same price. The input shops quickly realized that it was hard (and had no serious justification) to sell to members at one price and non-members at another, while also opening the door to deception (with a member purchasing for a non-member friend). The price is the cost price to the input shop, including the manager's wages and compensation for any wastage.

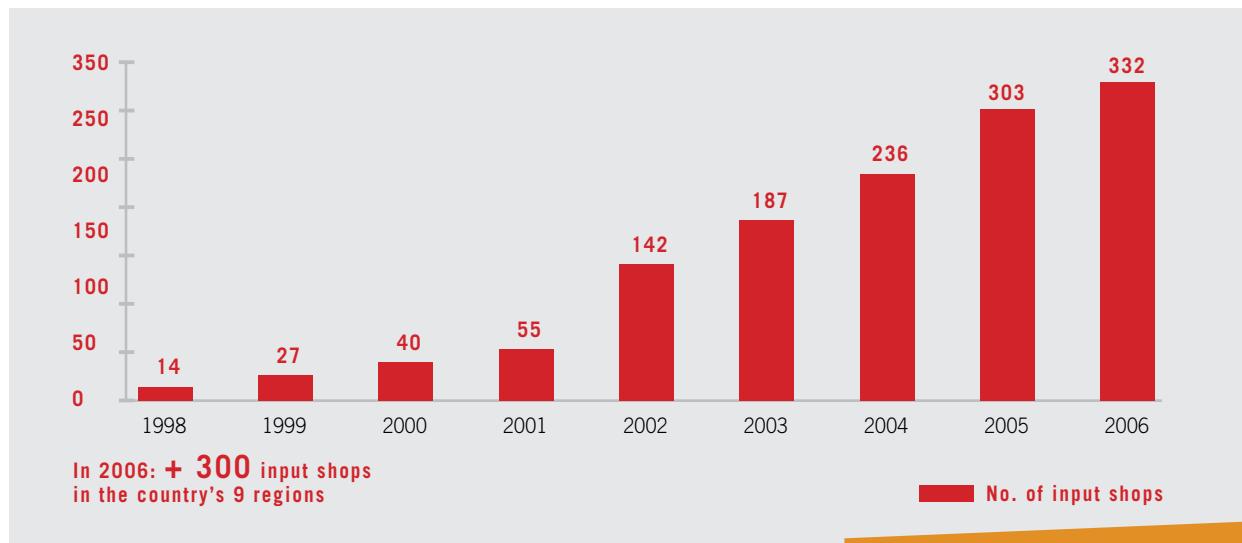
It is interesting that, unlike the case in other countries, it was farmers' organizations and not private distributors who developed the input shops. The reason is that the Government continues to place batches of subsidized fertilizer on the market without warning, a situation that discourages any private initiative to import fertilizer at market price.

The major innovation made by the input shops to provide an appropriate response to the needs of the poorest farmers is to offer small packets of inputs (for example 500 to 1 000 grams of fertilizer), so that they can purchase as little as they wish, bearing in mind their meagre financial resources. It was in fact only with the establishment of input shops that people became aware of the existence of a demand – the “diffuse” demand – that is not expressed unless fertilizer is available. This observation demonstrates the value of this service provided by farmers' organizations, which no private trader would venture to attempt.

IMPACT

The number of input shops has risen sharply since the start of the Inputs Project (see figure 5.1).

Figure 5.1 Evolution in the number of farm input shops in Niger

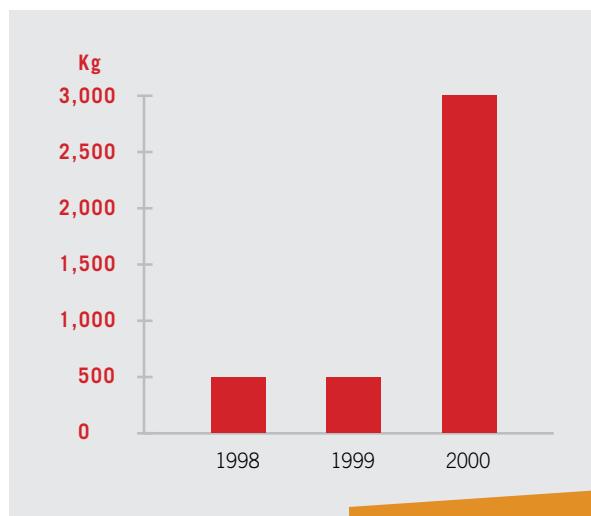


A survey recorded 507 input shops at the end of 2009, while a good many more are still being set up.

The establishment of input shops has had an immediate impact on the diffuse demand. In the village of Karabedji, for example, analysis of the contribution of the input shop to the procurement situation of small farmers from in and around the village shows¹⁷:

- **A substantial growth in the consumption of inputs**, particularly fertilizer and livestock health and veterinary products, by small farmers in the input shop's catchment area since it was set up, indicated by the net increase in fertilizer consumption one year after it opened in 2000: consumption rose from 500 kilograms in 1999 to 3 000 kilograms, including 1 000 kilograms in 1-kilogram packets – and all those surveyed expressed appreciation for this type of packaging, which enables even the poorest farmers to purchase fertilizer.

Figure 5.2 Karabbedji: evolution in fertilizer consumption



- **Diversification in types of input**: the input shop has allowed many users to discover new inputs: DAP, Green Muscle biopesticide, poultry vaccine and lick blocks.
- **The initiative of vaccinating poultry** against Newcastle disease, organized in the village by the input shop.
- **An impact on crop yields**: for example, an increase from an average of 486 kilograms of millet per hectare in villages not served by an input shop to 541 kilograms in those served by one.
- **The high degree of satisfaction** of users regarding the manner of packaging, the quality and the prices of inputs sold by the input shop: the inputs sold by this shop are of excellent quality according to all the

farmers surveyed and the prices are more affordable than those in markets.

- **The supply of non-members of the union**: the input shop has allowed the supply not only of members of the union, but also of non-members, who make up an average of more than 58 percent of customers.
- **Villages covered by the input shop**: with a radius of 14 kilometres, the input shop allowed 10 villages to be covered.

The input shops have developed in the course of time, so that they now form a real network, covering more and more of the country. They are thus now found in all the country's eight regions, in 33 of its 36 departments and in more than 110 of its 157 communes (see the annexed map), with a total working capital of CFAF 300 million.

KEYS TO SUCCESS

Various factors have contributed to the success of input shops in Niger's rural regions.

Internal factors

Solutions suited to the needs of small farmers

- The input shops provide a response suited to the modest demand of poor small farmers.
- Inputs are brought closer to farmers and their availability is improved.
- Products and local services are supplied at competitive prices.
- Apart from the sale of inputs, input shops offer a variety of services, depending on zone (crop protection, vaccination of penned household livestock etc.).
- Various training activities (field schools, demonstration plots), information activities (rural radio, bulletin boards, sharing of information and experience) and income-generating activities (warehouse receipt system, processing, fattening, seed multiplication etc.) are concentrated around the input shops.

Farmers' assumption of ownership of the process

- Farmers' groups are revitalized and empowered as owners of their own development.

A transparent mode of governance

The input shops are managed by the farmers (through a management committee elected democratically in a general assembly) and are governed by their own rules of procedure. They have equipped themselves with an

17 Amadou Tidjani Gambo, 2007 course report.

independent monitoring committee, which provides impartial outside supervision with two or three auditors.

Proficiency of shop staff

The input shops are run in a professional manner by competent staff (trained in management and marketing), who are paid on the basis of financial results. The managers have received training in managing input shops.

Partnerships

Many partners and long-term support

More than 35 partners have participated actively in establishing the network of input shops since the preparatory phase in 1998:

- farmers' federations: Mooriben, FCMN-Niya, Dadin Karkara, Marhaba, FUBI, FUCAP, FUMA, Sa'a and UCMA;
- French, Belgian, Swiss, Luxembourg, Danish, Japanese, American and Canadian aid agencies, together with the African Development Bank, the World Bank, the Food and Agriculture Organization of the United Nations, the United Nations Children's Fund, the European Union etc.;
- NGOs such as Africare, Afrique Verte, Tilalt, Tagaz, SOS Sahel International, Catholic Relief Services and Helen Keller International;
- others, including the National Office for Hydro-Agricultural Schemes and the International Crops Research Institute for the Semi-Arid Tropics.

The input shops have also obtained the collaboration of local and regional livestock and crop protection services to facilitate their provision of services (crop protection treatment, livestock vaccination etc.).

Many of the farmers' organizations running the shops have managed to find financial support for the establishment of other services around the shops (rural radios, savings and credit banks). These sets of independent but complementary services form what are known as "service centres".

External factors

The emergence of input shops has brought into being a supply that has in turn revealed a considerable demand for very small individual quantities (a "diffuse" demand), which would never have been expressed without the existence of this supply.

The Government of Niger's Rural Development Strategy encompasses the essential role of farmers' organizations in the distribution of inputs, making input shops a cornerstone of local distribution.

Throughout 2006, the Inputs Project supported a long process of formulation of a partnership-based, decentralized strategy of input procurement for sustainable agriculture. Since this strategy was formulated and adopted, the Government has shown a growing wish to restructure its Central State Input Procurement Bureau, opening it up to a real participation of farmers' organizations. The Government thus recognizes the important role played by farmers' organizations in the distribution of inputs, particularly through the networks of cooperative input shops.

MAIN LESSONS

By offering diversified, appropriate products, the input shops have made a major contribution to improving the supply of quality inputs for poor small farmers. Today these shops are part of whole input procurement systems that are gradually being organized by the farmers' federations, adopting a strategy of pooled orders, thus contributing to a reduction in prices and in particular providing a greater guarantee of quality. These joint orders can be built up gradually on the basis of confidence in the strict management of the grass-roots input shops, so that a federation that is known to have well-managed input shops finds it easier to obtain documentary credit to order fertilizer on the international market, without paying almost until the fertilizer reaches the final users (deferred payment agreed by suppliers).

Farmers' organizations in neighbouring countries are keeping a keen eye on this initiative in Niger, because of the novel fact that farmers' organizations and not private fertilizer distributors launched the network of input shops.

However, if the contribution of the input shops to supplying small farmers is to be further improved, it is important to remove constraints hampering the procurement of some types of input (for example DAP) linked to the failure of certain suppliers.

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For further information, consult:

Project for Promotion of the Use of Agricultural Inputs by Producer Organizations:
<ftp://ftp.fao.org/docrep/fao/011/ak159e18.pdf>



INTEGRATED RICE PRODUCTION COOPERATIVES AND CYBER-SEEDS SYSTEM

BACKGROUND

The structural adjustment policies of the 1980s led the Ivorian State to withdraw from certain productive and marketing activities in favour of the private sector, with a refocusing of its activities on more strictly governmental functions. In the seed sector, the role of government services has since then been confined to planning, legislation, quality control, certification, training and the production of prebase and base seed by national research institutes. The private sector is responsible for the multiplication and marketing of certified seed.

However, it should be noted that the private sector is basically interested in the seed of high added-value crops, such as hybrid seed and horticultural crop seed, thus ignoring the needs of the small farmers who constitute the backbone of the Ivorian agricultural sector.

In the face of this situation, a number of community seed production initiatives aimed at helping producers produce quality seed were launched with support from such development agencies as the National Rice Programme, the National Rural Development Support Agency and various NGOs.

The development of these community seed production systems has contributed to a substantial increase in rice seed and an improvement in its quality. Farmer seed multipliers have also been able to reduce the unit costs of seed production.

Despite these results in terms of the production of certified seed and the existence of a strong demand, disposal of the seed produced is still a serious problem for several reasons, in particular (i) the producers' lack of organization, (ii) the lack of access to financing and (iii) the lack of information on seed markets. In order to rectify this situation, initiatives were undertaken in Côte d'Ivoire not only through seed production cooperatives and rice marketing cooperatives, but also through Cyber-seeds.

INSTITUTIONAL INNOVATION

Seed production and rice marketing cooperatives

One of the major organizational innovations to address the problem of access to rice seed was the establishment of cooperatives charged with producing certified seed and

producing and marketing paddy (FAO, 2008). These cooperatives usually comprise the following bodies:

- a governing council;
- a general assembly composed of all the members;
- a management team responsible for administrative and financial management of the cooperative;
- commissions responsible for day-to-day management of a set of irrigated areas, distribution of inputs, supervision of sales and debt collection; four commissions may be distinguished:
 - a production commission in charge of inputs and the monitoring of cropping systems;
 - a commission to monitor agricultural machinery;
 - a loan commission responsible for granting loans and collecting debts;
 - a marketing commission responsible for market research and for selling produce from the irrigated areas at the best price.

The cooperative also has a salaried staff (in particular an agricultural expert to support growers). The producers have been trained in irrigated rice production techniques (between 2000 and 2008).

In this organizational model, the more experienced members are selected and trained to produce seed for the other members of the cooperative, who specialize in paddy production. The cooperative also undertakes to supply producers with other inputs (herbicides, fertilizer etc.).

Quality control of the seed is carried out by the National Laboratory for Agricultural Development Support. The cooperative provides certain basic infrastructures for treating seed.

Through its marketing committee, the cooperative is responsible for the marketing of all the rice produced. In this way it guarantees a sure outlet for seed producers, who plan their production according to the requirements of the other members and provide a reliable source of quality seed to the rice-growing members of the cooperative.

In this way the system provides a stable price for seed producers inasmuch as the market is already well-known in advance and the price is negotiated, reviewed and fixed within the cooperative.

Through this system, rice production can therefore be better planned and less risky, because rice producers and seed producers work together so that the supply of seed can be better adjusted to the demand from rice producers.

Cyber-seeds

As part of the Government's activities promoting the Community-Based Seed System (CBSS), various groups of seed-producers were established. The improvement resulting from establishment of these groups, in both the quantity and quality of the seed produced, has been hampered by problems in marketing the seed, linked to: (i) the lack of information on the availability of seed; (ii) the lack of information on farmers' requirements; (iii) the lack of information on the activities of seed-producers' organizations; and (iv) poor knowledge of the value of seed products. An example was seen in 2004 with the Daloa Foodcrop Production and Marketing Cooperative, which found itself with an unsold stock of 600 tonnes of Nerica rice seed and 200 tonnes of maize seed, when a demand for seed of these two crops did in fact exist in the country.

Apart from cooperatives for the combined production of seed and paddy, one of the initiatives developed in Côte d'Ivoire to address the problem of marketing seed was the establishment of Cyber-seed systems.

A Cyber-seed is a computerized information system managed by a farmers' organization or a seed-producers' cooperative in association with the National Seed Observatory, the Ministry of Agriculture's information service on seed established by the African Rice Seed Project of the General Directorate of Agricultural Production and Diversification. A link had to be created between the National Seed Observatory located in the Ministry of Agriculture and the Cereals Import and Export Markets Observatory set up by the National Rice Programme.

The farmers' organization or cooperative hosting the system is selected for its dynamism and expertise in the seed sector, the regularity and quality of its production (more than 100 tonnes a year) and the existence of storage facilities.

The Cyber-seed systems provide information through the Internet on the farmers' organization, its seed production activities (production plan, available stocks, categories of seed, current prices, quality, traditional varieties, improved varieties etc.). This information is vital in ensuring the good marketing of seed, seedlings and other agricultural products.

The farmers' organizations work with farmer **quality agents** responsible for regular monitoring of production plots and stocks in coordination with the seed service and regional directorates of agriculture. A quality agent is a farmer chosen by his or her fellow farmers to provide the necessary support to farmers' organizations and cooperatives with regard to seed. He or she is trained in quality control techniques, is approved by the seed services

to control seed in village communities, and ensures that services are provided on behalf of farmers' organizations and cooperatives in the following main areas:

- support for the production of quality seed;
- monitoring of seed plots;
- seed collection and stock management;
- data collection, management and dissemination.

The African Rice Seed Project has thus trained 50 farmer quality agents, who have been equipped with bicycles and measuring instruments to carry out their task, so that farmers' organizations that so wish may have an internal monitoring tool enabling them to produce "controlled" seed. The farmer quality agents collect data and enter them on the Cyber-seed terminal of the farmers' organization. The data are sent to the observatory by Internet and the observatory staff process it according to:

- region, locality, farmers' organization;
- type of variety (traditional, improved);
- category of seed (certified seed – G3, G4, R1, R2; controlled seed; seed of acceptable quality).

The processed data are made available to the public, who can access them through the Internet. They are also used to set up seed programmes and variety maps and to select agricultural development strategies.

The Cyber-seed also has a promotion function: each farmers' organization belonging to the network has a dynamic website that can be accessed through the observatory's main site.

IMPACT

Seed cooperatives

Promoting seed is a cost-effective activity for producers, so long as inputs (fertilizer, herbicides) are delivered on time, producers have the financial resources to pay daily labour, storage costs are reduced to a minimum and quality control is carried out.

The **Cyber-seeds** have achieved the following results:

- Establishment of a **simple, effective procedure for collecting and disseminating information** at village community level. The four Cyber-seeds installed, out of the target of fifteen, are operational. The information and statistics of the beneficiary cooperatives are collected and disseminated.

■ **Greater proficiency in sowing.** Sowing has been mastered, for seed plots are regularly visited by farmer quality agents, who keep a precise record of producers and the plots established. Only plots meeting production standards are approved, while the others are downgraded by the agent. This system obliges producers to apply the techniques learned in field workshops in order to obtain quality production. The information uploaded onto the Cyber-seed gives the name of the producer, the variety produced, the quantity, the selling price and the name of the agent monitoring production. This system forces the actors to be meticulous in their work.

■ **Facilitation of seed sales.** A cooperative benefiting from the Cyber-seeds was able to sell 30 tonnes of maize seed to an international NGO that contacted it through the Internet. Other beneficiaries have been able to off-load their production locally with no difficulty. The Cyber-seeds also offer a channel of expression for farmers' organizations and cooperatives, so that local situations such as crop diversification and companion cropping can be taken into better account.

KEYS TO SUCCESS

Internal factors

The experience and expertise of their members is an essential factor in the success of the cooperatives. They work with the African Rice Seed Project and benefit from a number of training sessions and technical advice.

The cooperative members' keenness to succeed in the undertaking has also been a determining factor. The seed producers selected are especially highly motivated.

The modest size of the cooperatives makes it easier to manage the supply and demand for seed among members.

With a view to making the Cyber-seeds cost-effective, it is best if the members of a given cooperative produce more, so as to satisfy local demand and sell the surplus through the Internet.

Links among actors

Good coordination among stakeholders

The roles of the various stakeholders – State institutions, the private sector, research services, extension services, advice and support services and the quality control laboratory – are clearly defined, making the production, certification and marketing system effective.

A good distribution and understanding of roles are put to good use by the Cyber-seeds, which provide clear traceability of seed placed on the market.

Support from various projects over several years

The cooperatives have been supported by various projects and donors since 2004: the Seed Production Project of the African Seed Network, the Ministry of Agriculture and the Interprofessional Fund for Agricultural Research and Consultancy; the European Union in 2006-2007; and FAO since 2008.

The Cyber-seeds have been fine-tuned by the CBSS Project, with technical support from the African Seed Network. They have been supported by the Interprofessional Fund for Agricultural Research and Consultancy, especially for the operation of the Daloa Cyber-seed. The CBSS Project is financed by the Japanese Government's Humanitarian Development Fund through the United Nations Development Programme.

External factors

The availability of land with a secure contract for its use for irrigated farming is critical for the success of the seed cooperatives. An agreement was signed by the Government and landowners to ensure that the farmers using rented irrigated land would not face major conflicts with the owners. Security of land tenure is the main factor in production and also an opportunity for effective operation of the Cyber-seeds.

The National Rice Programme and the CBSS Project provide support to farmers in terms of access to inputs and capacity-building.

CONCLUSION

Main lessons

The establishment of cooperatives for combined seed and paddy production and of Cyber-seeds has contributed greatly to solving the problems of marketing seed:

- By taking charge of seed production, using the special skills of experienced producers, the cooperative can guarantee a sure outlet for seed producers.
- The Cyber-seeds have made a major contribution to improved information on seed markets. They also enable producers to profit better from the strategic option to promote quality seed through traceability, that is, the individual quality monitoring of each seed batch and each seed producer or cooperative.

- In addition to their twofold mission of education and the promotion of quality seed and hence productivity, the Cyber-seeds can offer farmers' organizations and cooperatives a new framework for expression and also for awareness-raising on the concept of biodiversity preservation – a field in which Africa must resolutely play a leading role by implementing agricultural policies that are both productive and respectful of the environment.

Recommendations

The main recommendations to the Government and development aid agencies may be set out as follows:

- The Cyber-seed network should be expanded to other departments requesting it, with a view to providing country-wide coverage and thus providing an overview of national production.
- Capacity-building for Cyber-seed administrators should be pursued.
- Cooperatives should be encouraged to offer financial motivation to farmer quality agents.
- The National Seed Observatory's website should be boosted by creating links with other sites.

Contributors

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ON-FARM MANAGEMENT OF AGRICULTURAL BIODIVERSITY IN NEPAL

CONTEXT

In Nepal, rural farmers as most of the rural communities in the developing countries, have very limited access to external information, materials and inputs. The geographical terrain and poor infrastructure make it even more difficult. Agricultural biodiversity is a crucial part of rural farmers' livelihood providing food security, nutrition and fuel as well as playing a role in social and religious contexts. Since more than 80% of the population depends on agriculture for their livelihoods, *in situ* or on-farm management of crop genetic resources plays a vital role. Farmers are directly conserving, managing and selecting the crops, in order to enhance the value of agricultural biodiversity to improve the resources available for the rural poor and for humanity as a whole. Hence, local farmers and communities need to be supported and empowered in assessing and managing their agricultural biodiversity assets.

INSTITUTIONAL INNOVATION

In response to the rising importance of *in situ* conservation, Bioversity International launched the first phase of the project "Strengthening the Scientific Basis of *In Situ* Conservation of Agricultural Biodiversity" in 1995 in eight countries, one of which was Nepal. Three communities were selected in Nepal (Jumla -high hills, Kaski- mid-hills and Bara -low land, districts) representing different ecosystems. The main objective was to ensure *in situ* conservation and utilization of crop genetic diversity for sustainable agricultural development, food security and ecosystem health. The purpose was to strengthen the scientific basis, institutional linkages and policies that support farmers in the conservation and use of crop genetic diversity.

The project team and the various stakeholders have implemented a **wide range of activities and tools that integrated science and local culture** such as diversity fairs, diversity blocks, diversity kits (see below), community biodiversity registers, community seed banks, participatory plant breeding, rural roadside drama, rural poetry journeys, Hindu Teej song competition and a local radio agricultural programme.

■ **Diversity fairs:** Traditionally there are local markets and weekly fairs in Nepal which provide an opportunity for exchange of seeds and knowledge. These traditional events are organized by local institutions such as women's groups, community based organizations, indigenous people's organizations, farmers' groups and schools. By up-scaling these events with technical facilitation from research and development professionals, additional impacts can be obtained. Some of the main objectives include public awareness, localization of areas of diversity and identification of rare and unique species, documentation of variety names and associated knowledge and education for the younger generation.

Example of a Diversity fair: In 1998, 22 households of Begnas village in Kaski district participated in a diversity fair. One of the households displayed aromatic sponge gourd which was considered a rare variety. After the fair, the seeds of the aromatic sponge gourd were multiplied in the diversity blocks and distributed as a part of diversity kits in Begnas village. By 2000, over 95 households were growing this gourd.

■ **Diversity blocks:** This method is specifically designed for annual crops such as rice, finger millet and taro, to measure farmers' consistency in naming and distinguishing varieties. The field blocks are accompanied with a sign indicating the name of the crop variety. Other purposes of the diversity blocks are to sensitize local communities on the value of community-managed biodiversity, create ownership of local environmental health and multiply planting materials for research and development.

■ **Diversity kit:** It is a set of different seeds made available to farmers. This practice is an integral part of community biodiversity management programme and is linked with diversity fairs, diversity blocks and community seed production. Local institutions such as women groups, schools and community based organizations are encouraged to develop their own diversity kits for the deployment of diversity among fellow neighbours. By distributing and sharing different seeds, it helps farmers to generate income in the short and long term. Another important aim is to deploy diverse cultivars and species with the objective of enhancing diversity and reducing vulnerability from pests and diseases.

These activities and tools have enhanced community awareness about the importance of indigenous products and crop diversity as well as served to strengthen the ties between farmers, communities, international and local researchers and government experts on agriculture and development.

The local institutions have increased recognition of the importance of their local biodiversity. Participatory tools have helped the local institutions to have a stronger sense of ownership of the local crops, as well as improved access to numerous varieties.

IMPACTS

On farming communities

Farming communities in the project in Nepal have received **direct economic and social benefits** from cultivation of diverse crops and cultivars. The diversity fairs enhanced the value addition and market linkages, which enabled rural farmers to reach larger scale consumers.

Example of a market linkage: the Pratighya Cooperatives of Begnas Ecosite in Kaski district has been linked to Shital Agro-Enterprise, supermarkets, hotels and popular local food culture and ecotourism outlets in Pokhara (the most popular city among tourists in Nepal). Another example is local taro products (*Maseura, Tandre and Koreso*) which are marketed through better processing, packaging and nutrition analysis.

Other benefits of diversity fairs, diversity kits, community seed banks and community biodiversity registers include **improved access to unique and valued landraces**. For instance aromatic sponge gourd seed, some varieties of rice and taro were initially identified by farmers as rare crops. However, over the years the availability of planting materials increased in the communities across the three ecosites of the project.

Through participatory plant breeding and community biodiversity register activities for rice and other local crops, the farmers and communities have **increased ownership over genetic resources**. During the course of the project, local farmers have also participated in workshops and training to further enhance their technical capacity in maintaining and improving local crop diversity.

The *in situ* conservation project of diverse traditional crops and landraces also contributed to **ecosystem health** as it required limited use of chemical inputs and reduced the vulnerability of crops to pests and diseases. The participatory plant breeding has developed better adapted crops which demand low inputs with high yield.

Farmers have already developed a number of improved landraces that increase the value of landraces and thereby ensure continued on-farm cultivation.

It is also important to acknowledge that the local communities who were involved in the project are **still self-running** and implementing the conservation programme as they were empowered by various tools and workshops. The communities now make conservation and development decisions to continue improving their economic, social and environmental conditions.

On other stakeholders and areas

Other stakeholders such as local research and development organizations have been involved in supporting farmers' new initiatives such as domestication of traditional medicinal plants in Nepal.

Other areas in which the project has seen successful include:

- Creation of a knowledge base and information on farmer-valued local genetic resources for future crop improvement. The knowledge and information of local genetic resources are documented and kept in a community register by community members.
- Documentation of farmers' traditional knowledge and local diversity to protect them from biopiracy within the Ministry of Agriculture and Cooperatives as well as national NGOs.
- Raising awareness through culturally adapted tools such as workshops, a local radio agricultural programme, poetry journeys and roadside dramas.
- Institutionalization of participatory plant breeding methods in national research systems.
- Scaling up *in situ* conservation as a part of the development strategy in government agencies.
- Local and national capacity building through human resources and development of modern molecular laboratory facilities for genetic characterization and analysis.

KEYS TO SUCCESS: WHY DOES IT WORK?

Locally driven processes and participation of women

The main factor of success was the process of community empowerment as a part of the project. The project provided an enabling environment for the community and the farmers to make decisions on conservation and development activities. It supported communities access to funds and to use the resources on priority

areas that communities had identified. This process helped to develop their feeling of ownership which made the community members confident, self-reliant, better organized, cooperative, inclusive and influential within the community and outside of community.

The entry point of community-based biodiversity management is through women's groups. Awareness raising programmes such as rural roadside drama, rural poetry journeys and Hindu Teej song competitions were the methodologies used in the project involve women from the communities. As these activities were embedded in the local culture, it was easy for performers and audiences to exchange knowledge and messages.

A multi-stakeholder partnership and a long term commitment

The project adopted a multi-stakeholder partnership approach to incorporate multi-disciplinary, multi-sectoral inputs and multi-institution participation. This partnership approach was built upon mutual trust and understanding of the comparative advantages of stakeholders, including clearly defined roles and responsibilities and transparent resource sharing.

Bioversity International led and implemented the project together with the local partners, Nepal Agricultural Research Council (NARC – a research organization) and Local Initiatives for Biodiversity, Research and Development (LI-BIRD – a research and development non-governmental organization), with valuable collaboration and inputs from the farming communities.

Policy and development experts of the Department of Agriculture (DoA) and the Ministry of Agriculture and Cooperatives (MoAC) were also involved in the project. The main objective to include DoA and MoAC in the project was to develop policies on conserving and utilizing agro-biodiversity. The project provided opportunities for policy and development experts to have direct discussions with farmer communities. This process helped the experts to recognize the important role of farmers and their community based institutions.

Each stakeholder provided their expertise. Bioversity brought in international expertise, experience and the capacity to lead a large-scale project; NARC contributed with its national experience in agricultural research and Local Initiatives for Biodiversity, Research and Development (LI-BIRD) enriched the project with its experience and capacity in participatory research and development and community mobilization.

After a decade of project implementation, some key factors have been identified as crucial in order to maximize the benefits of multi-stakeholder partnership.

- Multi-stakeholder partnership is built on mutual contribution, trust and respect for each party's expertise, experiences and other comparative advantages;
- Multi-stakeholder partnership is productive when all parties agree on and respect the terms and conditions;
- Success of multi-stakeholder partnership depends on the quality of inputs and continuous commitments of all parties;
- Multi-stakeholder partnership needs participation and transparency regarding project funds among partners to avoid conflict over financial incentives;
- It is essential to respect each party's institutional and external environment and accept flexibility in resource mobilization;
- Success of multi-stakeholder partnership depends on sharing failure and obtaining inspiration from success cases;
- Identifying each partners' strength is crucial in order to maximize the synergy and the team building;
- Multi-stakeholder partnership produces best results when it is manageable in size and includes partners who have a strong stake and commitment to the project.

It is also important to acknowledge that the benefits generated through the project in the economic, social, genetic and ecological areas are the outcome of long-term commitment and continuous collaboration between the various stakeholders.

Enabling environment

The farmers and their institutions have participated in debates on farmers' right and what agricultural products should be exchanged and what should be protected. The community biodiversity register is one of the documentation approaches, which has increased not only the value of biodiversity but also awareness amongst policy makers. This practice was later taken by the Ministry of Forests and Soil Conservation (MoFSC) and Ministry of Agriculture and Cooperatives (MoAC) countrywide to document and establish ownership of local genetic resources. The Access and Benefit Sharing (ABS) law of Nepal recognizes this community biodiversity register as legal documents, although the ABS law has not yet being endorsed by the parliament.

CONCLUSIONS

One of the most important lessons learned from the project was to maximize the synergy between the community, local government and NGO professionals in order to achieve a common objective. This requires change of mindsets of everyone involved in the project, and all members need to cultivate long-term partnerships for effective implementation. Another lesson learned is the importance of community-based approaches for a successful *in situ* (on-farm) conservation of agricultural biodiversity. This requires empowerment of the community and community based organizations as precondition for success.

Although there is a need for continuous empirical assessment and measurement of the impacts on genetic diversity, ecosystem health and people's livelihoods, the *in situ* conservation project in Nepal has provided evidence that adding benefits and intervention strategies has the following implications for the elaboration of national policy:

- Market development: Policy targeted to market development of local crops and landraces enhances on-farm conservation and provides direct economic, social, genetic and ecological benefits to farming communities. On-farm *in situ* conservation linked to particularly niche markets for organic and nutritional products has shown that local products can develop a comparative advantage by including other sectors of the economy.
- Access and benefit-sharing: Innovative participatory approaches such as plant breeding, community biodiversity registers and diversity fairs can be used as an essential part of research and development strategies for enhancing farmers' access to genetic resources, providing and sharing benefits with communities and sustaining *in situ* conservation.
- Ecological agriculture: Policy linked to *in situ* conservation can enhance a broader environmental policy of maintaining ecosystem and human health and sustainable agriculture. It also promoted ecological agriculture and ecotourism which have economic benefits for the local communities.
- Benefits to the global community: The information generated and valuable genetic resources conserved on-farm provide benefits not only to individual farmers and local communities but also to broader society at the national and global levels and to humankind as a whole. It is, therefore, important to share the outcome through public awareness, publications, international conferences and other means to disseminate the information.

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INVENTORY CREDIT: A FINANCING METHOD SUITED TO THE NEEDS OF SMALL FARMERS, BOTH MEN AND WOMEN

BACKGROUND

General context

Niger is located in the semi-arid Sahelian region of West Africa, one of the poorest regions in the world, with the lowest human development indices. The extremely harsh climate is marked by a very short rainy season, with annual rainfall of 350 to 800 millimetres, varying widely in both time and space. The expansion of cultivated areas to meet the increased food needs resulting from considerable population growth has led to a reduction in fallow periods and greater exploitation of marginal land, with a reduction in soil fertility as a consequence. The combination of these adverse factors has meant a fall in the yields of millet and sorghum, the main food crops.

Situation to be addressed

Lack of access to credit is one of the most important of the many constraints impeding agricultural intensification among Niger's small farmers. Several factors restrict banks' supply of agricultural credit to small farmers: the influence of climatic instability on agricultural production increases the risk of non-repayment of any loan, while the small size of the amounts requested, combined

with the geographical distance of banks, increases transaction costs and diminishes the banks' keenness to finance agricultural activities. In order to counter this situation, local financial services have been developed by "decentralized" financial institutions – savings and credit cooperatives and unions, microfinance institutions etc. However, the inappropriate types of guarantee demanded (personal contribution, savings blocked for 30 percent of the loan, joint securities etc.) and the paucity of their financial resources reduce their capacity to respond to farmers' loan requests. In order to pay for inputs (fertilizer, seeds etc.) at the start of the season, small farmers therefore often have recourse to the traditional system of loans granted by traders at usurious rates and repaid in kind, with the harvest calculated at its lowest value.

Moreover, inasmuch as agriculture is small farmers' sole source of income, their need for cash (to purchase food, pay for children's education etc.) means that they have to sell a large part of their production immediately after harvesting it in October or November, when prices are at their lowest because of the simultaneous flow of agricultural produce onto the market. Nor does their low income allow farmers to obtain the necessary

quantities of quality inputs needed to boost their production. This situation keeps them in a vicious circle of low prices and lack of access to inputs, reducing their possibilities of intensifying their production or diversifying and undertaking activities that would generate supplementary income (fattening livestock, irrigated crops, processing agricultural produce etc.) during the dry season. It also contributes to keeping small farmers in a state of food insecurity, especially during the lean period from July to September, when they have exhausted their stock of cereals and are waiting for the next harvest.

INSTITUTIONAL INNOVATION

The technique of **inventory credit** or **inventory credit** was introduced and adapted in Niger to help small farmers, through their cooperative or association, to put their agricultural produce on the market later and at a better price, while having credit available to meet their needs or undertake a profitable activity immediately after the harvest. Inventory credit is a loan guaranteed

by a stock of agricultural produce whose value increases considerably over a given period.

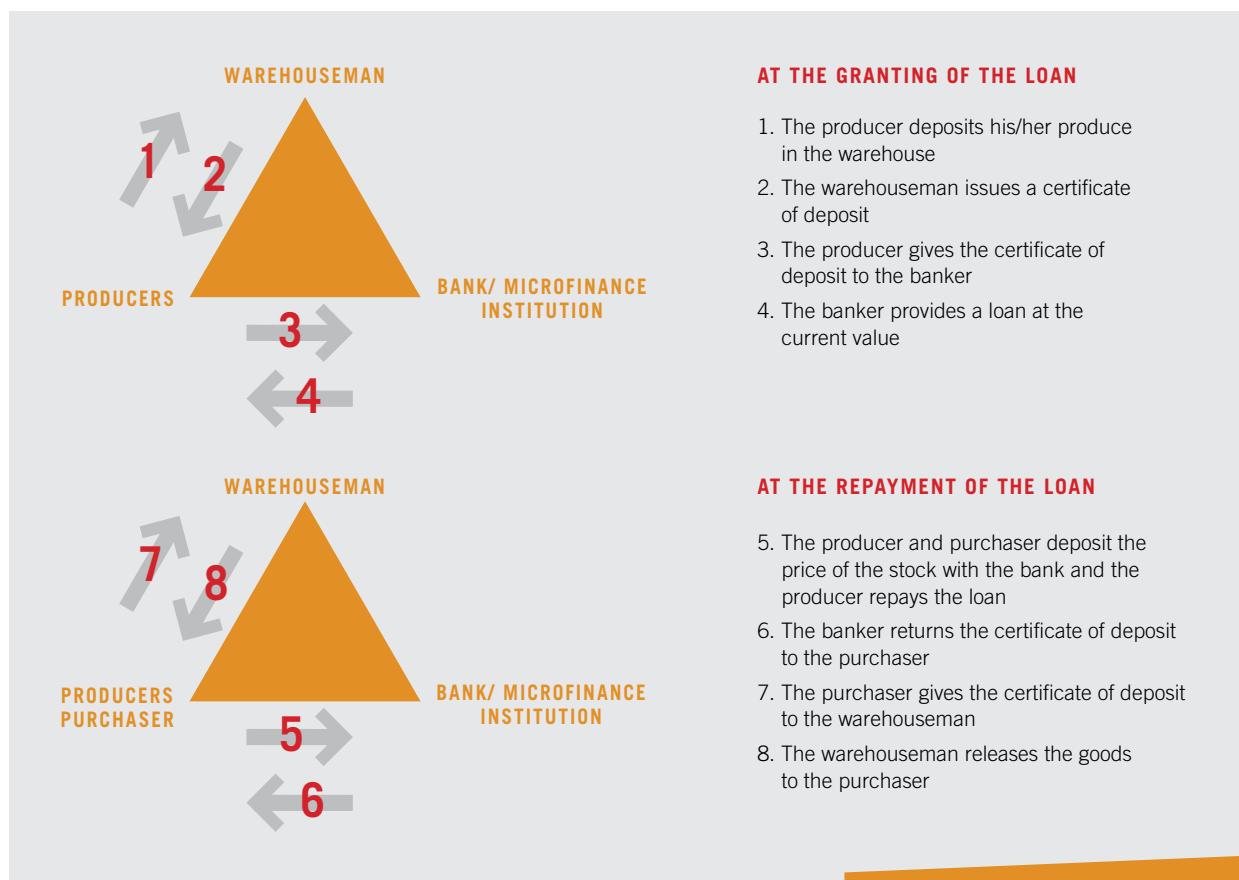
In its classic version, inventory credit involves three actors: a financial institution, a borrower and a warehouseman. The relationships between these three actors are illustrated in the diagram below.

In the context of developing countries, inventory credit may take one of various forms, depending on the country: "bank holding", "third-party holding", "domiciled warrant" or "community holding". Apart from the loan contract, another contract is usually drawn up (agreement on stock as collateral) in order to manage the collateral represented by the stock of agricultural produce. However, the two aspects (loan and guarantee) may be governed by a single contract.

In the case of farmers in Niger, where there are no warehousemen, the "community holding" system was selected, with a number of modifications, in that the functions that would have been carried out by an approved operator are divided between the farmers' association and a local financial institution:

- The farmers, grouped into cooperatives or other forms of association, store a portion of their produce in a suitable warehouse of their own. The individual

Figure 8.1



farmer does not have direct access to inventory credit; rather, the cooperative borrows from the financial institution and redistributes the loan to its members according to the amount stored.

- The local financial institution verifies the quantity, quality and manner of storage of produce, and assesses the value of the stock on the basis of current market prices. It then grants a loan equivalent to 80 percent of the value of the stock.
- The financial institution and the farmers' organization then lock the warehouse together, using one padlock each, with each of them keeping all the keys to its own padlock. There is no exchanging or lending of keys and the warehouse is opened only in the presence of both parties. This "double padlock" arrangement and the signing of an "agreement on stock as collateral" replace the third-party holding by the warehouseman and the certificate of deposit, as in the case of classic inventory credit.
- The farmers' organization then distributes the loan received to its members according to each one's contribution to the stock used as collateral. The inventory credit operation is described as "tied". The individual farmers know that their stored produce will be sold at a higher price in the months to come and that they will therefore be able to cover expenses. The farmer can therefore devote a portion of the money from the loan to financing an activity generating supplementary income: fattening livestock, extracting oil or market gardening.
- Some months later, when the farmer repays his or her loan, the financial institution releases the stock, which has increased in value in the meantime. The operation is thus "untied". The loan is often repaid with income from the supplementary activity and not with that from the sale of the collateral stock, so that the total value of the stock goes to the farmer. If the farmer does have to use the stored produce for the repayment, the financial institution and the farmers' organization go to market together for the sale.

IMPACT

Surveys on the effects of inventory credit show positive results for farmers and financial institutions.

Impact for producers

Increased income

Very clear positive results have been observed in terms of optimization of agricultural produce by selling it at good prices, improvement in income, increased security of the cropping season (preservation of seed, cash to purchase inputs) and improvement in food security.

For the farmer or farmers' organization participating in the inventory credit process, the average economic results over several years concerning various types of agricultural produce placed as collateral and various income-generating activities financed with the loan have been encouraging. A 25-percent increase in the value of the stored produce and a net gain of 8 percent from income-generating activities were observed, making a total increase of the capital (net of all charges) of about 33 percent in four to six months' storage.

The surveys also show that an average 20 percent of the gross margin is spent on inputs. An average 12 percent of the loans obtained is used to purchase inputs (6 percent for farmers growing rainfed crops and up to 48 percent for those growing predominantly horticultural crops). The stocks of agricultural produce used as collateral for the inventory credit are made up of an average 29 percent of seed stocks (32 percent in the case of farmers growing rainfed crops and 8 percent among those growing predominantly horticultural crops).

Increased food availability

An average 18 percent of stocks is made up of food supplies for the lean period (20 percent among farmers growing rainfed crops and 0 to 16 percent among those growing predominantly horticultural crops), while an average 53 percent of stocks is earmarked for sale (48 percent among farmers growing rainfed crops and up to 90 percent among those growing predominantly horticultural crops), thus improving the farmers' food availability during the lean period.

Impact for farmers' organizations

Improved organization

Although it is an instrument to improve access to credit, the inventory credit or inventory credit system has also had positive effects on the internal organization of farmers' organizations: inventory credit is clearly a system that encourages cooperatives to improve their organization.

However, the fact that cooperatives are also organized into a union or federation is a result of such other factors as the advantages of pooling their input orders and setting up and supplying a network of input shops.

Impact for financial institutions

Reduced risks, increased confidence

With regard to finance, the facts that (a) inventory credit makes available a collateral with a value higher than the amount of the loan (loans are generally granted for 80 percent of the value of the stock) and (b) a joint security is formed by farmers' organizations' grouping small loans together, reduce the risks of non-repayment of the loan, while also reducing transaction costs. This has boosted the confidence of financial institutions in financing agricultural activities. To illustrate, the financial volumes of inventory credit rose from a pilot initiative involving less than CFAF 2 million in 1999 to full-scale financial operations involving nearly CFAF 1 billion in 2007. So far, inventory loans – capital and interest – have been repaid in full without major difficulty, which has improved the overall health of the portfolio and also the creditworthiness of participating financial institutions with respect to sources of the refinancing needed to scale up their operations.

KEYS TO SUCCESS

Internal factors

Internal dynamism of farmers' organizations

The success of inventory credit rests on the prior existence of a fabric of farmers' organizations and financial institutions that agreed to introduce the innovation by equipping themselves with rules of conduct, inasmuch as the farmers' organizations have to organize themselves properly if they want access to inventory credit. Apart from accepting the rules and principles of inventory credit, they must:

- draw up and adopt appropriate rules of procedure;
- outfit (or undertake to build) a warehouse meeting well-defined standards;
- constitute a sufficiently large stock, while respecting quality standards;
- establish a management committee that undertakes to manage the stock, sponsor the loan application to the financial institution, submit the loan application at the appropriate time, redistribute the loan and recover it in a professional manner.

Links among stakeholders

A multi-stakeholder partnership

The viability of this approach depends largely on the success of a partnership among a farmers' organization, a local financial institution and a refinancing institution, supported by a local project.

- The farmers' organization is made up of a group of members who want to use the inventory credit system and accept its rules and principles.
- The local financial institution adapts its credit policies to the particular features of inventory credit and mobilizes the necessary financial resources.
- The source of refinancing – central bank, commercial bank etc. – verifies the local financial institutions' creditworthiness and grants line-of-credit facilities.
- The local project provides support to the farmers' organization and the local financial institution in the form of training, organization and coordination of participatory monitoring and evaluation, while also disseminating knowledge about the approach to other interested parties.

A long-term project support suited to the context

The Project for Promotion of the Use of Agricultural Inputs by the Producer Organizations (a Ministry of Agriculture project executed by FAO and commonly known as the Inputs Project) was launched in 1999 and ended in 2007. From the start, this project promoting inventory credit in Niger provided a demonstration of the viability and effectiveness of this system. Its activities were confined to technical support (training) and methodological support (active ongoing participatory monitoring and evaluation) for the targeted recipients of the initiative (farmers' organizations, local financial institutions, refinancing banks), basing its interventions on these groups' own capacities and on actions to bring them together, and through information and awareness-raising activities. It also based its interventions on a partnership among projects, farmers' organizations and local financial institutions in order to overcome the constraints (growing needs for training, warehousing facilities and financial resources) that hamper the expansion of inventory credit. In this context, access to the refinancing of local financial institutions through the traditional banking system has been one of the keys to the success of inventory credit in Niger.

External factors

The project has also raised the awareness of technical ministries (the Ministry of Agricultural Development, the Ministry of Economy and Finance, the Ministry of

Territorial Management and Community Development etc.) and bilateral and multilateral cooperation agencies, so that they should bear inventory credit in mind when formulating strategies and projects.

The Inputs Project has thus led to the recognition – by current development projects, the State and donors – of inventory credit as an effective instrument in combating poverty in rural areas and the inclusion of this system in the country's development policies.

CONCLUSIONS

Main lessons

Inventory credit is a major innovation in the financing of small farmers' agricultural activities in Niger. By pooling stocks of agricultural produce that is likely to increase in value over time, this credit mechanism provides the local financial institution with sure collateral and the possibility of reducing transaction costs. The arrangement has given farmers better access to credit, allowing them to initiate income-generating activities, set aside part of their harvest for the lean period and market the remainder at attractive prices, thereby improving their levels of income and food security.

However, as a mechanism based on short-term storage of agricultural produce (three to six months), inventory credit cannot be seen as a financial tool suited to meeting the need for medium- or long-term credit (investment). Nor can it be used with highly perishable agricultural produce, which is not easily stored and the price of which varies rapidly over time.

Recommendations

Any scaling up of this system requires in the first place the availability of good storage infrastructures and a proper grasp of storage techniques on the part of the farmers' organizations. Niger's experience with inventory credit also shows that if the system is to be successful, there must be a **framework of promotion and sustainable external support**, which could come from a **partnership with local financial institutions, collaboration among farmers' organizations** or partnerships within a federation of unions of farmers' organizations.

If the system is to be sustainable, **more storage infrastructures** are therefore required in rural areas, together with **capacity-building for farmers' organizations** regarding storage techniques, **boosting of the financial and management capacities of local financial institutions** and increased refinancing of these institutions in order to handle the increasing demand for inventory credit.

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All the data, photographs and diagrams are taken from slides and extension designs created by the Inputs Project.

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www.fao.org/landandwater/fieldpro/niger/default_fr.htm

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A GUARANTEE FUND TO ENSURE FERTILIZER SUPPLIES FOR CEREAL GROWERS

Union of Groups for the Marketing of Farm Produce in the Boucle du Mouhoun Region (UGCPA/BM, Dédougou, Burkina Faso)

BACKGROUND

More than 80 percent of Burkina Faso's inhabitants – about 11 million people on about 3 million family farms – make their living from agriculture. Cereals (maize, sorghum and pearl millet) are the country's staple foods and are the crops most widely grown. Although most of this production is grown for household consumption, a proportion is intended for the local and national markets. Market supplies vary according to the availability of the various products. Prices depend on the play between supply and demand, but also on the various stakeholders' market power.

The Union of Local Groups in Boucle du Mouhoun Region was set up in 1993 to rectify this imbalance and particularly to give farmers some more power in the market. It then became the Union of Groups for the Marketing of Farm Produce (UGCPA) in 2002. This latter union now has about 1 500 members divided into 56 groups, including 1 000 female farmers in 26 grass-roots groups and 500 male farmers in 30 grass-roots groups. It covers the six provinces making up Boucle du Mouhoun Region: Balés, Banwa, Kossi, Mouhoun, Nayala and Sourou.

The union has the main mission of organizing primary collection of cereals from its members and marketing these collectively. To ensure its members' ongoing adherence, it offers them a number of services, the most important being the granting of advance payments and various types of training. It carries out the following main activities in connection with the cereal value chain during the year:

- family surveys, followed by legalization of commitment contracts;
- payment of advances against anticipated receipts;
- pooling of surplus cereals by members of grass-roots farmers' groups, managers of local payment centres and senior extension staff;
- organization of transport of cereals from villages to Dédougou;
- storage in the union's central warehouses in Dédougou;
- monitoring of quality, cleanliness and packaging;
- search for market outlets.

Cereal supply commitment contracts

At the start of the crop-year, UGCPA members make a formal commitment to supply a specific quantity of

cereals (a certain number of sacks of maize and/or sorghum and/or pearl millet) to the union, to be marketed in common. This undertaking is formalized in a contract between the grower and UGCPA. The union then takes the quantities collected and sells them in the market, seeking the best price.

In the course of the crop-year, farmers may revise their commitment upwards or downwards. One of the main services requested of the union by its members is that of supplying quality inputs. However, the union has never been able to provide this service for lack of financial resources. If it were able to do so, its members' yields could be increased, leading to greater financial autonomy.

INSTITUTIONAL INNOVATION

In response to the 2008 food crisis caused by the sharp rise in agricultural prices, the Foundation for World Agriculture and Rural Life (FARM) very quickly gathered funds together, thanks to contributions from private enterprises: the BASF and Syngenta companies, Tereos (French agro-industrial cooperative for the sugar sector) and the Progosa Foundation.

The guarantee fund totals €30 413, allowing the lending of €68 236 (with a 45 percent multiplier effect). FARM turns the sum of the guarantee fund (€30 413) over to the group as a contribution to the group's own funds. FARM does not have the mission of recovering this amount. The arrangement boosts empowerment of the group regarding the use of money. With this sum of its own placed as a guarantee fund, the group can borrow up to €68 236 from the Burkina Network of Savings and Credit Cooperatives (RCPB) for the purchase of inputs. The loan thus has a multiplier effect of 45 percent. The annual interest rate is 8 percent. The guarantee fund is remunerated at an annual rate of 3 percent.

In the case of any default on payment, the guarantee fund is used to repay RCPB. The default risk is thus divided as follows:

- 45 percent of the total loan sum for UGCPA (corresponding to the sum of the guarantee fund);
- 55 percent for RCPB.

The partnership with FARM should thus be seen in the context of support to the union with a view to building up a **sustainable mechanism for the supply of quality inputs**.

- Presentation of the partnership between UGCPA and FARM
- **Key elements in the partnership**

FARM set up this project in the context of:

- a direct partnership between a farmers' organization and the funds of private enterprises supplied by FARM; this partnership was set up almost immediately after the onset of the 2008 food crisis;
- targeting of farmers capable of producing marketable surpluses to supply local markets; this initial targeting allows the organization's own funds to be built up, so that support can then be expanded to more farmers;
- the construction of a support and monitoring system by the farmers' organization with a view to better management of the services provided to farmers (linkage among fertilizer supplies, marketing, environmental impact and soil fertility).

IMPACT

Actions carried out in the context of the partnership with FARM (2008-2009)

The project was launched in 2008, with the aim of increasing the union's own funds, expanding the services provided by the union to its members and boosting the capacities of union staff and member farmers. In 2008 the project benefited 188 maize and sorghum producers, all of them men. In 2009 it benefited 232 maize and sorghum producers, and the intention is to continue expanding in future years.

The main components are as follows:

- making available by FARM of a fund for the benefit of UGCPA; this fund is deposited in the UGCPA bank and operates as a guarantee fund for a loan, so that farmers can obtain fertilizer supplies on credit; the union's own funds are also boosted through this mechanism;
- training: in techniques, management, advice to family farms, soil fertility management (use of mineral and organic manure) and cooperative dynamics (exchange visits planned with the Cooperatives for the Use of Agricultural Equipment [CUMAs] in Burkina Faso and Benin);
- support to UGCPA seed producers: prefinancing of seed and training;

- monitoring and evaluation of the supply of inputs: those carrying out the surveys were selected from the union's farmer members and were trained to carry out surveys of beneficiary farmers; this activity allows clearer links to be made between the services provided for production (fertilizer supplies) and the quantities marketed in common by the union.

First results of the 2008 cropping season

During the 2008 cropping season, average yields increased thanks to the project: 2.4 tonnes per hectare for maize as against a preproject figure of 2 tonnes, and 1.7 tonnes per hectare for sorghum as against a preproject figure of 1 tonne.

The union was able to acquire 23 tonnes of NPK and 18 tonnes of urea, which were then supplied to 118 farmers. The repayment rate for the 2008 season was 84 percent.

KEYS TO SUCCESS

The innovation was possible only thanks to the fact that UGCPA was able to bring into play all the skills and social capital acquired during its activities since 1993:

- experience of good governance (organizational and democratic life with empowerment of grass-roots members) within the union and at the grass-roots level;
- 15 years' experience in the collective marketing of maize and sorghum;
 - 1 512 tonnes in 2007/08
 - 768 tonnes in 2008/09
 - 2 000 tonnes anticipated for 2009/10 (contracts for 2 000 tonnes to be delivered to the Burkina Faso State Company for the Management of Food Security Stocks [SONAGESS])

- success in supplying cereals to national food security institutions (SONAGESS for national stocks) and international bodies (WFP), establishing a good reputation;
- experience in the management and storage of stocks through use of the SONAGESS warehouses, rented by the union for 15 years;
- an investment in storage infrastructures for cereals with a capacity of 1 850 tonnes with the financial support of the Jules Paul and Émile Léger Foundation, the Quebec Cash Crop Growers Federation, the Canadian International Development Agency and AgriCord;
- a 15-year partnership with RCPB on a credit line allowing the prefinancing of all cereal marketing operations;
- development of partnerships with private foundations from the North: FARM and the Jules Paul and Émile Léger Foundation;
- development of partnerships with farmers' organizations from the North: the Quebec Cash Crops Growers Federation and AgriCord.

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PRODUCERS GET TOGETHER TO STEP UP MECHANIZATION OF THEIR FARMS

BACKGROUND

Agriculture is Benin's main economic and export activity, supporting nearly two-thirds of the population, representing 25 percent of GDP and involving 80 percent of the working population. However, as in other developing countries, Beninese agriculture faces several constraints.

Apart from constraints associated with access to inputs, the increase in agricultural production to ensure better food security for the country comes up against difficulties in expanding cultivated areas due to the low level of agricultural mechanization. There is major potential for expanding cultivated areas, which would lead to an improvement in farmers' incomes and increase Benin's agricultural production. Farms – which are mainly of the family type – carry out most of their work by hand (75 percent of cultivated areas), which makes certain activities very laborious and time-consuming; for example, it takes eight to ten days to plough one hectare by hand, whereas a tractor could do the same work in four hours.

Moreover, the services offered by service providers are deemed very expensive and are often of poor quality and carried out late. Since Beninese farmers are not in

a position to purchase certain kinds of equipment (for example tractors) individually because their high price and the technical and financial limitations of family farms mean that they will not be cost-effective, they formed cooperatives to purchase such equipment and use it collectively.

INSTITUTIONAL INNOVATION

In order to address the difficulties of purchasing heavy agricultural machinery, Beninese farmers set up an initiative known as **shared mechanization** or Cooperatives for the Use of Agricultural Equipment (CUMAs), with support from the Departmental Federation of CUMAs of Dordogne in France. The initiative was initially confined to Borgou and Alibori Departments, but was then extended to all the regions of Benin.

In the Beninese context, a CUMA is a small group of farmers who **pool their resources** in order to purchase and use agricultural equipment according to rules of democratic self-management. The system allows the farmers to:

- purchase equipment they could not purchase on their own;
- make optimal use of the equipment;
- thus minimize the cost of mechanization;
- share risks;
- benefit from greater exchange and contact among themselves.

The group is composed of an average of ten farmers located fairly close to one another (at most 10 to 15 kilometres apart), who are inspired by the same modernization and development objectives and are financially solvent. The CUMA purchases the agricultural equipment on the basis of a financing plan involving a minimum of self-financing by the members of the group (in the form of shares), with the remainder being financed by a bank loan. The CUMA is registered with the Ministry of Agriculture, Livestock and Fisheries' departmental administration.

Once it has been set up, the CUMA is structured as follows:

- As a cooperative, decision-making is based on "one person, one vote". The CUMA has its own statutes and its own rules and regulations. Its general assembly elects executive directors and office holders (chairperson, treasurer, secretary and equipment manager) who are responsible for management of the CUMA.
- The equipment manager's vital strategic position means that he or she must enjoy the confidence of the members. He or she has to ensure that the equipment is available and monitor it, make field visits, draw up equipment use plans and ensure compliance with these, liaise between the tractor driver and the members, organize repairs to the equipment, request quotes from suppliers, organize maintenance of the equipment and make sure spare parts are available.

There are written rules, accepted by the members, regarding the way the equipment is to be used. In particular:

- lots are drawn for the order of use, limiting use to a portion of each person's area in each period, so that everyone can start to sow and also share the risks of mechanical breakdown;
- each member generally provides the fuel, filling up the tank at the end of work on his or her land;
- the driver must be carefully chosen and should be a reliable person with driving and maintenance skills; the members are asked to provide for the driver's training, and he is paid according to the successful

- "mechanical" running of the cropping season;
- the cost to each member is calculated according to variable costs (tractor driver, running repairs) and is invoiced on the basis of members' use, while fixed costs (major repairs, annual payments) are charged on the basis of the area involved;
- the CUMA may ask its members to advance their shares of variable costs at the start of the season, or even their shares of fixed costs in the case of major repairs.

The federative network

Development of the CUMAs at the national level (the National Union of CUMAs) is based on a well-structured federative network allowing the following actions at communal, departmental, regional and national levels:

- coordination and promotion of the CUMAs' development;
- defence of the CUMAs' interests in relations with government offices, financial institutions and suppliers;
- development of finance and supply chains.

IMPACT

Mechanization is progressing very well. The effectiveness of the Borgou-Alibori and Mono-Couffo CUMAs has not escaped the notice of the farmers of Benin, who are manifesting a yearly growing desire to organize their own CUMAs (nearly 80 percent of the CUMAs have been set up in the past four years).

Today there are about 100 very active CUMAs in Borgou-Alibori, grouped into a Regional Union of CUMAs, which organized its first national event in May 2008 in the form of the first field trade fair of Beninese CUMAs.

For example, in 2009, the Mono-Couffo region had 11 CUMAs (two of which already have equipment) and 182 members, accounting for a total area of 421 hectares. The Borgou-Alibori region has 95 CUMAs, 41 of which have equipment, and 838 members.

Each Beninese CUMA averages 10 farmers with a total area of about 100 hectares, and its average equipment is one 70-horsepower tractor, one plough and one 3-tonne trailer, for a total cost of about CFAF 10 million.

Cultivated areas are increasing. New areas are being placed under cultivation in this region, where the proportion of cultivated land is very small despite the exceptional potential of both soil and climate. In the zones of the first CUMAs launched 12 years ago, the areas under cultivation have doubled and there has been above all a **stabilization of yields**, especially of maize.

Moreover, **six directly connected jobs have been created** (three extension workers and three driver-mechanics). The financing of the coordinators' position, launched on the basis of the partners' budget, is being consolidated by self-financing from the CUMAs in the form of subscriptions to the umbrella structures. The mechanics are financed by invoicing the services to the CUMAs concerned.

The CUMA model is recognized by the Beninese authorities. The Government adopted the CUMA model as one of the key elements in its Strategic Plan for Agricultural Rehabilitation drawn up in 2006 by the Ministry of Agriculture, Livestock and Fisheries and leading in 2007 to the Programme Promoting Agricultural Mechanization. This programme is keen to involve Beninese CUMAs in the mechanization process being undertaken by the State and hopes to create two pilot CUMAs in each of the country's departments.

KEYS TO SUCCESS

More than ten years' development of the CUMA model in Benin has resulted in a number of lessons regarding the methods and parameters for the success of what could well become one of the determining factors in mechanization of the country's agricultural sector.

Internal factors

The success of the Beninese CUMAs is based on a model of activity comprising the following parameters:

■ An initiative taken in charge by its members

Groups with a limited number of members living in the same zone should be promoted. These members should be inspired by the same modernization and development objectives, be financially solvent and choose each other freely on the basis of criteria of reliability and honesty. The shared mechanization project must be desired and clearly understood, so that the equipment is not considered a gift.

Setting up a CUMA, especially when it is the first initiative of this kind in a given village or zone, must be based to start with on the best and most dynamic producers. Then, once these producers have gained experience with the techniques and methods, they can introduce new initiatives into their close circle and also bring in new groups that will benefit from their experience.

■ A group from which a leader will emerge

It is vital for the good running of the CUMA that the elected office holders (chairperson, treasurer, secretary etc.) be true leaders, capable of pursuing the CUMA's objectives correctly.

■ A group with equipment meeting members' needs

It is important that the equipment purchased be suited to the physical conditions of the environment and to the technical and economic parameters of the farms. For example, experience shows that a good balance is achieved with one tractor of about 70 horsepower, one plough and one trailer for ten farming families cultivating about 100 hectares in all.

■ A rational financing plan for the purchase of equipment

A CUMA that has every chance of success is undoubtedly one that has drawn up a clear, realistic financing plan. This might seem a small matter, but the relevance of a financing plan is as important as a good technical choice or the training of drivers and those responsible for the equipment. If a CUMA decides to invest in a tractor, a plough and a trailer, it is vital that it not forget any aspect of the total basis of the investment: many groups in the past have suffered for their failure to incorporate such associated expenses as transport, customs duties and bank charges into the basic sum to be financed, with serious consequences for their financial health. It is thus essential to forget none of the various elements making up the investment.

Another vital element in the financing plan is the role of **self-financing**. If the amount of self-financing is low, this will clearly weaken the project considerably. It would seem that the minimum self-financing is 20 percent, but that it would be best if it were 40 percent.

Partnerships

A technical and financial partnership for the long term. This project was initiated by the French Farmers and International Development (AFDI) association in collaboration with the Departmental Federation of CUMAs of Dordogne as part of the Programme for the Professionalization of Beninese Agriculture carried out by the French State and launched in January 1995. In 2004, the Regional Federation of CUMAs of Aquitaine decided to take over and extend the development of CUMAs after the close of the professionalization programme, inasmuch as this action was petering out at the time for lack of loans.

In 2007, a partnership with the Aquitaine Regional Council guaranteed a portion of the resources and also

the financing of the position of extension worker. Training is regularly provided for the leaders of the Borgou-Alibori Regional Union of CUMAs, the CUMAs themselves and the tractor drivers. The partnership is based on exchanges: the leaders of the Regional Union and of the CUMAs have had a chance to go to see how the French CUMAs work. Farmers and voluntary extension workers focus their energies on a range of components: support for the creation of a CUMA, technical and financial support for the Borgou-Alibori Regional Union of CUMAs, training of drivers, support for the training of CUMA leaders etc. Such action is based on the transfer of knowledge through North-South exchanges: journeys to Benin, organization of equipment collections in France, hosting of Beninese farmers in France.

In 2008, a two-year partnership with the French Ministry of Immigration, Integration, National Identity and Inclusive Development was launched.

These various partners have provided substantial support to the CUMAs.

External factors

Today the Programme Promoting Agricultural Mechanization says that it is interested in the CUMAs and has announced support that should see the allocation of substantial resources. However, in 2009 only 15 of the 400 tractors it had available were allocated to CUMAs.

It is thus important to pursue **the establishment of the National Union of CUMAs of Benin**, which would be capable of negotiating with the Government for the resources needed for a real policy promoting expansion of the shared mechanization approach.

CONCLUSION: MAIN LESSONS AND RECOMMENDATIONS

Mechanization of Benin's agricultural sector is only just getting under way. The CUMAs, which are organized as a network, are contributing to this development. Over the past more than ten years, they have built up unique experience and knowledge, so that they are now a vital element. The many factors standing in the way of their development are gradually being eliminated.

A genuine political will is being declared in favour of the expansion of mechanization. However, it is up to the Beninese State **to implement appropriate, coordinated measures** in pursuit of this policy. The CUMA network needs assistance in organizing its structure, while the CUMAs themselves need **resources to finance their investments. Pipelines for the importation of equipment and spare parts** must be organized. **A real training programme** must also be implemented.

Lastly, the development and success of the groups are possible only if these CUMAs are assisted, trained, supported and protected.

It would be unreasonable to hope for any significant development and sustainability of the system without effective training and the incorporation of each CUMA into a really well-structured network. No CUMA can hope to succeed unless its leaders can count on expertise in at least two areas:

- first, advisory support regarding the organization and management of the CUMA;
- in a complementary sphere, advisory support to the CUMAs is essential on issues of mechanization, technical diagnosis, repairs, maintenance and tuning, and training for drivers and equipment managers; this latter service is undoubtedly still the most lacking, severely hampering the efficient running of some CUMAs.

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P4P AS AN OPPORTUNITY FOR FARMERS' ORGANIZATIONS

BACKGROUND/INTRODUCTION

Challenge: production and marketing of staple crops

While targeting the hunger needs of 103 million people in 2008, the United Nations World Food Programme (WFP) bought US\$1.1 billion worth of food in 73 developing countries. Through "Purchase for Progress" or P4P, WFP will harness part of this market power and use it to transform the lives of poor farmers. The programme introduces innovative procurement and programme practices to develop secure markets for farmers' surpluses, increase their income and reduce the risks they face.

WHAT IS PURCHASE FOR PROGRESS (P4P)?

Purchase for Progress is a five year pilot programme (2009-2013) which uses WFP's purchasing power to support agricultural and market development in such a way that smallholder farmers are able to benefit from those markets by selling their produce to WFP and other buyers, thus boosting their incomes. By

raising smallholder incomes, P4P makes WFP's local procurement an effective tool to address global hunger and poverty.

Innovative procurement practices

Through P4P, WFP is shifting a small percentage of its overall local and regional procurement from the higher levels of the marketing chain (large-scale traders and processors, WFP's traditional suppliers) to the lower levels (farmers' organizations – FOs – and small/medium-scale traders), in order to have a more direct impact on smallholder farmers' income and livelihoods.

More concretely WFP is:

- **Adjusting procurement practices** in order to facilitate Farmers' Organizations (FOs) and small/medium-scale traders' participation in WFP tenders through "adjusted" tenders;
- **Piloting new ways of buying**, for example, through commodity exchanges – CEX – (Malawi and Zambia), warehouse receipt systems – WRS – (Tanzania and Uganda), cereal fairs (Mali), or through direct and/or forward contracts with farmers' organizations.

P4P purchases are underpinned by **the same core principle** of cost efficiency, like any other WFP food purchase. WFP will not compromise on quality and will not pay above local wholesale market prices when purchasing from smallholder farmers' organizations.

Paying prices above what WFP would expect to pay through normal channels would mean: (i) less tonnage purchased with donor funds, (ii) P4P objectives of sustainable market development are undermined, and (iii) WFP's ability to scale up and mainstream the new procurement models at the end of the pilot phase would be constrained.

■ **A collective and coordinated effort...**

The initiative relies on a wide range of partners – governments, international organizations, NGOs, financial institutions, commercial banks and private sector – that provide technical expertise in agricultural production techniques and post-harvest handling, facilitate access to farming inputs and credit, provide capacity building and strengthening of Farmers' Organizations.

WFP is working as a **catalyst** in bringing together supply-side partners to implement P4P at field level and linking more effectively smallholder farmers to the markets.

■ **... To develop farmers competitiveness and access to the market through:**

- Group marketing to increase their negotiation and bargaining power;
- Building capacity in commercialisation and marketing therefore reducing the number of intermediaries and transferring to producers a greater portion of the marketing margins;
- Encouraging smallholder farmers to participate in modern marketing systems and platforms;
- Increasing the quantity and quality of commodities sold by smallholder/low-income farmers, thanks to the supply-side support provided by partners to increase yields and quality, and to improve post-harvest techniques, reducing commodity losses.

■ **A win-win solution**

At national level, the food WFP buys from farmers will go to feed hungry people in the same country. Thus P4P creates a win-win solution for developing countries.

At the household level, P4P targets in priority organized smallholder/low income farmers cultivating less than two hectares. It is expected to increase their household income and also support the development of local pro-smallholder processing options where it is a viable option, with a potential impact of employment creation.

HOW IS P4P IMPLEMENTED

Where is P4P piloted?

P4P is being piloted in 21 countries:

- **Africa** – Burkina Faso, Democratic Republic of Congo, Ethiopia, Ghana, Kenya, Liberia, Malawi, Mali, Mozambique, Rwanda, Sierra Leone, Sudan, Tanzania, Uganda and Zambia.
- **Asia** – Afghanistan and Laos.
- **Latin America** – El Salvador, Guatemala, Honduras and Nicaragua.

Which commodities is WFP buying under P4P?

- Staple crops, such as maize (70 % of P4P contracts by 31 March 2010), sorghum, millet, wheat and rice.
- Pulses (9% of P4P contracts by 31 March 2010), such as cowpeas and beans.
- Blended fortified foods using local commodities, such as maize meal and corn soya blends.

What are the general farmers' organizations selection criteria?

Selection criteria are defined together with partners who are usually part of a P4P Steering Committee or a P4P Programme Advisory Group. In general, farmers' organizations eligible for participation in P4P should:

- Be composed of a majority of smallholders/low income farmers;
- Have the capacity to produce marketable surpluses;
- Be producing a commodity within WFP's basket (i.e., maize, pulses, rice...);
- Have legal status and have a bank account;
- Have the necessary supply side support by relevant partners and/or Government (i.e., access to seeds, fertilizers, credit, etc).

As FOs develop the necessary commercialization and production capacity and learn to engage independently in competitive market processes (like competitive tendering, WRS, CEX...), they are expected to graduate out of the direct support of WFP and its supply side partners.

Who funds P4P?

The Bill and Melinda Gates Foundation, the Howard G. Buffett Foundation, the Governments of Belgium, Canada and of the United States of America are providing US\$132.7 million to fund the technical capacity required to implement P4P.

Food purchases in any of the above countries will continue to be funded by donor cash contributions to WFP's regular programmes.

WHAT ARE THE ACHIEVEMENTS OF P4P AS OF 31 MARCH 2010?

- Nineteen of the 21 pilot countries¹⁸ are at different stages of implementation: together with partners, these countries have identified 578 Farmers' Organizations (with a total membership of over 770 000 farmers, 35% of whom are women) to be targeted under the programme.
- By 31 March 2010:
 - **17 countries have contracted over 50 000 metric tons (mt)** of food from more than 100 farmers' organizations, as well as from small-medium scale traders, through direct contracting or adjusted tendering, as well as through the commodity exchanges in Malawi and Zambia, and through different types of warehouse receipts systems in Tanzania and Uganda.
 - P4P has enabled **WFP local procurement** in countries where the organization had never before procured locally, such as Liberia and Sierra Leone.
 - **Over 25 000** smallholder farmers, lead farmers, small and medium traders and warehouse operators (30 percent women) have been trained through WFP and partners on topics including contracting with WFP, quality specifications, production techniques, post-harvest handling, group marketing and commercialization, Warehouse Receipt Systems (in Tanzania and Uganda), Commodity Exchanges (in Zambia), agricultural production techniques and agricultural finance.
 - **A comprehensive M&E system**, which includes comprehensive baselines and case studies, has been designed to monitor impact of P4P purchases on participating farmers' incomes and livelihoods.

¹⁸ All except Ghana and Laos, who have not yet started implementation.

- Lessons learnt during the pilot phase will then inform future changes in WFP's procurement and programming policies and procedures.

WHAT ARE SOME OF THE CHALLENGES?

- **Credit:** limited access to credit to finance aggregation and crop purchases from members emerges as an impediment to the ability of farmer organizations to market their products, and explains, together with the lack of storage facilities and cleaning equipment, most side-selling. **Facilitating access to credit is an area where WFP requires partners' support.**
- **Food quality, infrastructure and post-harvest handling equipment:** lack of storage facilities and post-harvest handling equipment is the other major challenge facing farmers' organizations in many P4P countries, leading to high post harvest losses and high potential side-selling. **Supporting construction or rehabilitation of storage facilities and providing post-harvest handling equipment** is another area where partners can make an important contribution to the P4P project.
- **Capacity of farmers' organizations:** weak business management skills and lack of experience on how to handle and market their produce is a major limitation. **Organizational strengthening** for farmers' organizations (including internal management, business planning and records keeping) is another area requiring further partners' support.
- **Gender:** P4P pilot countries have struggled to translate WFP's gender targets into concrete actions for the advancement of women farmers within targeted farmers' organizations. There is a need to strengthen efforts and find partners working specifically to enhance female farmers' positions within Farmers' Organizations and to ensure that women reap more of the economic benefits.

Example of contracts supported by local institutions

■ Commodity exchanges in Zambia (P4P Issue 12 – Sept. 2009)

In Zambia, P4P has taken a market driven approach, supporting the Zambia Agricultural Exchange (ZAMACE). Almost all P4P purchases in Zambia (so far, more than 11 000 mt of maize, maize meal and pulses) occur through the ZAMACE. Buyers and sellers wishing to trade through the Exchange must do so through their brokers, who are authorized to sell/

buy through the Exchange on behalf of their clients. There is no physical exchange of the commodities in the Exchange: sellers (represented by their brokers) register what they have to sell and describe the location and quality of the commodity; buyers (always represented by their brokers) put their bids against the offer. ZAMACE offers a comprehensive grain testing laboratory service and offers training and certification services to smallholder farmers at concessionary rates to encourage production of quality commodities. ZAMACE is also establishing a network of certified warehouses where farmers and traders store commodities to sell later in the marketing season, when prices are higher. WFP is supporting farmers' organizations to meet the quantity and quality standards required to access the certified warehouses.

■ **Warehouse receipt systems in Uganda (P4P Issue 12 – Sept. 2009)**

WFP signed an agreement in 2008 with the Uganda Commodity Exchange, where WFP committed to support the warehouse receipt system (WRS) by buying commodities through this mechanism. The WRS provides a great opportunity for smallholder farmers to use cleaning, drying and grading facilities and to store their commodities, which in turn helps them achieve better quality and reduce post-harvest losses. Accessing credit and the ability to sell their commodity to large-scale buyers like WFP are other benefits WRS provide to farmers. Since end 2008, P4P Uganda purchased a total of 1,583 metric tons of maize through the WRS.

One of the advantages for WFP is that the quality and availability of the commodity is assured, thus resolving two of the most common reasons for defaults when purchasing directly through FOs, side-selling or quality not meeting WFP specifications.

■ **Eco bank in Liberia (P4P Issue 11 – Aug. 2009)**

Ecobank Limited has partnered with P4P in Liberia to effect onsite payments to smallholders/low-income farmers delivering their produce to P4P targeted Cooperatives. Each seller is paid in cash on presentation of their individual vouchers indicating the quantity and value of paddy they had contributed to the WFP consignment. Placing payments directly into the hands of the farmers has been pivotal in restoring the farmers' confidence in group marketing, promoting transparency on the selling price and the assurance that their cooperatives are passing on the full value due to each member. The UN Military Mission in Liberia's (UNMIL) participation was crucial in ensuring the security of the cash, bank officials and payees during the payment exercise.

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For more information

P4P website at: <http://www.wfp.org/purchase-progress>, and/or contact us at wfp.P4P@wfp.org.



ENABLING SMALL RURAL PRODUCERS ACCESS TO LOCAL MARKETS: THE CASE OF AFRICAN LEAFY VEGETABLE PRODUCERS IN PERI-URBAN NAIROBI, KENYA

INTRODUCTION

African Leafy Vegetables (ALVs) are important foods for alleviation of food insecurity and poverty among the rural and urban poor due to their relative affordability. They are known to be especially rich in micronutrients such as vitamins (especially A and C), minerals and certain essential amino acids such as lysine (Imungi and Porter, 1983, Imungi, 2002). ALVs have also been associated with management of various diseases including HIV/AIDS, diabetes, high blood pressure and other common ailments. According to Maundu, et al, (1999), there are over 230 known ALVs species in Kenya and, before the introduction of the market economy and modernisation of agriculture, almost all ethnic groups consumed them.

However, despite this rich diversity and the potential nutritional benefits, for a long time the production and consumption of ALVs have exhibited a downward trend. ALVs were only found in the back streets and in a few open air markets usually frequented by members of specific ethnic groups (Maundu, 2004) and almost all ALVs sold in Nairobi came from distant areas such Kisii, Butere, Machakos and Transmara, from where they were transported with night buses leading to lots

of losses. Around 2001, an increase in the production and marketing of ALVs around Nairobi was noted. A study carried out in 2006 showed that the demand for ALVs increased by over 200 % between 2001 and 2006 (Irungu, et al, 2007). The increase was as result of, among others, awareness campaigns on the nutritional value of ALVs and the improved presentation of the product in high value stores. This demand was matched with increased supply predominantly from small scale farmers from the peri-urban areas.

Nevertheless, small scale farmers still face numerous challenges in commercial farming. These include low/poor capital endowment, in particular financial, human, natural (land) and physical (machinery and other infrastructure) capital. And yet, to penetrate high level markets, small scale farmers are expected, like everyone else, to play by the business rules in terms of quality, timeliness of delivery, continuity in supply and worst of all supply on credit for up to two months. Farmers in this case study overcame most of these barriers through an innovative arrangement discussed in the following sections.

INSTITUTIONAL ARRANGEMENTS AND INTERACTIONS AMONG TRADERS AND OTHER ACTORS

Promotion of ALVs and their subsequent introduction in modern supermarkets in Kenya can be traced to the ALV program (1996-2003) implemented by a consortium of research and development partners coordinated by Bioversity International. The program's general objective was to improve conservation through use. In the second phase (2001 to 2003), one of the specific objectives was the improvement of the handling, marketing and processing of ALVs. Under the marketing component, Farm Concern International (FCI), a regional NGO and the National Gene Bank of Kenya won a competitive research grant for their research proposal entitled "Enhancing market access for African Leafy Vegetables (E-MAC)". The project aimed to link farmers with the Fresh Produce Department of Uchumi supermarket¹⁹ and other key market outlets²⁰ (Irungu, 2008). A research conducted within this program highlighted poor product image and lack of consumer awareness as the key drawbacks to ALVs consumption and demand, while poor seed systems and weak ALV value chain were identified as major constraints on the supply side (Mwangi and Mumbi, 2006).

The first step to increase production and consumption has been to introduce farmers in the peri-urban areas of Nairobi to the commercial production of ALVs. This was a process that entailed identifying potential farmers, provision of quality seeds, training in agronomic practices, and formation of neighbourhood commercial groups. The project initially concentrated on two former divisions of the larger Kiambu district, namely, Githunguri and Wangige, where over 1700 farmers were trained and encouraged to form neighbourhood groups of 25 farmers each by FCI and other stakeholders.

At the same time, FCI approached the Uchumi supermarket and started to create awareness of the nutritive value of ALVs through fliers and brochures distributed to the shoppers. Inside the supermarkets, at the green grocery corner, ALV cooking demonstration and tasting session were conducted and shoppers were encouraged to buy a batch or two of the ALVs. With time demand grew and even exceeded that of the exotic

vegetables. The perception of ALVs in the eyes of the public was greatly enhanced by their presentation in high value supermarkets. FCI then introduced the farmers' groups to the Uchumi supermarket chain. Through this partnership, the chain was able to stock ALVs for the first time, beginning with its Agha Khan Walk branch and later in other branches.

This arrangement brought new challenges to small scale farmers. To meet all contractual requirements the farmers' groups needed support in other business development services such as transportation and credit facilities so as to ensure timely and quality supply. For example, in the past, ALVs were transported in passenger vans (matatus), as either luggage in the boot and on the top carrier or inside the van, but, on entering high level markets this mode of transportation was no longer acceptable. To overcome this huddle, FCI and farmers' groups leaders identified reliable and affordable transport providers who would pick the vegetables from the groups' collection points and deliver them to the Uchumi's Agha Khan Walk branch from where they would be distributed to all other branches.

Next, the supermarket chain procures goods on a 30-60 days credit period, a waiting duration which small scale farmers cannot afford. FCI set up a revolving fund that was used to pay the groups promptly upon production of delivery notes from Uchumi. Uchumi would in turn pay FCI directly to replenish the kitty. In addition, FCI encouraged farmers to save at least 10% of their earnings to progressively enable groups to become self reliant and use their own savings to discount Uchumi invoices.

Uchumi supermarkets, the farmers group and to some extent FCI (only in the beginning) have now to follow relational and formal rules. It is the responsibility of the supermarket's quality personnel to visit farmers' groups before awarding supply contracts in order to reduce potential information asymmetries regarding the contract and conduct regular inspections. Farmers' groups, in turn, ensure that they comply with their side of the contractual arrangements. The arrangement was such that any ALV losses resulting from poor quality were passed on to the farmers, as only what was bought was paid for. The groups' leadership ensures that phytosanitary conditions, proper and timely harvesting, grading, bulking, proper transportation and delivery on time are respected. Farmers also practice staggered planting where possible to ensure continuous supply and avoid being replaced as suppliers²¹.

19 This is a high value supermarket chain with branches in Kenya and Kampala, Uganda

20 After this initial funding FCI successfully took up the issue of marketing of ALVs and partnered with other organizations including Rockefeller Foundation, Gatsby UK, Farm Africa, and The World Vegetable Centre (AVRDC).

21 In some cases the farmers cannot afford to irrigate their crops during the dry season.

KEYS TO SUCCESS

Factors that led to the successful penetration of small scale farmers to high value markets

Internal factors

Internal factors that led the successful entry of small scale farmers into high level markets include capacity for self organisation and collective action, experience in growing ALVs for home consumption, proximity to large markets, and factors related to ALVs themselves.

■ Capacity for self organisation for collective action:

Although other stakeholders supported the farmers in better organizing themselves, it would have not been possible if no capacity for self organisation or collective action already existed among the producers.

■ Experience:

Some farmers had previous experience in growing and consuming ALVs so it was relatively easy to convince them to grow more for the market. Results from a study on the impact of the ALV program showed that education level, experience and occupation as full-time farmers were major determinants of the likelihood to produce ALVs for markets (Irungu, 2008).

■ Distance to markets:

The proximity to the city and hence access to large markets, both formal and informal, contributed to the success. This aspect gave these farmers comparative advantage as compared to farmers far off, who risk losing value for their crops through deterioration of quality and appearance in the process of long distance transportation.

■ Positive attributes of ALVs:

ALVs have some inherent positive attributes such as repelling pests and disease pathogens and they can, therefore, be grown with minimal application of chemicals. Their short growing periods also enabled those farmers who cannot afford to irrigate to grow a few during the rainy season, and to harvest and sell before the rains.

Factors related to the alliance/linkages between farmers groups, FCI and the Supermarkets chain

These included:

- R&D collaboration between different stakeholders who addressed different issues of the ALV value chain.
- Influencing consumer demand through promotion activities including media campaigns based on ALVs high nutritive value, cooking demonstration in major outlets, printing and distribution of fliers, health walks and food fairs in the city.
- Building alliances with a major supermarket chain, first for demos and later as an outlet.
- Provision of business support services (credit, transport, business training).

External factors

These included:

- General health awareness and consciousness in Nairobi about lifestyle diseases, especially those associated with poor diets. This made it easier for people to change their diets and accommodate ALVs.
- The high nutritive value of ALVs in terms of vitamins and micro-nutrients that is seen as vital in the managements of HIV/AIDS and other diseases. Medical personnel and herbalists started to recommend consumption of ALVs for treatment of different ailments and this contributed in boosting demand.
- Advancement in telecommunication and especially the use of mobile phones even in rural areas. Farmers are able to communicate easily amongst themselves, with the traders and with their customers.

Some factors contributed negatively to the market development of ALVs in peri-urban Nairobi. These included: poor rural road infrastructure; lack of clear policy guidelines and goodwill from the government; inadequate guidelines for ALV seed improvement, bulking, quality control and distribution systems; lack of adequate capacity to regulate drastic supply oscillations and hence prices; lack of value addition for enhanced prices; negative perception due to presence in the market of ALVs grown in unhygienic conditions, e.g. using sewer spillage, making potential consumers apprehensive about ALVs altogether.

IMPACTS

Integrating small scale farmers in the high level markets resulted in a number of positive impacts as follows:

- **Increased access to financial capital:** According to an impact study on the ALV program conducted in 2007, over 70% of the farmers within the peri-urban Nairobi had increased their incomes from ALVs between 1997 and 2007.
- **Enhanced human capital** through capacity building and training in good farming practices, business skills and general enlightenment of the members. This empowered farmers to perform better in their farms and lives in general.
- **Creation of social capital:** Direct and indirect benefits also accrued to members as a result of membership, including a sense of belonging and fulfilment from participating in their community's development. Good neighbourliness was also enhanced, and issues of

moral hazards reduced. Delivery of other services in the area was eased as a result of group formation.

- **Increased food and nutritional security** through production and consumption of ALVs as farmers use the increased income deriving from improved access to markets for food and other domestic needs and, being ALVs relatively affordable, many poor people in both rural and urban areas have increased their consumption levels. According to Irungu, (2008), 45.5% of households had increased their consumption of ALVs after realisation of their superior nutritive status. A further 37.5% reported to have had positive changes in their health status upon continued consumption of ALVs, including falling sick less often, becoming less anaemic and having increased appetite.
- **Up-scaling and replication:** These farmers have been active in farmer to farmer extension. Over 50 lead farmers attended training of trainers (TOT) courses organised by FCI and AVRDC (Mwangi and Mumbi, 2006). Apart from farmers from the main growing areas, over 1000 farmers from other regions have benefited from this farmer to farmer extension. Further after the initial linkage with the Uchumi supermarket chain, market partnerships were established with other outlets including supermarkets, groceries, food departmental stores, informal markets, and even the local authorities.
- **Increased access to credit:** Apart from the revolving fund from FCI, farmers' groups started their own Savings and Credit schemes. In addition, they have been able to attract credit from micro-finance institutions especially those that use social capital as collateral.
- **Gender issues:** Traditionally, ALVs' growing was considered a woman's business and women still dominate production and marketing. This has a positive impact in terms of household food security because women are enabled to make decisions on the use of the cash from ALVs. A recent study showed that cash obtained from sale of ALVs was mainly managed by women, and was mainly used to supplement kitchen budget (80.3%) and for paying school related expenses (12.3%). Further results showed that, in 77.2% of the households, women received ALVs cash, compared to 20.2% received by men and 1.8% received jointly. Further, in 69.9% of the households, women made decisions on how the money would be used, compared to 27% men-only decisions and 2.7% joint decisions (Irungu, 2008)

Elements of the good practice that can be replicated and adapted in other contexts include: the concept of commercial villages (neighbourhood business groups), which has already been replicated in other parts of the country and with other crops, such as orange fleshed sweet potatoes; the establishment of market partnerships with major produce outlets and private sectors, and linkages with influential consumers; the introduction of a revolving fund to ease the burden of small scale farmers as they penetrate high level market; the capacity building of farmers and farmers groups; and concerted efforts between researchers, the private and the public sectors, NGOs and farmers in promoting commercialisation of ALVs.

CONCLUSIONS AND RECOMMENDATIONS

Conclusion

Most of the ALVs consumed in Nairobi are produced and directly marketed by small scale farmers, ensuring that they take most of the profit that would have been apportioned to various middlemen in the chain. The case study shows that with the right support, small scale farmers are capable to penetrate and maintain contractual arrangements with high value supermarkets and up market groceries. This not only offers a sustained source of livelihood to those farmers who are closer to large markets, but also contributes to the ultimate development objective of poverty alleviation through increased food and nutritional security. Continued research into ALVs' nutrition value and safety issues²² contributes to ensure that consumer demand is sustained and even expanded.

Implications and recommendations

Small scale farmers would do better if a number of macro factors and policy failures were addressed by both the public and private sectors. The government needs to play a proactive role in removing existing market and policy failures by increasing investments in infrastructural development both for rural roads and market facilities and by continuing to develop human capital (education) and research into ALVs' nutrition value and safety

²² Research on the nutritive value is being done by a consultant through Bioversity International, while a consortium of scientists from the International Food Policy Research Institute (IFPRI), Swedish University of Agriculture (SLU) and University of Nairobi are working on a pilot project on food safety aspects of African night shade in urban and peri-urban Nairobi. During a recent workshop on the later project, farmers representatives were the majority stakeholders.

issues²³. Women education, in particular, is a key factor in enhancing women capacity to compete in this sector which is still their domain. Also, the image of ALVs would be enhanced if they were upgraded to scheduled crops like other major crops. Development and publicising of guidelines for seed quality control, food quality control and safety standards, and support in the distribution systems are all necessary. With enforcement of quality controls, ALVs could soon be destined for the larger export market.

For all stakeholders, promotion strategies on both demand and supply, as well as research, documentation and awareness creation on the nutritive characteristics of all the major ALVs in Kenya should continue. Certification, tracing and labelling of ALVs based on producers' adherence to good agricultural practices and places of origin will be of great importance to ensure sustained premium prices for farmers. Processing of ALVs for distant markets could also be explored.

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23 Research on the nutritive value is being done by a consultant through Bioversity International, while a consortium of scientists from the International Food Policy Research Institute (IFPRI), Swedish University of Agriculture (SLU) and University of Nairobi are working on a pilot project on food safety aspects of African night shade in urban and peri-urban Nairobi. During a recent workshop on the later project, farmers representatives were the majority stakeholders.



FARMERS' COOPERATIVE AND BIO-BHUTAN ASSOCIATE TO DEVELOP MARKETS FOR CERTIFIED ORGANIC ESSENTIAL OILS

CONTEXT

Rural communities in Eastern Bhutan with little or no access to agricultural land depend to a large extent on the income from non-timber forest products, including essential oil distilled from wild lemon grass (*Cymbopogon flexuosus*). Lemon grass occurs naturally under Chir Pine forest in Eastern Bhutan. In order to increase and diversify cash income of rural communities, the Government of Bhutan supports rural communities in their endeavour to manage natural resources in a sustainable manner.

The present contribution documents the experience of the private enterprise Bio Bhutan which supports the Lemon Grass Cooperative comprising of 170 members from four districts of Eastern Bhutan²⁴ through value addition (organic certification and product diversification) of non-wood forest products. Bio Bhutan is a private enterprise established in 2005. It introduced third party organic certification of lemon grass essential oil (LGO) distilled by farmer groups organized in the Lemon Grass Cooperative.

INSTITUTIONAL INNOVATION

Bio Bhutan supports the Lemon Grass Cooperative in their endeavour to manage natural resources e.g. lemon grass in a sustainable way, through wild collection according to organic rules, on-farm processing and hence income generation from non-wood forest products. The sustainability of wild harvest is assured through the strict appliance of management plans, which are a key requirement for organic certification.

Inspections are carried out by CERES²⁵, a German certification agency, according to EU Standards as a base requirement for access to foreign markets in Europe and the USA.

Bio Bhutan defines itself as a mediator between the producing communities and the markets (national, regional and international markets). The relationship between Bio Bhutan and the Essential Oil Cooperative is based on a contract (purchase of raw and semi-processed products) renewed annually and agreed upon by the distillers and Bio Bhutan. Annual contracts establish prices and payment modalities such as

advance payments to each distiller at the beginning of the distillation season, cash down payments at the time of delivery and the surplus payment for organic certified oil. Profits generated are shared with the members of the cooperative. Members of the cooperative receive a 20% premium payment over the conventional oil.

Attractive payment schemes including advance payments, a higher price and the cash down payments at the time of delivery have encouraged the distillers to opt for organic management practices.

With continued support from the private sector, the government and the non-government institutions, the Lemon Grass Cooperative is expected to evolve as a strong grass root organization supporting durable and sustainable social and economic development in eastern Bhutan.

With assistance from the 'Programme for South-South Cooperation Benin, Bhutan, Costa Rica', Bio Bhutan trains members of the Lemon Grass Cooperative in manufacturing natural soaps with purely Bhutanese ingredients including lemon grass oil as the scent component. Cooperative members will be equipped with latest technologies and equipment so that the end product appeals to customers within Bhutan and abroad.

Generating income for producers and distillers

The introduction of organic certification has a direct impact on income generation of rural households engaged in the distillation of essential oils. Considering the latest figures, the industry generates US\$14 400 (profit share of US\$3.6 x 2 tons of production) for 234 people.

Over the past two years Bio Bhutan has opened niche markets in Asia, Europe and the United States worth US\$150 000 and sold organic LGO at CIF²⁶ rates of US\$20-23 per kg of oil. The higher price offered for organic certified oil from wild collection made it possible to increase the profit of organic distillers to US\$3.6 per kg of LGO with a 30% profit, as compared to US\$2.4 per kg with a 13% profit for conventional distillers. Since 2006, farmers are paid BTN 600 (=USD 13.2) per kilogram of organic lemon grass oil. This premium price is approximately 20% above the price paid for conventional oil. The 2009 price paid by Bio Bhutan for organic certified oil remained at BTN 600 despite problems with the international demand due to the global recession and the consequent lower demand.

In addition to the premium prices paid for certified lemon grass oil, members of the Essential Oil Cooperative benefit from value addition to lemon grass essential oil through the manufacture of soap.

IMPACTS

Creating employment

In 2009, twenty distillers were actively distilling lemon grass oil with the collaboration of grass collectors, firewood collectors and drum operators. Thus, the industry employs presently 234 people. The total production of organic oil reached 2 tons in 2009 (see table 13.1).

Increasing participation and income for women

Lemon grass distillation is an operation with clearly defined gender roles: while mostly men carry out the actual distillation and firewood collection, both men and women engage in grass collection at a 50% ratio. A study carried out by Bio Bhutan concludes that women are the preferred grass collectors for a more careful selection of high quality grass. This pre-selection

Table 13.1 Active Distillers of Organic Lemon Grass Oil (2009)

Name of the group	No. distillers	Grass collectors	Fire wood collectors	Drum Operators	Male	Female
Dozam	4	28	12	2	28	14
Phuensum	8	56	24	16	68	28
Bepam	8	56	24	16	68	28
Total	20	140	60	34	164	70

²⁶ CIF: "Cost Insurance Freight," meaning that the shipping costs are included.

of unwanted weeds and lower quality *Cymbopogon* distance grass leads to high quality oil with high citral content. Overall, 30% of all people engaged with the lemon grass oil industry are women.

While distilling is the domain of men, mainly women will carry out soap manufacturing. In October 2009, at the early stage of the project, nine farmers have received training on soap making, 8 of which were women. This activity is expected to raise self-confidence of women who would otherwise seek employment as unskilled labour in road projects and construction. Additional family income from such activities is likely to improve living standards of the rural families, with consequent better education for children and improvement of the health status through better nutrition.

Sustainable management of natural resources

The identification of new essential oil bearing plants (e.g. *Gaultheria procumbens* 'wintergreen', *Artemisia spp.*) and value addition to non-timber forest products such as the development of natural soap, are examples of sustainable use of natural capital.

Though the introduction of organic certification has led to a sustainable use of lemon grass resources through the strict application of management plans, there has been no improvement with regard to the high fuel wood consumption of distillation units in Bhutan. In addition, increased efforts must be put into the efficiency of distillation in terms of re-using distilled material and the reduction of firewood consumption through improved distillation technology. Trials to adapt the firing device of the distillation units are currently being carried out.

Increasing participation of local people in the management of resources

Impacts are apparent in the increased participation of local people in the sustainable management of lemon grass resources. Since the introduction of organic certification of lemon grass oil, two additional groups (Bepam Lemon Grass Management Committee – Trashigang District; Phuensum Community Forestry Management Groups – Mongar District) joined the network of organic oil producers under the Essential Oil Cooperative.

The inclusion of two new community forestry groups dedicated to organic lemon grass oil production under the wings of the Essential Oil Cooperative are a good example of successful replication of the approach. Talks are under way with the Organic Programme and Bhutan Agriculture and Food Regulatory Authority (both institutions are under the Ministry of Agriculture) to extend the organic certification to all users of wild collected lemon grass.

Creation of a saving scheme to invest in production improvement

With the development of 'organic' soap, a new saving scheme will be implemented whereby 20% of profits generated through the sale of soap will be deposited into a saving account held by the Essential Oil Cooperative. It is expected that the saving scheme will improve social coherence among group members and enhance the bargaining power of farmer groups. Negotiation and bargaining power increases substantially with the availability of capital to invest in equipment and infrastructure. Investment in high quality, high capacity production units generates the base for increased production (economy of scale). For example, with basic equipments, no more than 500 bars of soap can be produced per month, which generate a profit of approximately Nu. 5 500. In contrast, a larger and more sophisticated unit will easily produce 5000 bars of soap, generating profits of Nu. 55 000. Labour inputs, which are at par in each scenario, are therefore more economically used in the second one. With larger batches available, access to markets (in urban centres and wholesale dealers) becomes easier.

KEYS TO SUCCESS OF THE GOOD PRACTICE

Internal factors

Since the establishment of Bio Bhutan with the financial support of the Swiss-Bhutan Society and Helvetas/SDC in Bhutan, the strategy of Bio Bhutan follows principals of ethics, whereby profit margins are considered important for the establishment and growth of an enterprise but not the first goal to achieve. Instead, sharing of profits with producer groups of non-wood forest products and the consequent strengthening of grass-root organizations such as the Cooperative in Mongar District through fair payment schemes are given priority.

Factors related to the alliances/linkages between the institution and key stakeholders

A rather complex network of non-government institutions, the government and the private sector is responsible for the good practice.

Non government institutions

The Swiss Bhutan Society & Helvetas SDC supported the establishment of Bio Bhutan enterprise and fostered the introduction of organic certification. The Sustainable Development Secretariat (SDS) implements the Programme

south-south cooperation Benin, Bhutan, Costa Rica for the development of 'organic soap' with Bio Bhutan and its partner ACICAFOC, an NGO in Costa Rica.

SNV, a Dutch Organization has supported Bio Bhutan through the 'Local Capacity Building Programme'. The programme supports Bio Bhutan in the organization and implementation of training modules for farmers' organizations, such as the Community Forestry Management Groups in eastern Bhutan in various aspects including training in certification requirements and sustainable management practices. With financial assistance from SNV and technical backstopping from the Organic Programme under the Ministry of Agriculture, Bio Bhutan develops training material and provides hands-on training to members of the Essential Oil Cooperative in organic practices (composting, preparation of natural pesticides, post-harvest management, energy efficient distillation methods) on an annual basis.

Private sector

Bio Bhutan enterprise has initiated the certification of organic produce in Bhutan with the collaboration of CERES in Germany. CERES issues a certificate saying that the produce packed and shipped by Bio Bhutan comes from organic certified areas. Customers of the Bio Bhutan organic produce are private firms (importers of essential oil, whole- and retail sellers) in Bhutan and abroad.

Government institutions

Activities carried out by Bio Bhutan are in line with government policies and priorities:

- Conservation of the nature through sustainable management of natural resources.
- Participation of communities in the management natural resources.
- Contribution to income generation and diversification of rural communities.
- Contribution to the growth of the private sector in Bhutan.
- The Essential Oil Development Programme (EODP) under the Ministry of Economic Affairs has supported the lemon grass oil industry since 1998. As the exit strategy of the government programme, EODP has supported the constitution of the Lemon Grass Cooperative in Eastern Bhutan in 2006. The cooperative has since then become a strong grass-root organization and a key partner for Bio Bhutan enterprise.
- Third party certification requires approved Community Forestry Management Plans with clearly demarcated management areas and defined

organizational structures within communities. A good collaboration with the Department of Forests as the authority for the endorsement of management plans is thus imperative. Equally important is the support of the Organic Programme of the Ministry of Agriculture and the Bhutan Agriculture and Food Regulatory Authority (inspection visits and fosters the training of Bhutanese inspectors)

- The mutual understanding of all involved stakeholders that natural resources can contribute to income generation through product development forms the base of the good practice.

CONCLUSIONS

Major lessons learnt

Organic certification of lemongrass products is a valid tool to increase household income and diversify income opportunities in eastern communities of Bhutan while maintaining the resource base through sustainable use.

International trade in innovative products such as certified organic lemongrass oil from wild collection requires adherence to international standards of certification and contributes thus to achieving global partnerships for development with a particular focus on landlocked and small countries.

In-country processing requires high investments, which farmers cannot bear. Entrepreneurs and donor organizations must make start-off investments so that the quality of products meets the market's requirements.

Implications and recommendations

- **Raise the scale of organic production of wild collected non-wood forest products** including lemongrass by increasing the number of community forestry management groups collaboration with the Social Forestry Division and the private sector represented by producer groups and marketing agencies.
- **Establish a national certification agency** to reduce the costs of certification with the aim of strengthening the bargaining power of the private sector. Until the certification agency is in place, state subsidies for the certification of CFs concerned with lemongrass distillation can be used to foster the development of this sector.
- **Raise competitiveness.** First hand experience proves that prices paid for organic certified lemongrass oil must be competitive with neighboring countries

(India, Nepal). Major efforts must be put into: (i) technology improvement to reduce fire wood consumption and make distillation more efficient, (ii) product development and (iii) marketing of products based on organic certified oil.

- Further research is required to identify **alternative and renewable energy sources** for the distillation of oil and to enhance the overall efficiency of distillation equipment.
- The **sharing of benefits** and improvement of the difficult working conditions require further attention from the communities and their partners.

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PRODUCERS' GROUPS AND SWIFT CO. LTD SET UP INNOVATIVE CONTRACT FARMING MODEL IN THAILAND

CONTEXT

The agricultural sector in Thailand comprises of very small farms and almost all farmers are poor and debt ridden. They are caught in poverty circle and most of them can not possibly break away without well designed assistance programs. Debts, debt servicing burdens, price level of farm products and crop damages from factors beyond their control are powerful downward spiral forces that cause them to lose their farms and become either farm workers or unskilled labour in the industrial sector. If they would like to continue with farming, they will become landless farmers who have to operate on lease lands and will totally be subject to mercy of land owners. Human dignity and social fabric will be gradually destroyed; the gap between the rich and the poor will get wider.

Small-farm holders have been facing five major constraints that preventing them from earning fair and decent income in farming:

- They have no direct access to markets and have to depend on services of middlemen and traders.
- In an inefficient multi-tier chain, additional expenses and profit taking are added every time when farm

products change hands. In most cases, the produce still have to be price competitive in the markets and middlemen/traders can not freely add any profit margin as they deem appropriate. To maintain or increase their margin, they reduce buying price at farm whenever possible.

- The prevailing poor logistics and handling in the supply chain from farm to markets cause severe damage to fresh farm products and create huge wastages; the losses are pushed back to growers, resulting in lower price at farm.
- Wholesale markets in Thailand are “Spot market” where prices fluctuate greatly and frequently. The prices reflect spot demand and supply and not the aggregated ones. Middlemen and traders try to limit their risk exposures to the fluctuation by buying at the lowest possible price.
- The ongoing market mechanism works against small growers even if they are organized into group or cooperative. Daily fresh supplies are delivered to wholesalers by “Regular suppliers” who are capable to organize supplies from different geographical sources to meet daily demand of wholesalers. The relationships are generally built on trust and mutual benefits. It is

very difficult for group of growers or cooperative to break in since they are not in the position to supply different types and varieties of vegetables and cash crops as required on daily basis.

INSTITUTIONAL INNOVATION

The socio-economic situation of farmers in Thailand calls for new approaches in any attempt to increase their income and to improve their quality of life. Swift Co. Ltd. was set up in 1986 as a business enterprise to supply fresh produce to market. Linking supply from farm directly to consumer and developing sustainable business are two key objectives of the company. Its main missions are:

- To supply premium quality produce with highest food safety standard to markets.
- Every stakeholder in the value chain, from growers to consumers, must fairly benefit from the operation.

It is a real challenge for the company to pay higher price (see box in 2. Results) which provides a higher income level,) to growers and still stays competitive in the targeted markets. To be fairly benefited, consumers must have premium quality produce with highest standard of food safety at reasonable price.

Contracted farming model

A contract farming model was designed in the first few years of the company's operation, between Swift Co. Ltd and vegetable grower groups. In order to secure steady flow of high quality supply and the food safety of produce from farm, grower groups have been organized in different locations in Thailand under long term contract (generally 3 years).

The required volume of each type of fresh farm produce is pre-determined by the company. To meet the given volume, planting area is determined by average yield per hectare of each type of crop. For example if the company require 36 metric tons of baby corn ear (4 metric tons of corn kernel per day) 365 days in a year, then number of hectares is calculated and farm production planning for daily delivery of 36 metric tons is carried out with contracted farmer-groups. In general the company will increase planting area by 30 percent, to reduce the risk of short delivery. Any surplus supply is frozen and otherwise processed.

All contract group have to practice GLOBAL GAP, Agrochemical free or organic farming.

Fair pricing policy which was built-in in the model reflected quality of produce from farm. Swift agreed to buy all farm produce from contracted groups at guaranteed price which is subject to negotiation annually. It is one of the company's key factors in developing and maintained sustainable business.

Farmers are provide capacity building services

Intensive trainings, on farming practices and techniques as well as on development of group management skill and on other necessary capacity building schemes, are provided to all members free of charge. Any financial assistance or support, without interest, is made available to the groups and not individual growers. A development of partnership relation is a key parameter in the model.

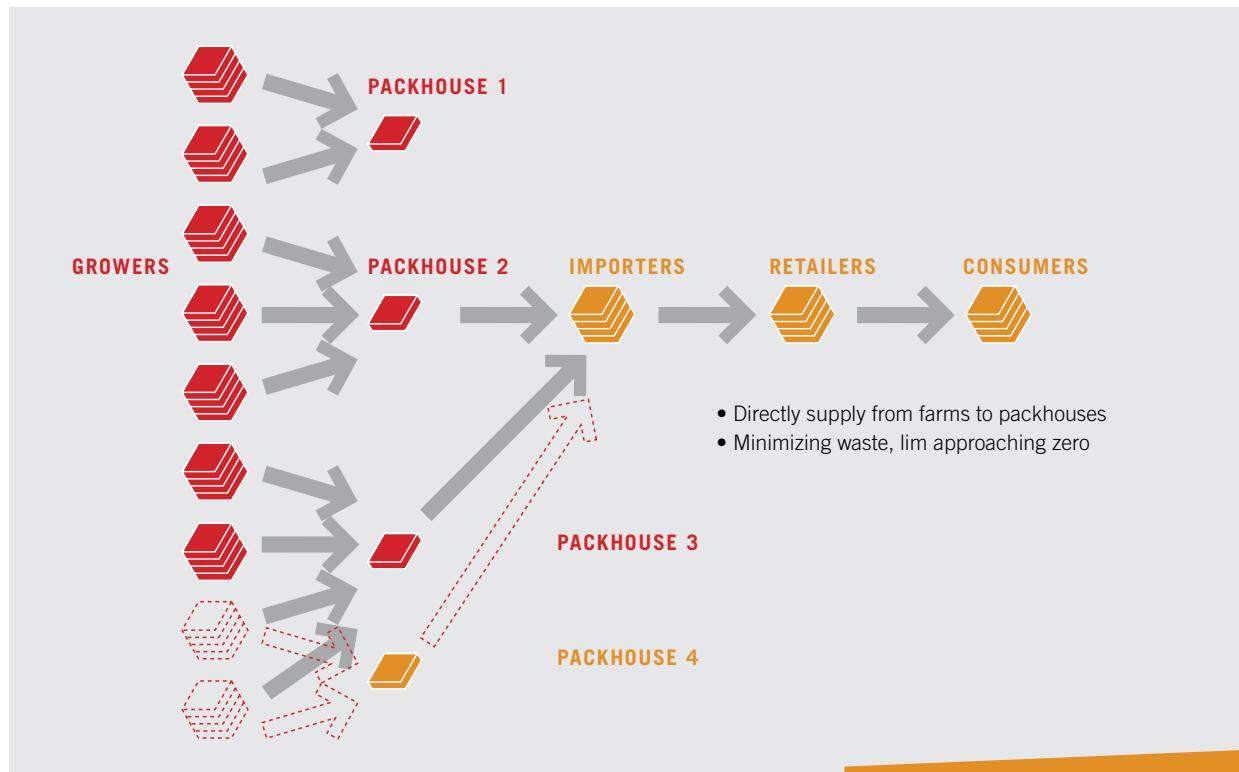
An efficient supply chain is developed

The model and the supply chain which is known as Swift's Model have been designed to eliminate all of the aforementioned constraints which drive small-farm holders into poverty.

One or a few collection stations, depends on the size of the group, are set up in the midst of every growing area. Members have easy access to the station(s) to deliver their daily harvest. Weighing and grading are carried out transparently on the presence of the members. The physical market is, literally, moved to within easy reach of the growers.

Small daily harvest of each member is combined to provide sufficient volume for economic logistics cost, incurring by the company in bringing daily fresh harvest to its packing houses. Post-harvest control, traceability system and direct face to face communication between members and company's staffs can be carried out on a daily basis. The quality and food safety of fresh produce is well protected right after harvest. Refrigerated trucks provide necessary cold chain and protection against any contamination in transporting the produce to Swift's processing facilities. The multi-tier chain and huge wastage are eliminated. The saving makes the guaranteed high and fair price to contract growers possible while consumers do not have to pay more for the quality produce. The company still enjoys reasonable profit, even though the margin is very thin. Everyone in the company has job security, good welfare and relatively high takes home pay. (See fig. 14.1)

Figure 14.1 Swift's supply chain



IMPACTS

Growers obtain higher and more regular incomes

Contracted growers of the company earn relatively higher income from their produce. With steady flows of income through out the years under contract, most of them can break away from poverty. They can improve their living standard and quality of life significantly.

For example:

Baby corn

In the early stage of Swift's operation, normal price of baby corn at farm was going around € 0.03²⁷ to 0.04 per kg. In rainy season when supply of baby corn is low the price was around € 0.06 per kg. Swift had guaranteed a minimum price at farm at € 0.07 per kg and € 0.08 to 0.09 per kg in rainy season. Given the cost of baby corn farming at that time, the guaranteed price provided a margin of 150 percent to farmers (all inputs, land preparation and farm maintenance costs are included in the farming cost). At present the guarantee price for the baby corn is € 0.11 dry season and, in rainy season, it is guaranteed at € 0.12 per kg. The margin has increased to around 200 percent.

Chinese kale

The going prices at farm of this vegetable are €0.11-0.13 per kg in dry season and around €0.27-0.33 per kg in rainy season. The company guaranteed prices are €0.31 per kg in dry season and €0.56 per kg in rainy season.

In cases of severe crop damage or total loss, which caused by factors beyond their control, they can rely on the company's financial safety net to help them to stand on their own feet again.

The company's financial safety net consists of:

- Long term loan without interest. Growers will pay back when they can realize income from their crops in long term.
- In case of severe damage or total loss from factors beyond their control, Swift will provide grant equal to their farming cost without any string attached. For example, the company provided Baht 5 000 for farming cost per rai (6.2 rai = 1 Ha) to each spinach growers under contract when they experienced total crop losses from heavy rain and landslide just one week before harvesting. If a grower plant one hectare then the grant was Baht 31 000 from the company to start a new plot.

The company benefits greatly as well. Quality fresh farm produce with the required food safety standard is delivered daily to the packing houses for processing. Swift is in the position to supply premium grade produce to its regular customers in more than 10 countries every day, 365 days a year. Consistency of quality and food safety, regular supply and competitive price contribute greatly to the steady increase in sales and turn over, year on year, of the company. It has earned the trust of consumers and retailers in the high-end markets.

Since its first implementation in 1989 to present date, no group had decided to stop its operation with the company. The very first group is still working with Swift at present. The spreading out of contracted groups in all regions of Thailand in the past 20 years indicates that the model is successful and sustainable.

The model is well accepted throughout Thailand. It provides easy and direct access for small-farm holders to a market which buys their entire farm produce at guaranteed fair price. Collection stations have eliminated their logistics constraint.

Expansion of the model and replication in other countries

The accumulated experiences, the reputation and the trust earned by the company make it relatively easy, at present, to organize and operate new groups of contract growers in Thailand. In recent years, many institutes, international bodies and some governmental agencies have taken interest in the model after it has been successfully implemented. The model is being planned to be introduced to neighbouring countries: Democratic Peoples Republic of Laos, The Union of Myanmar and Cambodia. Any success will depend on strong commitments of the local parties.

In Thailand the key actors are Swift Co. Ltd. and contracted grower groups. At present, new groups are being formed regularly while the expansions of the existing groups are still going on.

In DPR of Laos, the first project will be implemented in Uthapeu Province which is one of the less developed provinces in the south. A German public organization – GTZ – and RLIP (Rural Livelihood Improvement Programme) are key partners in the project implementation under the Public-Private Partnership programme (RLIP, a Laotian organization, has been set up to manage long term loan to the Laos government from EFAD for rural development).

KEYS TO SUCCESS: WHY DOES IT WORK?

Internal factors

A long term commitment from the company

Swift, which was a very small company when it was set up, has provided all necessary financial and human resources in developing its contracted farming model and its business. Following its integrated backward plan, long term strategic as well as marketing and production plans, the company has grown, step by step, in the past 20 over years. In the initial period, the company has to borrow quite heavily from commercial banks and IFCT. Debt and debt servicing burdens were gradually paid out and the company has been in a good financial position after the first 7 years of operation. It is a market oriented company and revenues from sales provide the bulk of liquidity and cash flows to meet all the expenses and the necessary investment.

A strong business model

Swift can afford to pay more to farmer by:

- Reducing waste in the supply chain and in processing;
- Elimination of all middlemen and traders in the supply chain.

Agricultural sectors in Thailand and in all developing countries comprise of small-farm holders who do not have direct access to markets. They have to depend on services of middlemen and traders to link them to markets. The multi-tiers supply chain is very inefficient, due to lack of post harvest control, poor logistics and handling. Tonnage loss in the chain is estimated in Thailand, from our experience, at around 30-40 percent and the value loss of agricultural products in the chain is of 200 000-300 000 million Baht (at farm price; retail price will be much more) per year if not more. In Swift supply chain, the wastages are minimized by post harvest techniques and proper handling of the produce in transit. Moreover, the company can reduce logistics cost by organizing combining volumes of harvest from many small farms at its collection stations which have been set up in all grower groups. The saving, from waste minimization to lower logistics cost, are passed to growers after operating cost are taken into consideration.

In Thailand, fresh produce changes hands 5 times on average, from farms to major wholesale markets and another 2 to 3 times before it reaches retailer and consumers. Additional expenses and profit are incurred and added on at every stage. In working directly with contracted groups of growers, all the stages additional

expenses and profit taking are eliminated and passed back to the growers. In managing the supply chain, Swift's growers can get a much better price at farm and the company can supply premium quality produce with highest standard of food safety to consumers.

It can be seen clearly that it is not a simple equation that if farmers get higher price then consumers have to pay more.

Adaptation to local conditions

The model has been designed to eliminate all the constraints, facing by small-farm holders. Farming techniques and farm production planning have been fine tuning to meet local conditions in different geographical locations and requirements of different types of crops. However, the key concepts and all key parameters are maintained through out.

A step by step approach

A key success factor is in effectively linking the farm products to markets on a step by step approach. In the initial period, the company's resources were very limited by any standards. It had to operate on a shoe-string budget with only few staffs. The well conceived marketing plan effectively link contracted farm-products to the targeted markets and made it possible for the company to expand its growing base, step by step, to meet the existing market demand for quality produce.

Equity and transparency in growers groups

All members of each group select their own management committee members, on a one man one vote basis, for a term of 2 years. As they have to contribute 1 percent of their income for group funding, account book of the group is opened to all. Expense budgets have to be approved by all members in formal meeting. Payments for farm produce by the company clearly specify the delivered quantity and amount dues to each grower. They can cross checking the quantity and their entitled amount with the receipts, issued to them by the company on each delivery. Members have participated in all discussions between the group and the company and can vote freely to agree or disagree on all issues.

The grower groups in Thailand are independent from the Swift after the initial period of 2-3 years. The Swift's concept in group organizing and its design of the group's charter make certain that the group will be in the position to independently make its own choice to sell to any buyer.

Factors related to the alliances/linkages between the institution and key stakeholders

Trust and commitment between growers and the company

The success depends greatly on strong commitment, fair pricing, transparency, sincerity and compassion as well as skill of the management team. Following through with all commitments, written or verbal, has earned the necessary trust and respect from growers. A very strong incentive for growers to learn and implement new farming techniques and practices stems from the high and steady income, generating from the contracted farms.

In organizing grower groups, customs and tradition as well as way of life of villagers are taken into consideration. Human dignity is well respected by Swift, and all extension officers are trained to respect all growers as equal without any regards for gender, religious, language which are not really issues in Thailand.

Enabling environment

Large export markets for fresh produce

Swift is one of Southeast Asia's leading fresh produce exporters within the niche market of quality Asian and Southeast Asian organic, chemical free, and GLOBALGAP – compliant, conventionally farmed vegetables and fruits. Its product line includes asparagus, baby corn, mangoes, mangosteen, ginger, galangal and lemon grass that are processed or heat – treated and packed for sale to retail and foodservice markets. The principal export destinations include the United Kingdom, countries in the Middle East, as well as Japan and Australia.

CONCLUSIONS

Major lessons learnt

A well design **contracted farming model** can help in poverty reduction if it is basing on **equal opportunity, fairness** and compassionate treatment from a stronger party. It is difficult but it is possible to organize, to introduce and to train new farming techniques and practices to a great number of growers from different walks of life. The model alone will not guarantee a successful implementation; **management skill, strong commitment, fair pricing**, sincerity, transparency and compassion are key elements of success. Partnership relation, in its true spirit, and not that of a buyer and seller must be developed and maintained at all time.

Any challenges for any institution to strengthen or to establish the contract farming groups are in its implementation and in linking farm products to

selected markets. As a path finder, it is very difficult for the company to develop and to implement the model successfully, given its very limited resources. Since the model has already been developed and it is well proven over a long period of time, it will be quite easier at present for any institute to adopt and modify the model. Any successful implementation will need strong commitment and the aforementioned success factors from all parties, especially the principle one.

Given the limited resources of the company, it can be concluded that the efficiency which is derived from the well design model, the commitment and skill of the company's management team is much greater than any expectation. The efficiency and the sustainability of the model and of the grower groups prove that funding, even though necessary, is not a key determining factor in creating efficiency in implementing any farm development project.

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PARTICIPATORY GUARANTEE SYSTEMS FOR ORGANIC CERTIFICATION IN INDIA AND SOUTH ASIA A GOOD PRACTICE CASE IN INDIA THAT ENABLES AND EMPOWERS RURAL OA FARMERS

CONTEXT

The western world looks at the benefits of Organic Agriculture [OA] for the environment in terms of reduction in use of petroleum products and consequent reduction in production of Greenhouse gases. India looks at OA for reduction of chemical fertilizer pesticide use and dependence on the expensive import of materials and technology. Its focus is on the long term sustainability of agricultural production systems for the large population with farming as their only source of livelihood as well as for the consumers. Both, the costs of production that is transferred to the consumer and the impact of chemicals or Genetic Engineering on the health of its citizens are an issue. For small-holder and poor farmers, Organic Agriculture is a way to reduce dependence on external inputs and debt, minimize risks and improve their food security.

A credible guarantee of the organic status of products needs to be accessible and effective for the sales of organic agriculture produce and value-added processed products to expand and for the OA farmers to fully benefit

from the growing market demand for “Organic” labelled produce. The corporate owned certification bodies [CBs] and their centralized verification mechanisms that are currently accepted by the importing nations are expensive to the producer and skew the pricing to push “organic” labelled produce into an elite, expensive range not preferred by an average householder in the Indian or South Asian context. Thus, no benefits of the organic certification are available to the small producers, who are unable to sell their products as verifiably organic without price premium that lowers the demand for their products locally. Third party certification is often not beneficial to the smallholders, due to its cost (certification fee), the amount of paper work involved and the standards that are often not appropriate and relevant in many developing countries such as India, Nepal, Sri Lanka, Pakistan and Bangladesh.

In this context, IFOAM and MAELA (South American Organic Agriculture Movement) organized an international workshop in Brazil to bring together many groups, representing 20 countries, which had been adopting alternative methods to certify/

guarantee organic produce. Thousands of farmers, who are part of these systems, became part of a world wide network of Participatory Guarantee Systems, facilitated by IFOAM.

Encouraged by the response across countries, FAO took the initiative, along with the Indian Ministry of Agriculture, to organize a workshop in September 2006 to bring together PGS stakeholders in India. Thus began a unique experiment with 14 groups across the country, which consolidated into the PGS Organic India Council.

INSTITUTIONAL INNOVATION

Participatory Guarantee Systems (PGS) are used for the certification of OA produce according to processes developed by the PGS Organic India Council (PGS-OIC) and following standards that are based on IFOAM basic standards and on the Indian National Standards for Organic Production (NSOP) under the National Programme for Organic Production (NPOP). PGS has gained acceptance in India in the recent past. Efforts are on to lay down standards for “Organic” wild produce – non-timber forest produce [NTFP] like honey, yams and fruits collected by forest-dwelling tribal communities in inaccessible forest areas where no pesticides or other harmful chemicals have ever been used. The PGS-OIC provides an almost cost-free, simple, effective and acceptable certification system that is best suited to the local market requirements and empowers the OA producers and NTFP harvesters through collective and peer reviewed capacity building to constantly improve, monitor and guarantee the organic quality of their production systems. The International Federation of Organic Agriculture Movements (IFOAM) defines PGS thus: “*Participatory Guarantee Systems are locally focused quality assurance systems. They certify producers based on active participation of stakeholders and are built on a foundation of trust, social networks and knowledge exchange.*” Since PGS is intrinsically a collective tool that is adapted to the needs of the OA farmers and is controlled by them, it has a great level of acceptability.

Local Group

is a social network that consists of farmers who live in the same village or region and interact regularly with each other. The Local Group does peer reviews of its members and decides which farmers are to be certified.

Regional Council

provides capacity building, facilitates, monitors and recognizes Local Groups. Is generally started by an existing NGO, but ultimately Local Groups are empowered to create their own Regional Councils.

Each PGS Organic Facilitation Council [PGS-OFC] has its own verification procedures (including the consequences in case of non-compliance by farmers and other producers) and maintains their own documentation systems, within the framework provided by the PGS-OIC.

The PGS certification of the Local Groups [LC] is centralized in the PGS-OIC Central Secretariat. The Local Group members then certify individual farmers in consultation with the relevant PGS-OFC. The commitment of time by the stakeholders, primarily the OA farmers, and the adherence to the basic standards as pledged is essential for the success of PGS Local Groups, the foundation of the entire structure of the PGS-OIC. It is for this reason that the pledge to eschew all chemicals and genetically-modified organisms as well as to adopt organic practices for all farm operations, including livestock, is made through the socio-religious custom of the community and region. The pledge to be “organic” is thus not just a document but a life commitment.

The PGS-OFC has to invest time in capacity building and empowerment of each of the Local Groups in its care and supervision. Farm appraisal visits (not called “inspections” as in third party certification procedures), are conducted by at least three farmers of the group, to verify the level of compliance with the basic standards laid down by the PGSOIC. India is a nation of diversity in topography, geology, climate, races, people, cultures, religions and languages. The standards, pledge, appraisal forms and other details are made available to the farmers in their language of choice. As of now, the Organic Farming Association of India [OFAI] has published the PGS booklets, including the appraisal forms in English, Hindi, Marathi, Telugu, Tamil, Kannada and Malayalam languages. Translations have also been made in Oriya and Punjabi, to be published shortly. A Nepalese organization has recently translated the PGS booklet into Nepali, a language also spoken in some sub-Himalayan parts of India. All efforts are made to ensure that the farmer fully understands what

he is committing himself or herself to. PGS seeks their informed consent and life-long commitment.

PGS-OFCs also provide marketing support to the members of other PGS-OFCs in each other's "Green Shops" or similar outlets. Within the PGS-OFCs the LGs promote joint marketing activities (weekly markets commonly known as "Organic Bazaars", mobile sale units using motor vans, periodic exhibition & sales, farm gate sales, etc) or in the form of joint branding using the PGSOIC "Organic" logo and on their products. Keystone Foundation markets coffee, Timbaktu Collective markets cold-pressed peanut oil and Deccan Development Society markets millets and pulses with the PGSOIC logo and organic label.

IMPACTS

PGS have shown positive impacts in:

■ Income generation for producers, diversification and increased food security

PGS are built around the objective to provide organic quality assurance for the products, and there is added value to selling farm produce as "organic". Through this certification system, producers have a stable market and obtain good prices for their products. They are also able to expand the range of their produce and access to the markets thanks to group marketing activities. Experiences from India show that farmers involved in PGS have reduced their cultivation expenditures and received a premium for their products from happy consumers. All PGS experiences show that PGS initiatives create and expand their own consumer base. Unlike third party certification, PGS always certify the entire production of their members (and not only a few commodities) and therefore encourage diversification, which in turn promotes food security. Branding of PGS products has helped increase sales which, in turn, encourage higher levels of production.

Experiences from Medak district of Andhra Pradesh show that women involved in PGS can handle the production and marketing their products with a PGS-organic certificate on their own. Most producers of PGS certified produce have buyers coming to buy directly from their farms at prices similar or above what they previously received at the regular market. Farmers in a PGS group in Kerala designed a farm gate board to declare their PGS compliance and experienced a change in consumer acceptability of their produce. Many of these farmers are also involved in export of spices with Fair Trade compliance.

■ Empowerment and social capital building

Learning processes in PGS aim at building producers' capacity to produce organically and to participate in the collective decision-making processes and hold responsibilities. Farmers are themselves "Resource Persons" who can help create capacities in other groups of farmers. When several local PGS groups upscale to form a national PGS system, the institution, in the form of a democratic representation, also helps them to reach policy makers and be represented in main policy dialogues, especially regarding the development of national organic regulations. PGS members are also working with state governments in drafting and notifying organic agriculture policies. In the state of Karnataka, even budgetary provision has been made to encourage Organic farming.

■ Natural resources and environment restoration

Conventional agricultural practices of the "Green Revolution" destroy soil structure in the name of greater productivity in the short term. PGS encourages production standards that are respectful of the environment with strict non use of pesticides and chemical fertilisers, re-building of soil fertility through organic additives and microbial action, protection of diversity in plants, animal, insects and microbes, sustainable harvest of wild products, and such other good practices. When PGS are formed by a community, they provide the framework to address collective resource management issues such as access to land, or use of wild areas. In Karnataka and Kerala, PGS farmers grow bananas along the boundary for the monkeys to feed on so that they may not damage their crops. In some other states, PGS farmers grow yams on the edge of the forest for the sloth bears to feast on so that their crops may not be laid waste.

KEYS TO SUCCESS: WHY DOES IT WORK?

A "life-commitment"

The commitment of time by the stakeholders, primarily the OA farmers, and the adherence to the basic standards as pledged is essential for the success of PGS. The adoption of organic practices for all farm operations is made through the socio-religious custom of the community and region. The pledge to be "organic" is thus not just a document but a life commitment.

A social networking system

The very first word of PGS involves "participation". The PGSOIC has fixed a benchmark of at least five farmers

in the neighbourhood coming together to form a “Local Group”. In areas where neighbouring farmers have been involved in disputes and litigation over petty differences, PGS promotes good neighbourliness. PGS is effectively a social networking system.

A peer to peer approach to inspection and capacity building

PGS inspections are carried out by other farmers that live nearby. There are real advantages of the peer-review approach. First, local networks naturally develop, and the information sharing and collaboration this facilitates strengthens the movement as a whole. Second, neighbouring farmers-inspectors are more likely to regularly and randomly visit their neighbours, and they are more intimately familiar with local pest pressure, so they can be more aware of cheating and thus serve as better deterrents.

Each farm visit is an occasion for knowledge exchange between the peer farmer-appraisers and the farmer who is visited. Farmer-to-farmer trainings within the PGS-OFC and between PGS-OFCs help in capacity building, knowledge sharing, exchange of produce or seeds and bonding between the farmer groups in different LGs. Even the PGS-OIC meetings are occasions when PGS-OFCs are encouraged to bring along OA farmers from their network to the venue of the meeting and interact with the farmers of the host PGS-OFC. Even the members of the PGSOIC's National Council spend one day in field visit, either before or after the formal meeting. Such interactions and group discussions between their members help to build capacity on good practices, including farm management.

Efficient communication and promotion of OA to consumers and partners

A quarterly newsletter, ORGANIC NEWS promotes the instant recall of PGS Organic logo which is prominently displayed on its masthead. It also provides news of new PGS product launches, activities of PGS-OFCs, updated position showing the growth of LGs in each PGS-OFC and the international news of PGS. It also carries advertisements of PGS products and outlets like “Green Shops”. The newsletter's target readership is organic farmers' organizations, policy makers in federal and state governments as well as in donor agencies and the consumers.

By involving consumers, the newsletter helps to widen and stabilize the consumer-base for the members of the group. The assurance of the organic quality of the products of the PGS members is the adhesive that keeps the consumers and OA farmers together in the demand-

driven supply chain for labelled organic produce. Transparency and credibility are two sides of the same coin which is one of the key elements of PGS.

A cost-free certification making produce affordable to local consumers

The cost of PGS certification for producers is close to zero as the PGS-OFCs do the capacity building and the peers do not charge a fee for the farm appraisal visits. This helps the farmer to make organic products available at affordable costs to local populations. Experiences from India show that PGS has managed to provide certified organic products to village consumers at similar prices to conventional products but with improved profitability for the farmers and consumer alike. Organic tomatoes have a shelf-life of 25 days at ambient temperature as against a “conventional” shelf life of one week to ten days. Once the consumer experiences this tangible benefit of organic produce, he or she demands for organic tomatoes and is willing to pay a premium to get them. By reducing the intermediaries and organizing collective marketing through weekly “Organic Bazaars” for perishable organic produce, PGS-OFCs have been able to provide a stable market and boost the profits of their member Local Groups.

Factors related to the alliances/linkages between the institution and key stakeholders

The participation of other stakeholders like local community based organizations [CBOs], voluntary organizations [VOs], NGOs and even the consumers, has helped to set-up democratic organizations to decide how to adopt standards that are locally adapted and culturally sensitive in the local socio-religious context.

CONCLUSIONS

Key lessons learned

The Participatory Guarantee Systems are best suited to the needs of small land-holders in India and the South Asia region. It was built for small farmers selling into domestic, primarily local markets, and this specificity is seen as crucial to its success.

Major lessons learned from the overall development of PGS in India are that:

- PGS is generally accepted by the local organic producers and consumers as a credible and desirable system of certification for organic produce.
- In countries with strong farmer groups and cooperative culture, farmer groups can take the lead in setting-up

their own PGS and in involving other stakeholders. In India, adding to this positive base is a strong religious and cultural attitude of respect towards life and the environment which makes India particularly receptive to Organic Farming ideals.

- Promotional activities like “Organic Bazaars”, Exhibitions and Trade Fairs, Newsletters, promotional T-shirts and caps, information brochures and, above all, marketing of PGS ORGANIC branded produce helps to create a demand that will help boost production of PGS labelled produce. Hence PGS is a producer-driven process that will facilitate boosting consumer demand.

The Indian experiences show that PGS is a self-sustainable system. Keystone Foundation, IIRD and OFAI have done pioneering work in the implementation of the system in India and are now promoting its adoption in Nepal, Sri Lanka, Bangladesh and even in Indonesia. The experiences show that PGS systems are not only sustainable at the community level and national level but **can be “scaled-up” over time**, to develop into regional systems in a sub-continent.

The main barrier to the development and sustainability of PGS is government organic regulations, such as “AGMARK Organic” rules in India which may not permit PGS to use the word “organic” and sell through organic mainstream channels, if not checked at this stage itself. The influence of market forces, especially from Europe and USA, can be felt even in India due to WTO and other international negotiations. In USA, it is illegal for a non-third party certified produce to use the word ‘organic’ on its label. This is the case in the European Union and has been a major reason for the decline of the French PGS since the enforcement of the EU regulation, although this decline has recently been reverted thanks to IFOAM’s position backing-up PGS. In Brazil, the organic regulation is favourable to PGS. This is the pattern India must be encouraged to follow instead of going the inhibitive USA and EU way for compulsory Third Party certification. The PGS concept has proven to be replicable in various parts of the world. It must be encouraged and assisted to grow. The PGSOIC is committed to this growth in South Asia.

Recommendations

National regulation of the organic sector is a key factor that will either enable or disable the development of PGS locally. Once countries have an organic regulation in place that is not conducive to PGS, it is extremely hard to change the regulatory framework. Therefore, particular

attention should be given to PGS at times where countries like India are developing their regulations, particularly when the PGS movement is already strong and nationally organized.

All stakeholders should vigorously promote the adoption and development of PGS in their countries. Governments should avoid compulsory requirements for mandatory third-party certification as they will not enable other alternatives to emerge. Other conformity assessment procedures, such as participatory guarantee systems, should be explored. [UNCTAD-UNEP recommendation²⁸].

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IMPROVING MARKET OPPORTUNITIES OF SMALL PRODUCERS THROUGH COOPERATIVES

CONTEXT

Argentina's long tradition of wine growing constitutes a fundamental economic driver in rural areas of the Mendoza Province, which currently counts more than 12 000 producers and 156 000 hectares. Out of the above 12 000 producers, 70% are small land owners with less than 10 hectares each, most of which are members of cooperatives.

Towards the end of the 80's, a series of events had dramatically changed the landscape of the Mendoza Province. From generation to generation, land was transferred to families of numerous children, resulting in an atomization of property and a fragmentation of land that made the scale of production at farm level to loose competitiveness in an economy that was increasingly evolving into a liberalized context. On the other hand, urban populations were changing their food and drinking consumption patterns, and there was a trend to replace wine with the consumption of soft drinks and beer, causing a decrease in the demand for the so-called table wines. Simultaneously, a trend towards widespread consumption of higher quality wines was emerging in most developed countries, opening the doors to foreign markets. Consequently, foreign investments arrived to Mendoza with a more articulated strategy for meeting this new demand, which resulted in a crisis situation for small producers, who lacked varietal quality in their vineyards, had outdated wineries and deficient enological know-how, running the risk of disappearing when competing with the new and more competitive firms.

INSTITUTIONAL INNOVATION

In 1970, the Association of Wine Cooperatives (ACOVI) was set up in this context, grouping first tier cooperatives to represent the interests of small producers. In 1980 the Argentine Viticulture and Winemaking Cooperatives Federation (FeCoVitA) was established. Although there are overlapping responsibilities between ACOVI and FECOVITA and the limits

between one and the other are blurred, over the years both structures have managed to cooperate functionally. ACOVI has increasingly focused on a trade-unionist role, while FECOVITA has focused more on an entrepreneurial role.

FeCoVitA functioned as a cooperative federation until 1990, when it bought the formerly state-owned Giol winery's bottling plants and brands at a public bid. After successfully competing in the bid, FECOVITA became more and more oriented towards the market, thus streamlining its modus operandi towards an increasingly entrepreneurial structure. FeCoVitA managed to transform the state enterprise, Giol, which was operating at a severe deficit (over \$500 000 per month with a debt of over \$35 million), into a successful business-oriented cooperative enterprise, which is now operating at very lucrative surplus rates.

FeCoVitA integrated all small-scale producers who used to sell their products to the winery, as well as some already-existing cooperatives. About 5 000 wine producers and their families belong to 30 cooperatives and are distributed throughout the territory of the Province of Mendoza. In order to ensure adequate provision of services to its members, FeCoVitA grouped all associates into 5 groups, according to their geographical location: North, South, East, West and Center. Some 6 cooperatives belong to each region, which selects a Regional Representative. The 5 Regional Representatives constitute the Board of Directors of FeCoVitA. However, important decisions of the Federation are made within FeCoVitA's Assembly, which is constituted by the 30 Cooperative Presidents. The Assembly meets twice a month to discuss market policy, wine prices, technical assistance provision, credit policy and other priority issues identified by any of the cooperatives' Presidents. Assemblies have a twofold advantage: on the one hand, they allow active participation of associates on decision making processes; on the other, they are dynamic and flexible enough to work like a business, guaranteeing entrepreneurial efficiency.

Service provider

The consolidation of the ACOVI-FeCoVitA system searched for solutions to deep-rooted structural problems affecting small producers. It offers new credit programs

for both working and fixed capital, provides technical and legal advice as well as purchase guarantees as a transition policy. More importantly, the Federation has been a key provider of services such as credit, technical assistance, extension, etc, giving an important boost to the development of wine and grape producer cooperatives in Mendoza.

The pursue of constant technology innovation has driven FeCoVitA to actively pursue a widespread system of insurance against losses deriving from hail. The association has helped farmers obtain credit from FeCoVitA itself and from other actors as well, to build nets to protect grapes form the impact of hail. The FAO TCP project helped some of the cooperatives design 5 investment projects, which have already been approved to build such protective nets. On the other hand, FeCoVitA consistently assists farmers in improving the overall conditions of farmer plots to ensure they supply adequate quality of grapes to their respective wineries. Finally, FeCoVitA has also been present all along in helping wineries themselves improve their wine processing capacities. Also in this case, FAO helped design a number of investment projects to improve and modernize wineries for them to become competitive in the domestic and foreign markets.

At the beginning of the current decade, FeCoVitA realized that in order for the organization to preserve its vitality, it required to enhance the connection between its membership and the management. It was for this purpose that the Federation, through the relevant national authorities called on the assistance of FAO.

RESULTS

- FeCoVitA commercializes over 80% of the wine made by its approximately 5 000 members and each cooperative ranges from 20 to 300 members. In addition, the Federation exports around 12% of its bottled volume. Cooperatives are export oriented towards regional markets and especially Latin American markets. In this case, FeCoVitA is particularly interested in the Brazilian market, which is the greatest in the region and where past experiences had proved successful. This success is based on the good price/quality ratio, as well as on the active work by public and private entities to promote Argentine wines abroad. Its exports range from the basic table wines to the finest ones. The main FeCoVitA external markets are currently the USA, Brazil, Paraguay and Russia; also most is exported,
- mainly to the USA and Russia. In 2006, FeCoVitA registered sales for US\$281,9 millions, which equals 74% of national exports.
- In about 15 years, it has demonstrated a growing efficiency, from both, the organizational and the economic points of view. Fecovita integrates 40% of producers of the province and commercialize 10% of national production, all of which originated from a broken state-owned winery, is without doubt, a successful story. Small producers that belong to a cooperative receive from 15% to 20% more for their products
- The Federation has also obtained remarkable results in terms of market positioning. In a domestic market where consumption of table wine is decreasing, FeCoVitA has adopted a strategy of internal commercialization based on a very good price/quality ratio and a solid capillary commercial net that allows distribution to reach the smallest and most remote locations within the country. Today, FeCoVitA counts with 12 branches targeting small grocery stores rather than supermarkets with a minorist distribution system. The reason for this strategy is that supermarkets take the lead on commercial conditions, which would lead to a loss of independence in the negotiation process. Distribution chains such as that of FeCoVitA are complex and slow to build, but once consolidated, they prove solid and steady.
- The Federation Assembly and its Board of Directors enjoy a high degree of legitimacy vis à vis its membership and therefore, yield significant influence on policy decision making processes concerning the setting of wine prices, access to credit for small farmers, the construction and maintenance of infrastructure at the farm-gate level, including irrigation, etc. This influence is not only visible at provincial but also at central government levels and establishes a solid bridge between civil society, the private sector and Government. FeCoVitA has earned a reputation among its members for consistent payment at higher prices and constant investment in improving production capabilities, as well as assistance to upgrade quality of grapes at farm level, ensuring the profitable sale of their products. Also, FeCoVitA has engaged in improving the access of farmers to irrigation schemes, which greatly enhanced water use efficiency and thus, vineyard productivity. In addition, as a result from FAO's advice in the framework of the TCP/ARG/3102, FeCoVitA is currently considering the idea of initiating a watershed management scheme in anticipation of risks of water shortages deriving from melting glaciers.
- The ACOVI-FECOVITA complex has consistently shown an active interaction with the local, regional and

national institutional frameworks. National matters are brought up to the National Inter-Cooperative Agro-Council (CONINAGRO), a third tier entity that puts together all rural cooperatives in the country, representing a strong political tool to influence strong decision making processes at national level.

KEYS TO SUCCESS OF THE GOOD PRACTICE

- A key factor for the success of FeCoVitA has been a combination of bottom-up consolidation of capacities, wherein farmer families build their cooperatives at the local level, articulating production with organization at all levels of the process and thus, horizontally integrating into a cooperative that does not only function as a conceptual reference, but delivers primarily a key production-related function for grape producers, that of transforming grapes into wine or juice. The cooperative is thus, not just a coop, but it is in itself the winery. The production of wine is thus, the linking thread that binds farmers together and ensures loyalty to the cooperative. The 30 coops that belong to FeCoVitA are wineries themselves. They all provide their produce to FeCoVitA, which is responsible for the packaging of the product, and thus becomes the element that vertically binds all 30 coops and the 5 000 members that belong to them into a single civil society organization that performs its functions as an efficient and highly competitive private sector enterprise. On the other hand, there is a top-down discipline that emanates from FeCoVitA management and flows downstream to cooperative members, enabling FeCoVitA management to impose quality standards, regularity of supply and full member production delivery to its member cooperatives and, through them, to FeCoVitA.
- The integration among all actors of the system: cooperatives, producers and their representative institutions (ACOVI, FeCoVitA), allowed to work along the production chain in order to strengthen the institutional capacity and to ensure access to both, domestic and foreign markets. In fact, the TCP project focused on the strengthening of the articulation between FeCoVitA and INTA by demonstrating to the Federation the importance of constantly introducing technology in the search for competitiveness, as well as the technical assistance to members of first tier cooperatives. The fact that FECOVITA is actually a bottom-up construction did not guarantee that the voice of smaller farmers reached management to the extent that it was required. This was

required for the consolidation of democratic processes which are inherent to the very nature of cooperative structures but also because flexible, fluid dialogue is the basis for entrepreneurial success in competitive market dynamics. A TCP project was implemented in 2006-2009, where FAO provided technical assistance to the National Institute for Agro-Technology (INTA)²⁹ in the institutional strengthening of the economic and technical capacities of Mendozan Cooperatives. The project was implemented in close collaboration with FeCoVitA and ACOVI. The purpose of the TCP was to establish a line of communication between the associates (small scale producers) and wineries and between wineries and FeCoVitA. The project also included specific studies on critical aspects of the system to generate information for decision making and planification; it promoted the establishment of interinstitutional alliances; provided training to small-scale producers and directives of cooperatives in different matters. Overall, the project was oriented towards the strengthening of political and institutional capacities of FECOVITA, promoting participatory decision-making processes while enhancing competitiveness.

■ In the case of Argentina, (which is similar to that of Uruguay and Southern Brazil), the nature of cooperatives makes them an ideal vehicle to channel services such as credit, training, technical assistance, etc. down the line to small farmers. It is important to highlight that the outreach potential of small-farmer cooperatives is guaranteed by the ownership of the farmers over the cooperative.

■ The political and economic contexts of greater liberalization and market deregulation have put cooperatives in front of a dilemma over the years. However, FeCoVitA is actively and quite successfully seeking for a balance that allows for a competitive cooperative, while respecting its solidarity values. The cooperative adopts an ever more business character, or to include an additional condition: to strengthen capacities and economic efficiency, but not at the cost of excluding the weakest bonds of the chain, but in the contrary, elaborating strategies that allow for progress within the cooperative. Although this solution may be significantly more complex, it is compatible with an ideology that promotes solidarity, democratic and inclusive values. This is what FeCoVitA is trying to achieve.

29 TCP/ARG/3102: "Fortalecimiento Institucional y de las Capacidades Técnicas y Económicas del Movimiento Cooperativo en Mendoza"

MAJOR LESSONS LEARNT

- The case of FeCoVitA provides strong evidence that **when privatization transfers property to small-farmer cooperative, social, demographic and economic targets can be reached**, e.g. farmers remain on their farms deriving increase income from their on-farm labor, migration is reduced and thus, the rural exodus is reduced with beneficial impacts for life in urban centres and finally, the enterprise itself begins to produce a surplus that makes the enterprise competitive on the one hand, and helps it achieve its social targets on the other.
- **The articulation of civil society organizations around agricultural production can be highly successful, provided that the activity is competitive in a liberalized market.** The case of FeCoVitA shows that, at a time when 250 000 small farmers were abandoning farming activities, wine producers were able to remain on their plots. The case also shows that the limited economies of scale of small farmers can be overcome by their integration into cooperative organizations. The further the articulation grows, both horizontally into local cooperatives, and vertically into a third tier federative structure, the greater the chances for economic and social success of mobilizing civil society around income-generating activities.
- **Transfer of technical know-how is better achieved by in-service training on farmer plots**, rather than laboratory-type plot experiments on specifically targeted plots. Farmer to farmer approach is much more acceptable to farmers than top-down training provided by external consultants with little understanding for the reality of the small farmer. Farmers believe in what they can visually observe and understand. They are less keen to abstract messages that contain academic wisdom. This is not necessarily cheaper than traditional extension schemes. However, evidence suggests that in terms of cost-effectiveness, it is a far more successful approach.

- It should be noted that a distinctive feature of the cooperative movement in Argentina was the extent to which these have been controlled by their membership since the beginning and the role they played, to: a) protect the interests of small farmers, for which they played a trade union-like role; and b) reduce transaction costs for small farmers in their connection with the input and output markets.
- **Cooperativism allows for visibility to social groups with a weak institutionality**, strengthening their limited possibilities to influence on public policies. As far as its relevance on social development, FeCoVitA favors intra-community integration, based on social relations within the community expressed in the degree of confidence to initiate and participate in common projects.

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FARMER MARKET LINKAGE ACTIVITY FOR THE FIJI PAPAYA INDUSTRY

BACKGROUND

Fiji is in the midst of an exciting and challenging period in its agricultural history. The decline of the sugar industry signals the passing of an economic era and a way of life for many people in the rural areas. Although sugar is still important to the economy the face of Fiji's agriculture sector is changing. The former plantation system has gone; the sugar industry has been based on small holdings for over a century. With the changes in the preferential trade agreements, the ending of land lease agreements for Fijian Indian farmers and the return of the land to native Fijian farmers' diversification of agriculture is a key focus area for policy makers in Fiji.

This challenge has brought new crops, products and services to the sector. In this context papaya has been identified as a crop with the potential to be very profitable for smallholder and commercial farmers. While papaya farming has traditionally been considered a gardeners activity in Fiji it is now emerging as an important export commodity offering the opportunity for sustainable income and employment in the rural areas.

The papaya value chain consists of a relatively large number of actors as compared to other papaya industries

found in other southern countries, but has a similar to the industries known in Australia and Hawaii. This fact is positive in that a larger number of households are benefiting from employment and livelihoods as a result of this industry.

However small farmers have been facing several constraints in this chain which had to be addressed and have been overcome: highly restricted quarantine regulations/requirements, food safety and quality requirements, expensive inputs, small dispersed land holdings with difficult access to the road network, competition from larger countries, communication and information sharing among value chain actors, cohesion between different actors, etc.

INSTITUTIONAL INNOVATION

Natures Way Cooperative (Fiji) Ltd. (NWC) was formed in 1995 to undertake mandatory quarantine treatment on behalf of Fiji's fruit export industry. Prior to the establishment of NWC, quarantine treatment throughout the Pacific islands was undertaken by

government quarantine departments. The company has over 120 shareholders, made up of growers and exporters. The vast majority of the shareholders are small farmers, who without the services provided by NWC would not have access to export markets. Over the last decade NWC has grown from a small business handling just 30 tonnes of papaya to an agribusiness treating 1 200 tonnes of fruit (papaya, mango, eggplant and breadfruit) annually for export.

Coordination and integration in supply chains is an essential strategy to increase competitiveness in the market place, particularly for perishable and delicate processed products. Successful integration of supply chains depends essentially on building trust; this requires transparency and sharing of information amongst chain participants. Based on the increasing demand for Sunrise papaya, **Natures Way Cooperative managed to mobilize stakeholders along the value chain and build trust among** input suppliers, growers (11 larger papaya farmers and 100 small farmers), transport agents, and exporters (4 major export companies). In addition a number of domestic buyers have become interested in the Fiji red papaya and compete with exporters for the produce, i.e. roadside vendors, market vendors and middlemen³⁰.

NWC offers the following support services to the producers:

- Quarantine treatment as the core service
- Importation and supply of seeds to its smaller farmer members. The availability and quality of papaya seedlings is a critical initial link in the papaya supply chain. NWC Field Service supports the industry through the importation and distribution of seeds. It is the intention of the NWC Field Service to continue imports of papaya seed to supply to its smaller farmer members; this is done merely as a service to its members as there is no significant profit arising from these sales.
- A small field service

NWC also facilitates linkages to the group of exporters which offer an excellent and feasible market entry opportunity for small-farmers into the papaya chain for “Fiji Red” papaya.

NWC has prepared a description of its business model and, based on the business model, an **action plan/upgrading strategy on how to more successfully integrate small-farmers into value chain** for “Fiji Red” papaya. On this basis the following sequence of activities

were designed to successfully integrate small-farmers into the value chain for “Fiji Red” papaya:

- **Component 1:** Involves a 3-fold increase in quarantine treatment capacity. This investment will provide Fiji with the capacity to export around 5 000 tonnes of fruit annually.
(Increasing the packing area; An additional wide body treatment chamber; Expanded administrative facilities; Grading and handling equipment and improved systems; An additional fork lift; Facilitating market access to the US for papaya and breadfruit)
- **Component 2:** Involves creating a focused industry outreach program to facilitate the substantial increase in the volume and quality of fruit to take advantage of increased quarantine treatment capacity and available markets (Establishment of a NWC field service; acquisition of field crates for farmers).

IMPACTS

- Improvement of the industry's competitiveness and increasing the volume of produce sourced from small farmers.
- The NWC has ensured that products for export have consistently met the consumer market demands on quality.
- Since NWC commenced operations in 1996, approximately \$15 million³¹ (7.75 million USD) has been generated in foreign exchange earnings of which nearly \$6 million has been paid to farmers (Table 17.1). Currently NWC annually generates around \$2million in export earnings and \$800 000 in farmer income. Because of the capital investment made by NWC a three fold increase in export earnings and farmer income is now feasible. The table shows the number of farmers who supplied produce that was treated by NWC in 2008. This represents an estimated 330 full time job equivalents. To this has to be added the employment provided by the exporters (176) and by NWC (18). The total direct employment generated by NWC is estimated to be around 530 full time job equivalents. The projected increase in employment resulting from the capital investment made by NWC are shown in table 17.1.

30 They deal with farmers at the farm gate and will sell the papaya to hotels, restaurants, market vendors or supermarkets

31 all in Fijian Dollars

Table 17.1 The estimated and projected employment created by HTFA³² treated fruit exports

	2008	2009	2010	2011	2012
Fruit treatments (tonnes)	864	1 655	2 150	2 580	3 210
Estimated employment (full time job equiv.)					
On-farm	333	414	538	645	803
Exporter	176	219	284	341	424
Natures way	18	28	28	30	30
Total	527	661	850	1 016	1 257

SUCCESS FACTORS

The key factors that have contributed to the success of NWC are:

■ Good management

- The most important success factor is the quality and continuity of management, i.e. the same Chairman and General Manager have served from the outset.
- Shareholders have not interfered in the day to day operations on Management.
- Quarantine treatment fees have been set at economic rate from the outset. This has enabled the business to run profitably and retain a sufficient level of earning to fund repairs and maintenance, to invest in the expansion of the business and to make “rainy day” provisions for events such as cyclones and trade bans.
- The Natures Way Cooperative’s key service is the quarantine treatment, but also providing good management, a **mediation role**, managing to bring stakeholders around the table and keeping them together over long periods (almost 10 years now).
- The Natures Way Cooperative owns and operates the quarantine treatment facility. The customers of NWC’s quarantine treatment services are its shareholders – the exporters and growers of fresh fruit for export. Without this service they cannot export.

- The business was able to quickly move to a level of plant utilization that yielded a positive cash flow. The key to this was the introduction of eggplant in 1998 to complement and then surpass papaya.
- Because of its **high quality service provision, long term good management**, technical know-how, reliability, transparency (openness/information sharing, charging for services to build up reserves for times of crisis (floods or cyclones often hit Fiji) and accountability, NWC attracted donor funding and retained Government support.

■ Enabling environment

- There has been no government interference in the operations of the business. The role of government in the public-private sector partnership has been confined to the initial provision of capital and in the carrying out of core quarantine functions.
- The small-farmers receive extension support from the Taiwanese Technical Mission: technical training and support as well as supply of agro-inputs to farmers on a micro-finance scheme where farmers are required to pay back the loan when they begin harvesting. Their extension model is successful in many respects due to the fact that they visit participating farmers once a week.
- The Ministry of Primary Industries Agriculture Extension Division provides services locally such as farm registration, technical training and farmer field days, farm hygiene and sanitations inspections, technical advice and awareness on post harvest and quality management. Despite the fact that they are under resourced they continue to assist farmers as best as possible.

³² High Temperature Forced Air (HTFA) quarantine treatment involves slowly heating fruit (5-6 hrs) to a temperature that can kill fruit fly larvae and eggs (around 47.2 OC).

- Fiji's horticultural produce exporters have direct air links to Sydney, Melbourne, Auckland, Los Angles, Hong Kong, and Seoul. The international airport at Nadi is the Pacific hub for international flights and has offered a unique advantage for Fiji's HTFA treated produce to access Pacific Rim markets. The main growers providing products destined for HTFA treatment are located in areas with adequate road connection to the treatment facility at Nadi Airport. Furthermore, the positive impact of the telecommunications revolution means that throughout much of Fiji, growers, buyers and transport providers are now benefiting from instant communications.
- The different project initiatives are now being coordinated by a group of **stakeholder representatives**, who meet regularly. The initiative is now called the "Papaya Project".

CONCLUSIONS

- **A good manager and well skilled mediator** is needed to bring together (and keep them together) stakeholders to work on a commercially viable and competitive value chain
- Different issues affecting the supply chain need to be **addressed by all of the actors along the chain**:
 - **Quality and consistency** to maintain Fiji's share of the export market and attempt to expand these markets. Quality management is not the responsibility of any one actor but everyone must make a concerted effort to handle the product as carefully as possible.

- **Information flow and communication** especially between farmers and exporters: It is recommended that NWC and the Fiji papaya project support the exporters association and support the coordination of informal farmers' groups into larger geographical areas to provide feedback on the issues facing their members.

NWC has proven itself to be a financially viable operation. However, it would not have been possible to become established and to expand without donor assistance. NWC has been successful in securing external capital funding because it has demonstrated its willingness to make a substantial contribution of its own retained earnings to expand the business.

The key lessons from the various quarantine treatment operations in the Pacific island region are:

- A necessary condition for the success of a commercial scale treatment facility is that it must be run by the private sector.
- The division of responsibility between the quarantine treatment business and the quarantine service.
- As with any other business success depends on good management
- Financial viability depends on maintaining a sufficient level of throughput.
- The business must be able to charge economic rates for treatment if it is to be sustainable.

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TOMATO INTER-PROFESSIONAL ASSOCIATION AT THE SERVICE OF COORDINATED MANAGEMENT OF THE VALUE CHAIN

BACKGROUND

Until the end of the 1980s, government services in most developing countries were closely involved in the management of agricultural value chains, particularly cereal and export chains, determining (sometimes unilaterally) how they were to operate and fixing the purchase price paid to producers, the conditions for input procurement and the systems to be used in marketing and export. In certain value chains, government services were even the sole central operator, holding a monopoly over purchases from producers, processing and/or exportation, or governing the supply of inputs.

The structural adjustment programmes of the 1980s led States to withdraw from agricultural value chains, inasmuch as the World Bank, the International Monetary Fund and other donors believed that privatization of these sectors would be more effective with a view to their development and smooth running. Most of the technical functions of procurement, marketing etc., which had been in the hands of State companies, were thus transferred to the private sector and existing professional organizations, although the latter were still in their infancy and relatively lacking in structure.

The stakeholders in many value chains thus found themselves faced with the task of working together and getting organized in order to remove constraints extending beyond their particular professions, such as improvement in the quality of a product, defence of a local value chain against imports, and establishment of agreements on price. This was particularly the case for value chains of processed products, perishable products or those facing competition from imports. In such chains, coordination among producers, traders and/or processors were needed – or indeed obligatory – in order to support their activities.

In Senegal, various interprofessional organizations were formed, particularly in the groundnut, cotton, industrial tomato, cereal, poultry etc. subsectors, with varying degrees of success. The present paper is intended to capitalize on the experience of the National Coordination Committee for the Industrial Tomato Value

Chain (CNCFTI), an interprofessional organization often cited as a successful example as compared with other similar organizations in Senegal.

INSTITUTIONAL INNOVATION

Industrial tomato growing was introduced into Senegal in 1969, since when a Franco-Senegal enterprise, the Senegalese Canned Food Company (SOCAS) has been offering growers tomato purchasing contracts, providing them with the technical assistance needed for development of this crop. At the start, harvests yielded 200 tonnes of fresh tomatoes, whereas today SOCAS purchases more than 50 000 tonnes of tomatoes under contracts with growers, processing them into double concentrate. A close partnership has gradually been built up between tomato producers and the manufacturer, leading in 1995 to the establishment of CNCFTI. This collaboration has not always been plain sailing. In 1998, for example, producers were dissatisfied with the price paid by SOCAS and decided on a complete boycott. That year, no tomatoes were delivered to the manufacturer, and since then the committee has taken on a real importance.

Today CNCFTI is an association recognized by the State, with its own statutes and rules of procedure, and regular renewal of its various governing bodies. It encompasses all the professions in the value chain: tomato growers, manufacturer, transporters, suppliers, traders and consumers, and also government services. However, the “active” members of the committee are in practice the growers and the manufacturer, who have the most to gain from dialogue and finding a consensus. It is also they who finance CNCFTI, with the Senegal River Delta Land Rehabilitation and Use Company (SAED) providing its secretariat. Decisions are made in this committee as to how the cropping season is to be run and the overall piloting of the value chain, for example planning of the cropping season, fixing of the price of fresh tomatoes, areas to be planted, financing

of the cropping season, input procurement, technical packages, data production and advocacy.

Firm contracts to purchase tomatoes at guaranteed prices (“crop contracts”) are negotiated each year between producers’ groups and the manufacturer. The producers undertake to respect quantities, quality and delivery dates, and also to sell their produce to the manufacturer. For its part, the manufacturer undertakes to accept all the trucks of tomatoes parked outside its plant over the 24 hours, reserving the right to reduce the price if the tomatoes are damaged or do not meet the specified quality. On the basis of their contracts with the manufacturer, producers can gain access to seasonal loans (and investment loans) from the National Agricultural Credit Bank of Senegal (CNCAS). Repayment of loans is deducted at source from the payments made by the manufacturer to the producers.

The committee is made up of representatives of the various professions and institutions involved in the industrial tomato value chain, as follows:

- group representing producers: strategic partner;
- group representing the processing industry: strategic partner;
- group representing financial institutions: associate partner;
- group representing public institutions: associate partner.

The structure of the committee is based on various governing bodies:

- the general assembly, with 53 members: 40 producers, 4 manufacturers, 3 representatives of CNCAS and 6 representatives of public institutions; it meets every three years;
- the governing council, with 26 members: 14 producers, 4 manufacturers, 2 representatives of CNCAS and 6 representatives of public institutions.

The governing council elects the administrative office holders:

- the executive office, with 24 members: 12 producers, 4 manufacturers, 2 representatives of CNCAS and 4 representatives of public institutions;
- the crop monitoring committee, which meets every two weeks;
- the tractor monitoring committee.

CNCFTI has the following tasks:

- organization of interprofessional coordination “in which all the various partners in the industrial tomato value chain can circulate information, present and discuss the problems and interests of the various

professions represented, define and propose joint and sectoral actions etc.”;

- organization of coordination among professionals in the value chain and other development partners (particularly the State) “in which all the problems encountered by the professionals are discussed, together with the direction and measures to be taken by the government regarding the industrial tomato sector both directly and indirectly”;
- planning, monitoring and evaluation of actions at the various stages in the value chain;
- drafting of proposals with a view to appropriate policy measures;
- identification, formulation and execution of research and development programmes with specialized bodies;
- actions to promote the products of the value chain.

It should also be noted that the committee intervenes strategically in two spheres connected with the definition of trade rules:

- it helps to draw up crop contracts and countersigns these;
- it is the main intermediary for CNCAS in the allocation of seasonal loans, guaranteeing loan applications thanks to the existence of a guarantee fund within CNCFTI, drawing up invitations to tender for suppliers of seed, fertilizer, plant protection products and field work, and selecting the partners shortlisted for supply of these inputs.

The operating costs of the committee and the guarantee fund are covered by levying a fixed subscription for each category of member.

IMPACT

The establishment of CNCFTI has made a major contribution to improving industrial tomato growers’ access to quality seed and their grasp of technical packages thanks to agricultural advice, financing and assured outlets and prices, thus allowing the success of this value chain.

Since the creation of CNCFTI, loans to producers, the area planted to tomatoes and the produce delivered to the manufacturer have thus constantly increased. The price paid to producers for fresh tomatoes has risen, while the price of tomato double concentrate to consumers has fallen.

KEYS TO SUCCESS

Internal factors

A well-structured value chain and shared interests

The industrial tomato value chain is a short, well-coordinated chain that is also marked by the geographical concentration of production. The small number of downstream operators (the processing company) facilitates contractualization, and this has advantages: security of outlets and prices known at the start of the cropping season for producers, security of supplies at fixed dates and of the required quality for processing companies, security of loans for the bank, etc. Industrial tomatoes are a perishable product intended for sale: the processor is “dependent” on producers, just as the producers “need” the processor. Coordination, negotiation, trade-offs and agreements are therefore obligatory for these two groups of stakeholders.

An organization sought by the stakeholders themselves

The appearance of a major crisis in the sector prompted the professionals themselves to join forces and work together, even though SAED, a State structure, has undoubtedly played – and is still playing – an important role in providing support.

A leader at the head of the interprofessional organization

The role of certain major stakeholders in these dynamics should be highlighted, especially the personality of the chairman, a producer who acts as an interface with the other stakeholders in the value chain, thanks particularly to his professional experience in large-scale processing and in SAED.

External factors

A favourable national trade policy

The market for tomato concentrate has been protected in order to reduce competition from imported triple and double concentrate (through a contingency import tax of more than 32 percent).

A well-established committee with strong government support

The existence of a coordination committee in the industrial tomato sector dates back to 1988. It was established in response to a wish to re-examine the respective roles of the State, producers and processors when the sector was being liberalized. The industrial tomato value chain has thus been enjoying substantial State support for a long time. In 1995, the committee was opened up to

other stakeholders in the value chain (CNCAS, suppliers, the research sector) and its name was changed to the National Coordination Committee for the Industrial Tomato Value Chain (CNCFTI). It then really came into its own in 1997 following the boycott of the value chain by producers dissatisfied with the price paid by SOCAS.

Today CNCFTI is an association recognized by the State (Ministry of the Interior, 2002), with its own statutes and rules of procedure (CNCFTI, 2001) and with regular renewal of its various governing bodies.

CNCFTI operates on the basis of a close partnership between private actors and government. Since its constitution as an association, it has thus chosen to include a group representing public institutions. Although this group is described as an “associate partner”, it plays a crucial role in the functioning of the committee. The committee’s headquarters are located in the offices of SAED, which hosts its meetings and sends out notifications. SAED also draws up minutes of meetings, technical and administrative documents, and forecasts and balance sheets for each cropping season. It can thus be said that SAED acts as the secretariat for CNCFTI, so that the committee operates “on two legs”: the private sector (represented by its chairman) and the public sector (SAED), which provides indispensable strategic support.

CONCLUSION

Main lessons

For almost 20 years now, new organizations have been appearing in African agricultural value chains. These previously unknown mechanisms are the focus of major interest today from economic stakeholders in agricultural value chains, policy-makers and development partners.

The experience of CNCFTI shows that today interprofessional organizations are **effective tools allowing the organization of markets, the structuring of value chains** and the facilitation of relations between private stakeholders and government.

Recommendations

However, certain conditions are needed for their emergence and operation, in particular:

- ongoing support from the State, especially protection of the value chain through its economic and commercial policy tools;
- support for the structuring of professional organizations for the various types of stakeholder, particularly in the

case of producers in order to improve their negotiating position within the chain;

- support for coordination among stakeholders: boosting of the value chain's analytical capacities, help in establishing standard contracts etc.;
- long-term financial and technical support.

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A PUBLIC-PRIVATE PARTNERSHIP TO SUPPORT ORGANIC FAIR-TRADE COTTON

BACKGROUND

West Africa is the world's second largest exporter of cotton, after the United States, producing 5 percent of the world's cotton, which is recognized for its excellent quality. The sector involves more than 10 percent of the region's population and plays a core role in the economic and social development of these countries.

However, West Africa processes less than 5 percent of its cotton production. Mali, which produced 600 000 tonnes of cotton in 2003/04, has a processing rate, both small- and large-scale, of barely 2 percent.

Since the 1990s, the cotton sector in the countries of the West African Economic and Monetary Union (WAEMU), as also in the other countries of Western and Central Africa, has been marked by:

- its heavy dependence on the world market for the marketing of fibre and the procurement of inputs (fertilizer, pesticides, insecticides and herbicides);
- internal constraints (stagnation of yields, insecurity of payments for cotton etc.) and external constraints (export subsidies in industrialized countries);

- State withdrawal processes (with insufficient preparation) following privatization programmes for cotton companies;
- the negative effect of revaluations of the euro against the dollar.

All these factors help to explain the crisis in the cotton trade and the textile sector in the WAEMU, Economic Community of West African States (ECOWAS) and Economic and Monetary Community of Central Africa (CEMAC) areas, leading to a sharp drop in the income of small farms and their (over-)indebtedness, environmental degradation, a fall in national revenue etc.

In this context, **the newly emerging organic cotton value chain** would seem to be **an alternative worth pursuing**.

Working with local stakeholders, the Helvetas Mali NGO launched a pilot project (1998–2001) focusing on the production of organic cotton and rotation crops (millet, sorghum, sesame, karité, groundnut etc.), which demonstrated the technical, economic and environmental feasibility of this approach. Encouraged by this tangible result, a first operational phase of the Organic Cotton and Rotation Crops Programme executed by Helvetas Mali in collaboration with its main partner, the Malian Textile

Development Company (CMDT), was launched in 2002. Three operational phases (2002-2005, 2006-2008 and 2009-2011) followed. At the regional level, the same concern and bottom-up approach mobilized cotton growers around the promotion of organic cotton and rotation crops in Benin (2000), Burkina Faso (2004) and Senegal (2004).

INSTITUTIONAL INNOVATION

With a view to ensuring the sustainability of the 1998 initiative and promoting its consolidation and scaling up, **a partnership among WAEMU, the Brittany Region of France and the Swiss NGO Helvetas** was established for the period 2008–2010. The partnership focused on the niche market within the WAEMU region for organic and fair-trade cotton as an opportunity to obtain added value from small- and large-scale processing. It should give a fresh boost to the region's cotton sector, and more broadly to regional economic development.

It is based on the observation, on the one hand, of a growing demand from consumers in countries of the North for textiles made from organic cotton and, on the other, of the difficulties that companies in the sector have in obtaining supplies of African organic cotton, which has a reputation for quality. West Africa therefore has a major opportunity for expansion in this niche market.

Brittany and WAEMU thus invested €740 000 over three years (from 2008 to 2010) in order to provide about 5 000 cotton growers in Mali and Burkina Faso, organized into cooperatives, with the tools and know-how to grow organic cotton. Helvetas is coordinating the programme on the ground, in collaboration with such local associations as the Malian Organic Movement. The Brittany Region is trying to mobilize enterprises in the west of France. Such textile brands as Armor Lux, Ekyog and Dolmen – as well as the TDV Textile Corporation, with headquarters in Laval, France – that are anxious to ensure their supply of organic cotton are undertaking to purchase certain volumes each year.

This WAEMU-Brittany-Helvetas partnership has thus undertaken the task of acting jointly on demand in the following ways:

- making it easier for local stakeholders to control the environment in which they operate, inasmuch as stakeholders in the South who are involved in marketing value chains with the North are extremely vulnerable to the fallout from international crises; the idea is therefore to develop **shorter value chains**, expand **the local market** and produce craft-made and industrial cotton items to meet an indigenous demand;

- activating the lever of responsible regional **and national public orders** (work and sports clothing ordered by such local communities as Fao Danfani in Burkina Faso);
- forming **a network of Breton businesses** that undertake to purchase their supplies of organic cotton from the WAEMU area and to observe fair trade practices;
- mobilizing company committees, workers' unions and sports sectors in France;
- mobilizing fair trade distribution networks and social and solidary economic networks in France.

IMPACT

Increase in organic cotton production

Organic cotton production in Mali grew from 47 tonnes of seed cotton in 2002, produced by 174 growers, to 798 tonnes of organic and fair-trade seed cotton in 2007, produced by 4 445 growers. By the end of 2008, production had risen to close on 1 500 tonnes of seed cotton. In Mali the sector involves 20 villages, with 3 300 growers and 2 000 hectares, and a production estimated at 1 500 tonnes in 2009 and 2 300 tonnes in 2010. In Burkina Faso it involves 10 villages, with 2 000 growers and 1 600 hectares, and a production estimated at 325 tonnes in 2009 and 600 tonnes in 2010.

Increase in farmers' income

The fair-trade approach of the programme leads textile companies to purchase at approximately CFAF 350 (or €0.53) per kilogram for organic seed cotton, as compared with CFAF 170 (or €0.26) for conventional cotton.

Improvement in working conditions

Organic cotton does not require the purchase of fertilizer, so that it has the further advantage of allowing women to work more easily than in the conventional sector, in which pesticides may expose them to harmful substances, which are especially dangerous if they are pregnant.

Prospects for the creation of a network of cotton mills

The Brittany Region and WAEMU want to consolidate their efforts regarding organic cotton and are examining the feasibility of establishing a network of cotton mills in West Africa and thus giving a little more added value to the local organic cotton value chain. In WAEMU countries, the cotton-textile value chain too often stops at ginning and the production of cotton bales, missing out on the whole

chain of added value and job creation connected with processing (spinning, weaving, dying and making up).

In Burkina Faso, for example, the Breton association Ingalan, which has been involved in fair trade since 2004, is supporting such groups of craftworkers as Initiatives to Develop the Artisanal Textile Sector (IVATEX), specializing in dying and weaving. The aim is to allow the producing country to control the whole chain, from ginning to processing (spinning, weaving and making up) in order to obtain 100-percent West African products by 2010.

KEYS TO SUCCESS

Internal factors

Cotton producers show a marked interest in organic fair-trade cotton

The African growers involved in this programme, who have been badly affected by the economic crisis and by competition from such countries as India and the United States where cotton growers are heavily subsidized, see it as the means of obtaining more consistent returns.

A win-win partnership has been established

In Brittany, businesses (manufacturers and distributors) will have reliable supplies of organic fair-trade cotton and be assured of a production of cotton of guaranteed quality and quantity. In exchange, they undertake to respect the principles of fair trade (just remuneration for producers' work in the WAEMU zone, respect for fundamental human rights, preservation of the environment and respect for consumers through the supply of quality products). In Africa, the thousands of producers involved (half of whom are women), organized into cooperatives, will have the assurance of a decent income and a production method more respectful of human health and the environment. In more general terms, this value chain will lead to development of the country's economy, the creation of jobs and hence an improvement in living conditions, health and education, and the advancement of women.

Partnerships

The partnership links a variety of stakeholders

A major positive aspect of this programme is that it fosters direct contact among economic stakeholders and is the fruit of the ongoing efforts of the main partners (beyond the Brittany-WAEMU-Helvetas partnership) and stakeholders in the value chain since the start of the process.

The stakeholders in the value chain are:

- producers, both male and female, organized into farmers' organizations (cooperatives of organic fair-trade cotton producers) and umbrella organizations (the Malian Organic Movement, the National Union of Cotton Producers of Burkina Faso, Senegal's National Federation of Cotton Producers etc.);
- cotton corporations (CMDT, Faso Coton, Sofidetex etc.);
- traders (Reinhart AG);
- Breton textile companies;
- the two Swiss distributors (Mogros and Switcher).

They are supported by:

- the WAEMU Commission;
- Helvetas Burkina Faso, Benin and Mali and other NGOs (Mali's Research and Technology Application Group, the Panafrican Biological Interprofessional Group, the Dutch Interchurch Organisation for Development Cooperation, Oxfam International, the British organization Comic Relief, the Netherlands Development Organisation, Organic Exchange etc.);
- private agricultural advisory service bureaux (SETADE, AMS, G. Force etc.);
- organic certification bodies (ECOCERT) and fair-trade certification bodies (FLO/Max Havelaar) etc.
- research and training bodies (rural polytechnic institutes, rural economy institutes, the International Center for Research in Agroforestry [ICRAF], national environmental and agricultural research institutes etc.);
- financial partners (the Regional Council of Brittany, the Swiss State Secretariat for Economic Affairs, the Swiss Directorate for Development and Cooperation, the Liechtenstein Development Service, Helvetas, the Dutch Interchurch Organisation for Development Cooperation, the European Union and the French Development Agency).

External factors

Market demand is growing

Organic cotton represents a mere 0.2 percent of world production, but demand is growing fast, particularly in the professional textile sector.

CONCLUSION

Main lessons

The Brittany Region and the WAEMU Commission decided to invest in a new type of value chain and show that ethics and economics can be reconciled through the search for mutual interest:

- **The convergence of stakeholders with very different perspectives:** this economic cooperation is innovative inasmuch as it brings into play political, economic and associational stakeholders in both North and South, involving them in a very concrete value-based project, which will create both jobs and income.
- **The determining contribution of the private sector:** the development of countries of the South will not take place through international financial support alone, but also requires economic partnerships allowing them to enter into world economic flows. This economic project is based on the observation of both the growing demand for textiles in organic cotton from consumers in countries of the North, and also the difficulties that enterprises in the sector have in obtaining supplies of African organic cotton, which is noted for its quality.
- Management of the shift from conventional to organic cotton and the guarantee of security and sustainability for cotton growers in this transition is a **long, complex process**. If the partnership project is to be successful, timeframes, quantities and quality must be respected.
- **The relevance of organic cotton to meeting producers' needs:** organic fair-trade cotton respects producers' work by assuring a fair remuneration (30 to 50 percent higher than the prices for conventional cotton). This reduces cotton growers' dependence on fertilizer suppliers and generates income that opens the path to a real development of local communities (other producers, education, health, women's role etc.).
- **The relevance of organic cotton for preservation of the environment:** conventionally grown cotton is one of the most polluting crops in the world, using 25 percent of the global insecticide tonnage and 11 percent of the global pesticide tonnage, while accounting for only 2.5 percent of total cultivated land. Organic cotton enhances existing natural resources and respects the environment.

Recommendations

Development of textile processing

In WAEMU countries, the cotton-textile value chain too often stops at ginning and the production of cotton bales, missing out on the whole chain of added value and job creation connected with processing (spinning, weaving,

dying and making up). Since the early 2000s, political will and actions at both national and regional levels by both private and business sectors have been fostering a rehabilitation of textile processing. These moves have involved such initiatives and events as the summit of WAEMU Heads of State, the Paris Cotton Forum of the European Union-Africa Cotton Partnership on processing in the WAEMU region, the Islamic Conference Organization's Investment Forum, the European Union-ECOWAS industrial partnership meeting on the textile sector, the "WAEMU Agenda" supporting rehabilitation of the textile industry with a targeted local processing rate of 25 percent, the reopening of the Regional Textile Centre (CERFITEX) in Ségué, Mali, and the Network of Farmers' and Agricultural Producers' Organisations of West Africa (ROPPA) Declaration on the Cotton Sector.

Apart from the production of organic cotton, **many other lines of joint action** are being established between Brittany and West Africa, for example links among small and medium-sized enterprises, training, and cooperation on food crops.

Cotton is not solely an industrial plant. Although its flowers are used mainly in the textile industry, its seeds produce an oil used in human food and even in cosmetics and the pharmaceutical industry. With support from the Brittany Regional Council, the Global Think-Tank Network PEKEA and the Coordination of International Solidarity Associations (CASI) initiated a reflection in 2009 in order to identify the know-how available in Brittany and the needs existing in West Africa, providing an opportunity for new partnerships to be established between companies in Brittany and the WAEMU area.

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MALAWI AGRICULTURAL INPUT SUBSIDY PROGRAMME (AISP)

CONTEXT

The policy climate for developing countries has evolved substantially since the reforms of the 1980s and 1990s. International concerns over poverty and the formalisation of the Millennium Development Goals at the turn of the century have led to a reappraisal of policy approaches and instruments to hitherto intractable problems. Underlying this policy debate is the ideological and pragmatic discourse about the appropriate role of the state in improving market performance and economic growth. The shift from intervention to market solutions and latterly a shift back towards gentle intervention illustrate the dilemma in this most contested area. There is growing recognition that the 'East Asian miracle' and the 'Green Revolution' have been accompanied, even stimulated by, judicious state involvement.

Greater attention is now being given to certain types of policies, programmes and investments in agricultural development that have resulted in proven successes in terms of reduced hunger and poverty (Spielman and Pandya-Lorch 2009). These reflections have contributed to the return to programmes of input subsidies in Malawi and other countries, thereby generating considerable interest among policy makers internationally.

Malawi continues to be one of the poorest countries in the world, with an extremely low GDP per capita and with one of the most unequal income distributions in the world. Harrigan (2008) gives a thorough account of the food security policies in Malawi since independence: 'Malawi is typical of many countries in sub-Saharan Africa, with an agricultural sector dominated by poor, land scarce and capital scarce small holders suffering from food insecurity' (p. 248).

INSTITUTIONAL INNOVATION: PUBLIC PRIVATE PARTNERSHIP

Since 2005/06, following repeated food crises and consequent election promises, the Government of Malawi has been implementing a major intervention in agricultural input markets to deliver to smallholder farmers the necessary inputs to boost maize production, satisfy hunger and stimulate the rural economy. The programme consists of the distribution to farming families of vouchers that can be redeemed at market outlets for fertilizer (for tobacco, the principal cash crop, and maize the staple food crop) and also for improved maize seeds. 'The objectives of the programme were to promote access to and use of fertilizers in both maize and tobacco production in order to increase agricultural productivity and food security' (Dorward and Chirwa 2009: 3).

The programme 'is a major intervention in input markets – affecting fertilizer and seed importers, seed producers, and input wholesalers, retailers, and agro-dealers. It is also a major logistical activity involving very significant resources in the purchasing and transport of inputs and in the distribution and redemption of vouchers, with potential to crowd out other agricultural services' (2009: 1).

The public and private stakeholders involved in the programme

The Agricultural Input Subsidy Programme (AISP) involves a wide range of stakeholders.

The programme has been managed by the public sector supported by international donors who have had limited leverage over programme design. Apart from the central government organizations, key parastatal players in the input programmes have been the Agricultural Development and Marketing Corporation (ADMARC)³³, with an established country-wide distribution network, and the Smallholder Farmers' Fertilizer Revolving Fund

³³ While clearly in need of reform, there is now a general recognition of the importance of the social services provided by ADMARC, particularly the distribution of inputs to remote rural households, and the purchase of surplus maize where the private sector is not well established (World Bank 2009).

of Malawi (SFFRFM), a Trust within the Ministry of Agriculture that has acted as an independent distributor of fertilizers, and sometimes importer, acting somewhat in competition with the private sector.

The private sector comprises major national and international agribusiness firms who are importers, manufacturers and distributors of fertilizers and seeds. In a sense these large firms have not been involved substantively in policy design, but rather in policy implementation through their normal commercial activities. Besides the major private sector players, there are innumerable small-scale agrodealer distributors who transport and retail agricultural inputs to targeted beneficiaries, primarily the smallholders dependent on maize production for cash and consumption. The interests of these small scale stakeholders have not been directly represented in policy dialogue and formulation.

The development and evolution of the public private partnership³⁴

In the first year, 2005/06, private sector firms were responsible for the importation of almost 50% of fertilizer, the rest being managed and entirely distributed by the public sector. There was some confusion and delays, but the parastatals ADMARC and SFFRFM reported total subsidy sales of fertilizer of 131,803 tonnes (representing 2.62 million coupons), and the general perception was of positive impacts.

In 2006/07 there was an increase in the total of subsidized fertilizer and other improvements in security and logistics. Some large input supply companies were involved in the retail sales of fertilizer; accounting for just below 30% of sales, and maize seed vouchers could also be exchanged at private agro-dealers. Donor support for specific elements of the programme also increased. The increase in sales and higher than budgeted prices led to cost overruns.

In 2007/08, the scope of the programme grew but the concept was not changed substantially. Attempts were made to improve targeting of vulnerable households, and 'remote Extension Planning Area premia' were offered to private retailers to extend their distribution networks into poorly covered regions of the country. Ministry of Agriculture staff was more involved, at the expense of Traditional Authorities. But whereas quantities of fertilizer distributed increased by 29%, and parastatal distribution increased by about 30%, private sector subsidised sales increased by only 6%. In fact, relations between the government and the private sector were poor.

Among the changes for 2008-09, the involvement of private sector retailers in the sale of subsidized fertilizers was discontinued, partly to attempt to exercise greater control over the redemption of false vouchers, or possibly to control total subsidy sales without controlling vouchers, or perhaps for other reasons.

Changes in the programme were made as a result, *inter alia*, of formal evaluations and consultations with stakeholders, including the private sector players. Among the major modifications of the programme, there has been a change in extent and modality of private sector involvement in fertilizer imports and sales, and seed sales, and on the other hand, the premium paid to private retailers to reach remote areas. It is the voucher redemption system of the Agricultural Input Subsidy Programme (AISP) that has had the most impact on the private sector, although fertilizer import strategies have, as also in years prior to the AIPS, impacted on private sector importers.

RESULTS AND IMPACTS OF THE PROGRAMME

The programme has proved politically popular and ostensibly has been a success in terms of maize supplies and enhanced national food security. The major objectives of the programme were to achieve food self-sufficiency and increased income of poor households through increased food and cash crop production. In 2008/09 the programme reached about 2.5 million beneficiaries with 5.9 million vouchers, representing 3.4 million bags of fertilizer, worth US\$220 million. While research and monitoring has been undertaken, conclusive evidence is not yet available about the impact of the programme on food supplies. According to Dorward and Chirwa (2009), no formal performance targets have been established for the programme, and lessons can only be inferred.

The logistics of timely importation and distribution to remote areas has sometimes failed, as has security in respect of production and handling of vouchers, leading to corruption and abuse. Nevertheless, in the four years during which the programme has operated so far there have been rising rates of subsidy and rising quantities of subsidised inputs up to 2008/09, paralleling the less specific targeting of recipients.

34 Much of the information in this section is derived from Dorward and Chirwa (2009).

Limits and opportunities of the Public Private Partnership

As a potential public-private sector partnership, it is possible to make a preliminary assessment of the programme operations. The relationship between the public and private sectors has been ambivalent. Public sector rural institutions have successfully operated a huge programme of intervention but in a process which has viewed small-scale producers as recipients rather than participants.

The private sector input distribution system has been included within operations on terms controlled by the public sector, and in a role subordinate to the parastatal input distribution system. Building private sector capacity has not been attempted. Participation as commonly understood has been minimal, and deliberative fora and stakeholder participation have not been on the agenda: other than through the normal political – and electoral – processes within Malawi, small rural producers have not been drivers of the programme; the consultations with private sector players have been muted at best, and their interests have not been fully represented. The political process has been opaque with little transparency and accountability.

Private sector participation has been constrained by restrictive terms of engagement in input importation and distribution, in a somewhat utilitarian manner and subordinate to the role of the parastatal organizations. There has not been a purposeful process of leveraging private sector involvement to strengthen civil or commercial institutions. Different types of input firms facing different incentives have been affected in different ways. International fertilizer manufacturers with internationally mobile capital face different incentives from small-scale and diversified agrodealers who can switch within the domestic market regarding product range and target market: fertilizers, seeds, agrochemicals and equipment; and estates and large scale commercial farmers, or the heterogeneous smallholder sector. Understanding these incentive structures is a complex task, but is necessary to shape policy. Nevertheless, one outcome of the programme has not been strengthened the mechanisms for public-private sector cooperation. Nor has the programme dissipated the environment of business uncertainty limiting the commercial fertilizer distribution ‘frontier’.

The programme could have linked more substantially with the private sector in planning the input subsidy programme and in using commercial fertiliser and seed distribution networks, perhaps in competition with ADMARC and SFFRFM. In relying

on public sector distribution, a potential benefit has been lost; the programme has ‘missed two tricks’ which are significant for the economic development of agroindustry in Malawi:

- achieving transparency and stability in the public policy approach to state intervention, and therefore the stability in the business environment that is conducive to planning;
- building up the domestic input supply industry in order to nurture an efficient, independent and sustainable agroinput delivery system through longer term investment.
- supporting small-scale agrodealers who have been excluded from all fertilizer sales.

Indeed, attention is drawn to this point in Dorward (2009): output market development policies are needed for such programmes to realise maximum benefits.

CONCLUSIONS

The primary objectives of the AISP have been met, at least partially: agricultural output has been boosted and people have been fed, with as yet unknown long-term consequences for rural economic growth. However, the supply industry is in no better position to participate in this process of growth than it was before: firms are still likely to be wary of the politics and policies which, rather than conditions of supply, demand and transaction costs, are the dominant force in shaping the economic environment. In failing to address this important – but secondary – objective, the programme design and implementation so far has ‘missed a trick’ that could lead to more substantial economic development.

Ambivalence towards the private sector, and a centralized approach to planning and implementation sustained an unstable policy and business environment. But all is not lost: the government’s commitment to food security and rural development, together with donor commitment is likely to lead to further rounds of the AISP. There is potential to introduce characteristics of a new social contract between the state and the private sector and therefore achieve broader development objectives.

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Acronyms

ADMARC	Agricultural Development and Marketing Corporation
AISP	Agricultural Input Subsidy Programme
EPA	Extension Planning Area
MOAFS	Ministry of Agriculture and Food Security
MRFC	Malawi Rural Finance Company
OPV	Open pollinated varieties (of maize)
SFFRFM	Smallholder Farmers' Fertilizer Revolving Fund of Malawi
TIP	Targeted Inputs Program

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DEMOBILIZED POOL THEIR RESOURCES IN ORDER TO IMPROVE THEIR LIVING CONDITIONS

BACKGROUND

From 1996 to 2003, the Democratic Republic of the Congo was riven by wars, causing massive displacements of people throughout the country, thus intensifying the deterioration of already alarming socio-economic conditions. The various forces and armed groups constantly added combatants to their ranks, recruiting them from all strata of society (children, young people and adults), either as volunteers or by force. Fleeing from each movement of these fighting forces, the people lost their basic working tools and found themselves in a situation of serious social and food insecurity.

When the conflicts ended in 2003, under peace agreements signed by the belligerents in Sun City, Republic of South Africa, the Congolese Government and international donors set up, on the one hand, a training programme for a unified national army and, on the other, a National Programme of Disarmament, Demobilization and Reintegration to facilitate the reintegration of ex-combatants into civil life.

In partnership with the Implementation Unit of the national disarmament programme, the Food and Agriculture Organization of the United Nations

(FAO), which was selected as the strategic partner for implementation of the programme, set up a Programme to Assist the Socio-economic Reintegration of Demobilized Ex-combatants into the Agricultural Sector (PARSAC: project OSRO/DRC/608/WB), which has provided support to 13 500 demobilized ex-combatants in their reintegration throughout the country.

Looking more specifically at the Uvira and Fizi Territories, 923 demobilized people have received technical assistance from FAO through selected NGO partners.

INSTITUTIONAL INNOVATION

In order to facilitate support and technical supervision and achieve the anticipated results and impacts of the project, FAO encouraged demobilized people to form professional interest associations. In 2007, 50 demobilized people thus formed an association entitled the Demobilized People's Association for Community Development (ADDC).

This association was created with the aim of helping demobilized people to get back on their feet through various community development activities. Agriculture,

fishing and livestock production are the main activities that have enabled the members to start up new activities (sewing, carpentry, soap making, milk processing, goods transportation etc.).

The administrative structure of ADDC comprises three bodies: the Management Committee, the Board of Directors and the General Assembly. The Management Committee is composed of seven members (chairperson, vice-chairperson, secretary, treasurer, accountant, animator and chief adviser); it presents a report on activities to the Board of Directors twice a year and to the General Assembly once a year. The General Assembly specifies the objectives, guidelines and anticipated results for each sector of activity. The Board of Directors draws up an annual plan of activities and sets out the optimal approaches for achieving the objectives.

At the start, the association was made up of 15 women and 35 men – 12 fishermen and -women, 12 farmers and 26 herders – who received “professional kits” from FAO for their various types of activity. These kits contained:

- For those who chose agricultural activities: 20 kilograms of maize, 60 kilograms of groundnuts, a bicycle, 40 empty sacks, 2 axes, 5 machetes and US\$30-worth of preparatory tillage.
- For those who chose livestock activities: either a bicycle, 250 grams of veterinary products, 4 female goats per demobilized person and 1 male goat per 4 demobilized people; or a bicycle, 480 grams of feed, 250 grams of veterinary products, 2 sows per demobilized person and 1 male pig per 5 demobilized people.
- For those who chose fishing activities, per team of 6 demobilized people: 150 metres of fishing net, 4 Coleman lamps, 1 fishing line, 5 ropes, 2 canoes, 6 hoisting poles, 6 pulleys and 2 poles to link hulls.

The demobilized people then pooled these initial inputs with a view to achieving the anticipated production.

IMPACT

The association creates income-generating activities for the demobilized people

Several community activities were thus set up:

- *For those who chose agriculture.* With monthly subscriptions and the share of income received from such activities as bicycle-taxis (thanks to the bicycles donated by FAO), the association was able to purchase 10 hectares of local farmland for US\$2 050 from local

chiefs of Kiyaya and Mayi ya Moto to set up a community field. At harvest time, 60 percent of the produce was divided up among the demobilized people for sale and consumption, while 40 percent was retained by the association (for sale to raise cash and pay for storage, and conservation of seed for the following season).

- *For those who chose fishing.* Two teams were formed for catamaran fishing, pooling their equipment; 60 percent of the catch goes to each team of 6 demobilized people, while 40 percent is sold by the Management Committee and the proceeds are paid directly into the association’s account with a savings cooperative in Uvira.
- *For those who chose to rear goats.* The association set up a pilot farm where all the goats were pooled, with the demobilized people taking turns to feed them. When they reproduced, each demobilized person recovered his or her four goats, while the remainder became the property of the association on the ADDC farm. After each member had recovered his or her initial “kit”, the association sold some goats, keeping only 22, a number easier to care for.

Agricultural supplies increase in local markets

Thanks to the association of demobilized people, there has been an increase in the availability of seed and agricultural food products, especially maize and groundnut, in certain markets in Uvira Territory (Kamanyola, Sange etc.) and Fizi Territory (Mboko, Swima etc.). For example, the association was able to produce about 35 tonnes of food crops (maize and groundnut) in the Ruzizi plain, delivering it to market in June 2009.

Table 21.1

	No. distillers	Fire wood collectors	Female
Maize	1	25	30
Groundnut	3	25	5
Total	4	50	35

In Kamanyola, a group of demobilized members placed 16 900 kilograms of maize on the market with a value of US\$3 120 and 2 500 kilograms of groundnuts with a value of US\$1 950.

In June 2009, the association placed about 4 tonnes of fresh fish (*Stolothrissa tanganicae*, known locally as *sambasa*, which becomes *ndakala* after it has been

dried) on the markets in Mboko and Uvira, selling it for US\$3 800.

Thirteen goats were recently sold for a total of US\$520.

All the association's takings are deposited in an account with a local cooperative savings bank in Uvira.

The association and its members are diversifying their activities

With the training and close supervision provided by FAO, the association was able to become more efficient, diversify agricultural production and create new income-generating activities.

With the income generated, the association was able one year later to:

- set up a sewing workshop (January 2009), in which 15 demobilized men and women were given training and now work; the workshop has six sewing machines belonging to the association (purchased for US\$600);
- set up a carpentry workshop, in which the labour is provided by demobilized members of the association;
- mobilize its members to maintain bad sections of some service roads in their production zones in order to facilitate outward delivery of agricultural produce; ADDC pays US\$1 per day from its own resources to each member carrying out this work;
- purchase a second-hand van (June 2009) to provide transport for merchandise between Uvira and Baraka, and also deliver members' produce to the Uvira and Fizi markets;
- set up a community pig farm and goat farm; many pigs had perished in an epidemic of African swine fever, but a nucleus of two pregnant sows was preserved; the community goat herd at present comprises 22 adult animals;
- set up an artisanal soap factory (October 2009), managed by a demobilized woman (a member of ADDC), who employs both demobilized and other people;
- set up a dairy (October 2009) where association members process fresh cow's milk into yoghurt.

Household living standards have improved

A survey of the households of demobilized members of the association was carried out in May 2009 by field workers of the Agricultural Inspectorate of the Uvira and Fizi Territories in collaboration with the FAO Uvira branch. The following improvements were observed:

- an increase in household consumption of food crops and fish;

- an increase in household income;
- diversification and enrichment of diet, a reduction in food and animal protein deficits;
- regular payment of school fees, whereas children were previously refused admission to school because of a failure to pay fees.

KEYS TO SUCCESS

Internal factors

The association initially had a membership of 50 demobilized people within the framework of the PARSAC. When other people saw how dynamic and successful it was, 50 new members joined (20 demobilized people previously supported by Caritas and 30 demobilized people who had not yet received professional kits).

The association meets demobilized people's needs well by offering them income-generating activities and concentrating its efforts on their reintegration, especially by:

- encouraging and building awareness among demobilized people about peaceful coexistence in order to achieve better reintegration into civil, social and economic life;
- training demobilized people in various enabling occupations: cutting out and sewing, soap-making, carpentry, and very soon joinery, mechanics, hairdressing etc.;
- combating food insecurity by practising farming, fishing and livestock rearing, and diversifying household members' means of subsistence.

ADDC lives and operates in large part thanks to its own resources (income from its activities, monthly subscriptions and other contributions from members), supplemented by external grants. Lastly, it has equipped itself with a formal governing structure and a general assembly that lays down the objectives, guidelines and anticipated results for each sector of activity.

Partnerships

The association was set up thanks to the support of the National Programme of Disarmament, Demobilization and Reintegration, and its establishment was facilitated and supported by FAO with regard to farming, fishing and livestock rearing activities. Today, ADDC is also a partner of such other institutions as Caritas, the Kiringye Community Development Centre and the

Collective Association of NGOs of Uvira and the Surrounding Area.

Throughout implementation of the project (from January 2007 to June 2008), demobilized people were the object of major awareness-raising activities by FAO and NGO partners regarding the consensual socio-economic reintegration of ex-combatants in peaceful coexistence, and also benefited from training in the marketing of agricultural produce and in livestock rearing and fishing techniques.

External factors

The National Programme of Disarmament, Demobilization and Reintegration for ex-combatants was put in place by the Congolese Government with support from international donors, through the programme's Implementation Unit.

Lastly, ADDC operates within the institutional framework recognized by the Provincial Inspectorate of the Ministry of Agriculture, Livestock and Fisheries and has official recognition from the Uvira Territorial Government.

CONCLUSIONS

Main lessons

The emergence of the association was facilitated by the approach and operational strategy for implementation of the PARSAC project, which were designed by FAO's Emergency Coordination and Rehabilitation Unit in the Democratic Republic of the Congo. This strategy is based particularly on:

- awareness-raising among demobilized people, local authorities and the host population about harmonious reintegration;
- stimulation of an association-focused spirit with a view to community development;
- organization of participatory workshops with a view to achieving a common view of project implementation;
- practical training and the presentation of professional kits to demobilized ex-combatants;
- close supervision and technical support of the demobilized ex-combatants.

The beneficiary members of the association have thus recognized the importance of developing as an association rather than as individuals. This approach has been particularly effective in furthering the social and economic reintegration of these demobilized people, who have been turned into useful citizens, thus contributing to the country's economy.

In conclusion, today there is a guarantee that demobilized people can take charge of their own future and live in a way other than by recourse to arms. And this assistance has eventually convinced them of the concern of the Congolese State.

Recommendations

Various actions are advisable with a view to creating a favourable environment for the emergence of this initiative:

- boosting of association members' capacities through regular training sessions on a range of subjects: conservation and processing of fish and agricultural produce, input procurement, farming and marketing techniques, management of the association's resources and of natural resources etc.;
- facilitation of the installation of processing and conservation units for agricultural, fishing and livestock products in order to increase added value;
- support for work to improve agricultural service roads in order to facilitate the outward delivery of produce and its sale in consumption centres;
- financing of the construction of local markets in order to facilitate market access.

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INNOBAP: MULTI-STAKEHOLDER INNOVATION PLATFORMS FOR THE PLANTAIN VALUE CHAIN

BACKGROUND

General context

The plantain is a staple food crop produced throughout the year in the humid zones of Western and Central Africa and is of strategic importance in food security. It is mainly grown on poor, small family holdings using fairly inefficient traditional farming systems and has yet to benefit to any substantial degree from innovations developed by research: hence the low yields, aggravated by the continual reappearance of diseases and pests. Nonetheless, the plantain is a major source of income for millions of growers and intermediary traders (600 000 small farmers and 40 000 traders of various types in Cameroon alone). The growing gap between supply and demand that has come about during the past 20 years has almost turned plantain into a luxury product in the subregion, at least for the poorest inhabitants, whereas potential yields could be increased tenfold if various factors were brought under control. The potential for increased yields on family farms (a rise from 4-10 tonnes/ha/year to 25-30 tonnes/ha/year with an improved technical package) could thus be better exploited in order to meet the crucial challenges of food security and poverty eradication in Western and Central Africa.

Situation to be addressed

The African Research Centre on Banana and Plantain (CARBAP): a regional centre of excellence thanks to the commitment of a number of states to promoting the effective sharing of resources, expertise and experience with a view to agricultural development of the whole subregion.

The various States' interest in plantains led to the signing of an intergovernmental agreement in February 2001 establishing CARBAP, which can thus be seen as a major tool for regional cooperation on agricultural research and development. CARBAP was the result of a revamping of the Regional Research Centre for Banana and Plantain (CRBAP) established in 1989 on the initiative of the International Cooperation Centre on Agrarian Research for Development (CIRAD) and Cameroon's Ministry of Research in order to counter the serious threat posed to the region's plantains by parasites. CARBAP has now been adopted as a regional centre of excellence by the West and Central African Council for Agricultural Research and Development (WECARD) and the Economic and Monetary Community of Central Africa (CEMAC), with a mandate covering Western and Central Africa and a three-pronged thrust focusing on research,

training and support to development. Its central mandate is that of boosting the capacities of national agricultural research and extension systems with regard not only to research and development, but also to the assumption of ownership of innovations. CARBAP seeks to support the development objectives of banana and plantain value chains at the regional level, with an anticipated impact on the major stakeholders in the chain, including growers. It is a specialized centre with a comparative advantage in its field of intervention, mobilizing resources at both regional and international levels to support these partners in the context of regional projects. Its governing and scientific councils are made up of representatives of African countries, subregional organizations, donors, the scientific community and civil society.

Its status as a CEMAC and WECARD centre of excellence and its key role in the International Network for Improvement of Banana and Plantain (INIBAP) has helped CARBAP to establish a considerable network of partners and dialogue partners, and develop a wide-ranging partnership with research and extension bodies, development projects, farmers' organizations, NGOs, processors' and traders' groups, economic organizations etc. It manages and disseminates information from various networks and provides secretarial and extension support for the Musa Documentation and Information Network for Africa (REDIMA). With its six laboratories, its large global reference collection of varieties, its varietal creation programme and its facilities for horticultural multiplication, CARBAP is an important provider of training, supplying short courses and giving field support to extension workers, producers' and processors' groups and various agro-entrepreneurs in small and medium-sized agricultural enterprises. The people trained then hand on the innovative technologies learned from CARBAP. The centre also receives about 20 students, researchers and research technicians of various origins each year. WECARD and Bioversity International have approved CARBAP as a regional centre for the multiplication and distribution of banana seedlings, so that it plays a key role in the conservation, multiplication and distribution of certified plant material in Western and Central Africa. Almost 50 000 vitroplants have been distributed to a dozen African countries in the past 15 years and have been used as base material for mass multiplication using horticultural techniques developed by CARBAP.

INSTITUTIONAL INNOVATION

The INNOBAP project: an experience in varietal innovation in plantains in Western and Central Africa

Objective

The INNOBAP project seeks to bring about varietal innovation in plantains by establishing a network of multi-stakeholder platforms to facilitate coordination and the identification of the needs of stakeholders in the value chain in order to give the CARBAP regional programme for varietal selection and distribution a clearer focus. Its specific objective is that of carrying out a participatory evaluation and distributing varieties suited to the needs of various target groups. Eight platforms have been set up, two in each of the four countries taking part in the project (Benin, Cameroon, Gabon and Guinea). The project is coordinated at regional level by CARBAP with the support of CIRAD and has involved more than 50 such organizations as national research centres, agricultural extension bodies, universities, NGOs and farmers' and processors' organizations, and also such individual stakeholders as nursery managers, wholesale and retail traders, transporters and caterers.

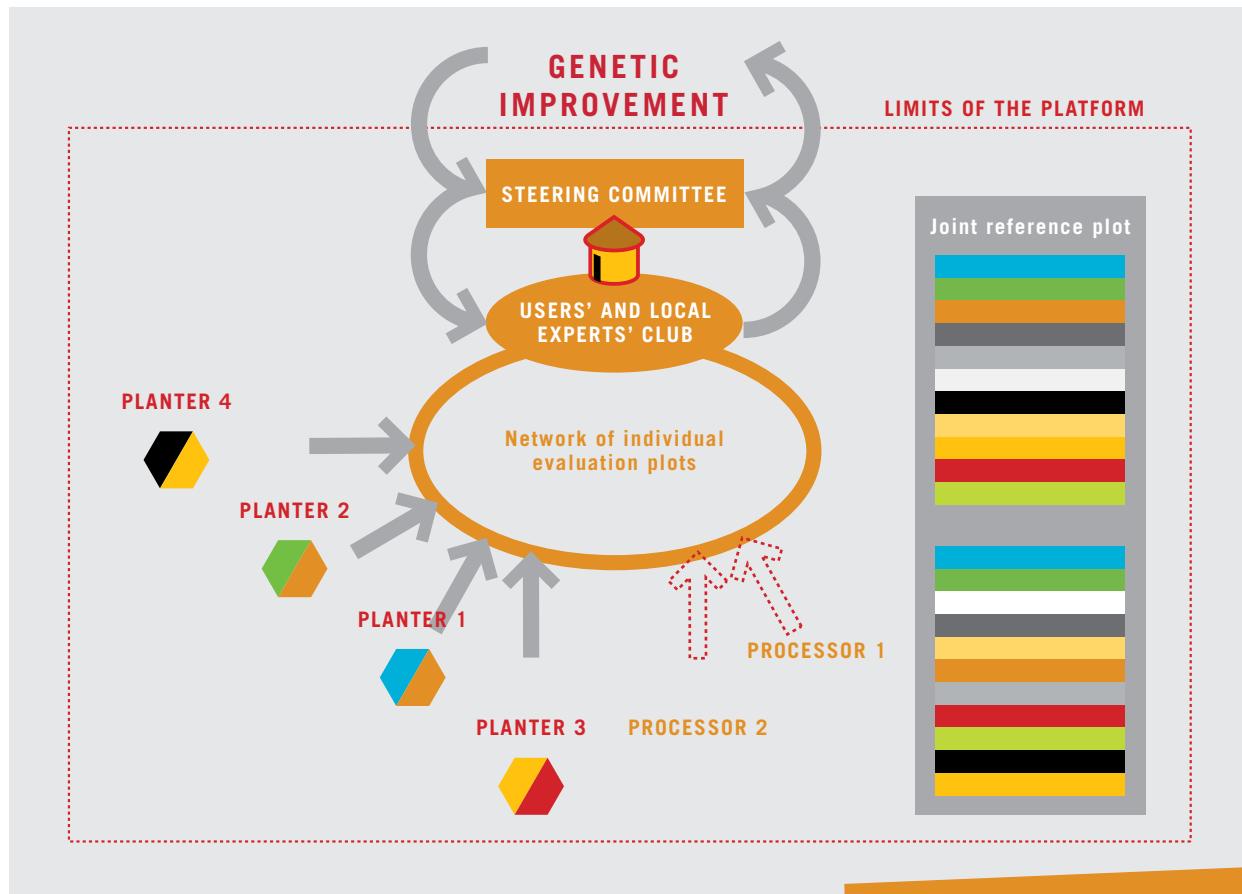
Mechanism

Each platform is designed as a sociotechnical mechanism combining a "field" component focusing on the agricultural and post-harvest trial of a range of new varieties, and a formal framework for coordination, exchange and sharing among researchers, extension workers, NGOs and various types of user (planters, processors, caterers, nursery managers, traders etc.). The platform has four bodies:

- a steering committee with five to six members;
- a users' and local experts' club with about 20 members;
- a joint reference plot;
- a network made up initially of 20 individual evaluation plots on farmers' land.

The steering committee has the task of taking strategic decisions for the platform (definition of objectives, plan of action and planning of activities, financing plan, dissemination of platform results, capitalization on these results, actions to ensure sustainability of the platform etc.). It is made up of representatives appointed by the main stakeholders involved in facing the collective challenges, thus facilitating the success of the project. These are institutions and representative organizations that place infrastructures or financial, human or material

Figure 22.1



resources at the disposition of the platform. The operating rules of the bodies of the platform (steering committee, users' and local experts' club, joint reference plot and network of individual evaluation plots) are laid down in a charter drawn up by the steering committee and validated by all the stakeholders in the project, to whom the steering committee submits regular reports on its activities and these decisions. The charter is governed by principles of legitimacy, competence and solidarity, which are the best guarantee of a successful dissemination of the results obtained by the platforms.

The users' and local experts' club represents the expertise of the various parties working in the value chain (planters, nursery managers, processors, transporters, caterers, traders etc.) and bodies supporting professional agricultural organizations (researchers, extension workers, NGOs etc.). It is responsible for carrying out various evaluations of the varieties introduced by research (CARBAP and national research institutes).

The joint reference plots involve the whole range of varieties introduced, each plot receiving ten varieties at the start. They host agricultural evaluation workshops, field training sessions and discussions on the features sought and the selection criteria for varieties in terms of the various

objectives. Depending on the platform in question, a restaurant or other premises in the area of the reference plot hosts post-harvest evaluation workshops (recipes, tasting, enhancement of by-products etc.). The market value of the various varieties (fresh fruit, fruit processed into chips or fritters, fried plantain etc.) is tested in local markets, and also that of discards and such by-products as leaves.

There were initially 20 individual evaluation plots, mainly held by small farmers who evaluate the behaviour of at least three of the ten varieties initially planted on the joint reference plot.

The project focuses on eight key activities:

- selection, awareness-raising and mobilization of partners for implementation of the project;
- project start-up workshops, with the establishment of steering committees and users' and local experts' clubs, and identification of constraints and their effects;
- viral indexing/multiplication/distribution of genetic material, and planting and monitoring of joint and individual plots;
- management and animation of the platforms;
- field and post-harvest varietal evaluation workshops;
- organization of national and regional evaluation workshops;

- creation and maintenance of a website;
- analysis of results by the regional coordination centre, putting them into perspective.

IMPACT

The project led to the establishment of a regional mechanism for participatory varietal evaluation managed by the stakeholders in the value chain under their own charter. It has also made it possible to carry out trials and to validate a particular model of partnership management, which can be replicated in other situations. The mechanism operates not only as an official body for consultation and coordination among the research community, public bodies and civil society, particularly concerning their respective expectations, but also as a space for learning and training. It has fostered coordination and a mutual enrichment of scientific and local knowledge regarding the issue of varieties.

Surveys carried out after the first two years of the project show that the stakeholders are happy with the coordination mechanism and with the introduction of new varieties into their value chain. They have shown particular enthusiasm at varietal evaluation workshops, and a number of them have already adopted and are marketing varieties introduced by the project. This observation applies particularly to women's groups that have adopted a variety with novel characteristics (the Popoulou variety, with very large fruit and an orange pulp that is very popular) to make chips. A "proto-value chain" has appeared in Cameroon for this variety (already disseminated in certain areas close to CARBAP's trial stations), with farmers' groups, collectors, and wholesale and retail purchasers and resellers. Bunches fetch a higher price than those of traditional plantains. The targeted purchasers are female caterers (modern-style restaurants and street stalls) and hotels, which use these plantains to make *pilé* that is eaten with sauce, but especially to make large, crunchy chips with a splendid orange-yellow colour. Production is still fairly modest, accounting for about 1 000 bunches per month, but increasing numbers of these distinctive bunches are being seen in home gardens and local markets, particularly in Cameroon's Mungo Department where CARBAP's main station is located. However, farmers' groups are asking CARBAP to provide training in production techniques for improved seedlings of this variety in order to increase production and meet the growing demand. The variety has thus led to the appearance of small groups,

including dozens of women's groups, concerned not only with the production and sale of bunches, but also with processing the plantains into chips. The price per bunch ranges from CFAF 1 500 to 2 000 in local markets, but can reach CFAF 5 000 in markets in Douala, especially in periods of shortage.

Another remarkable example concerns the appropriation of certain small hybrids especially by women's groups, which very quickly realized the practical nature of this type of variety. The fact that the bunches of these hybrids are within the women's reach facilitates not only upkeep and harvesting, but also makes it possible and indeed easy, especially in home gardens (the most widespread cultivation system in central Africa), to harvest the fruit one hand at a time, without picking the whole bunch, thus allowing time for the lower hands to ripen fully. Moreover, unlike local plantain cultivars, which are all prone to black Sigatoka disease and are generally large, hybrids resistant to this disease, especially dwarf hybrids, have a number of healthy broad, thick leaves at harvest time – and these leaves are much sought after for use in packing and are sold for this purpose in local markets.

The project has enabled the small newly-formed groups to become aware of the need to organize themselves first at the national level and then at the regional level, in order to promote the plantain value chain more effectively. Despite the success of the INNOBAP project, the main challenge is on the one hand to maintain this mechanism in operation through motivation of the stakeholders, while on the other hand extending it to other production areas, or indeed to other producing countries in the region. If this is to be achieved, donors and local and central government must be encouraged to support the platforms and make them sustainable. Sustainability of the mechanism also requires capacity-building for the stakeholders and the establishment of income-generating activities. Various groups have therefore been trained in the techniques of improved multiplication of planting material, allowing rapid promotion of the varieties selected by the stakeholders.

With regard to the sustainability of the mechanism, one of the most striking repercussions of the INNOBAP project is undoubtedly the financial support of the European Union under its Food Security Thematic Programme. This support was provided following a project proposal by CARBAP and its partners with the institutional endorsement of CEMAC and WECARD. The project is entitled "Partnership platforms to develop and disseminate innovations with a view to sustainable improvement of the banana and plantain value chains in central Africa". The European Union support allows

the INNOBAP project's pilot scheme to be extended to innovative technologies as well as varieties, and also to other countries.

KEYS TO SUCCESS

This project has been running since January 2009 and must have the support of a certain number of elements if it is to have any significant impact. On the basis of past experience, appropriate locations were selected where there is already a certain enthusiasm for plantain growing (a large production area, the presence of nurseries, closeness to large markets and processing companies etc.). The areas around markets on national borders are particularly attractive in this connection, for they are visited by various types of stakeholder from the value chain at the crossroads of several countries. An example here is the Ntem platform (the project's main subregional platform), which is on the frontier of southern Cameroon, northern Gabon and eastern Equatorial Guinea. This platform has a coordination centre in the small town of Ambam in southern Cameroon, with a number of branches in the three countries. It encompasses three major border markets supplying the towns of Libreville and Bata, where there is a large demand for plantain, and has a plantain market observatory run by CARBAP and the relevant services of the three countries' ministries of agriculture.

Many rural development stakeholders and organizations are involved in this platform, facing the major challenge of making it a model of subregional integration. Taking previous experience into account, partnerships have been established in a well-defined contractual context in which each party makes commitments that he or she will be able to respect. The steering committee is chaired by the Subregional Platform of Farmers' Organizations of Central Africa (PROPAC) and was designed in such a way as to be operational and have real decision-making capacities. The ongoing commitment of national agricultural research systems, particularly their extension services, is an important factor in success and sustainability, as is that of PROPAC and its national components (national coordination offices of farmers' organizations), whose visibility and capacities are boosted. These structures have a permanence and a presence on the ground, and CARBAP seeks to stimulate them within the framework of the platforms. Local government authorities of the three countries (governors and prefects) have issued passes to the platform members. The local directorates of the three countries' ministries of

agriculture, communal services, local elected officials, chambers of agriculture and commerce, research stations, agricultural training establishments, rural development projects and radios are all involved in the platform, willingly placing their resources at its disposal in order to facilitate the performance of various activities (information/communication, meetings, consultation, coordination and sharing, advocacy and awareness-raising, demonstrations, training workshops, formation of such pilot units as those for the multiplication of plant material, seed fields, field schools, drying units and pilot processing units).

CONCLUSIONS: MAIN LESSONS AND FUTURE OUTLOOK

One of the main lessons of this initiative concerns the time needed to establish a real partnership with a wide range of stakeholders and organizations. If a partnership is to be sustainable, it needs a clear contractual and empowering framework, much time and many types of action. Steering committees must be designed in order to function properly and have real decision-making capacities. Another important lesson concerns the capacities of farmers' groups to organize themselves sustainably and effectively and to meet their commitments and responsibilities.

In this connection, the major issue of the autonomy of management of the platforms must be resolved, the main challenge being on the one hand to maintain the mechanism in operation with motivated stakeholders and on the other hand to scale up its action. To this end, central and local government must be encouraged to promote and support the platforms and create the conditions needed for their sustainability. Such sustainability also requires capacity-building for the stakeholders and the establishment of income-generating activities.

CARBAP and its institutional partners have accumulated a wealth of experience in participatory research and pilot projects involving a range of stakeholders in the plantain value chain. Although a number of technologies have been tested and even disseminated on a significant pilot scale, they have not yet had any really perceptible impact. One of the priority future actions will be to identify the elements for effective measurement of the impact at national and regional levels. However, the real scaling up that will bring about a significant impact on the value chain will take more time and require the ongoing will and

mobilization of the stakeholders, particularly extension bodies and the government, which must provide regular support to competent, operational professional organizations and also support the visibility and promotion of innovation platforms.

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To learn more: list of publications, studies and other documents

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PARTICIPATIVE MARKET CHAIN ASSESSMENT: MAKING INNOVATION RELEVANT TO POVERTY REDUCTION, MARKET ACCESS AND COLLABORATIVE LEARNING PROCESSES

CONTEXT

In Peru, potatoes are a staple crop of the high Andes with significant potential, both genetic and commercial, that has been little recognized and still less exploited at the national level and in international food markets. However, the biodiversity of potatoes in the Andes is one of the most valuable characteristics of the crop and is amenable to commercial development.

The *Centro Internacional de la Papa* (International Potato Center, CIP)³⁵ based in Lima, Peru is tasked among other things with working for the development of the potato sectors of poorer countries of the Americas, Africa and Asia. From the 1980s onwards, the CIP began to collaborate with the Swiss Agency for Development and Cooperation (SDC). The *Papa Andina* programme began in 1998 as a means of collaboration between the international organizations and national research organizations with a focus on technological innovation as a means to reduce poverty of agricultural smallholders. The programme gives a special attention to processes of empowerment and gender issues. Its activities address the situation of poor smallholders whose participation in commercial markets is challenged by problems of access and the increasingly sophisticated requirements of rapidly urbanizing populations, increasingly complex distribution systems, and increasingly demanding consumers (Devaux, Horton et al. 2009).

INSTITUTIONAL INNOVATION

Papa Andina accords with recent ideas about institutional learning, pro-poor rural innovation, and action learning, all of which are closely linked to innovation within, and not just by, research organizations (Poole and Penrose

Buckley 2006): '[These ideas] are evidence of a shift from linear pipeline to learning process. Action learning, with participants as action learners, illustrates the fundamental changes in concepts, methods, mindsets, values, rules and behaviours that are beginning to alter the practice of agricultural research and development' (Chambers 2003: 119-120). These changes are consistent with movements arising from within the wider civil society to address the failure of top-down policy processes and to integrate better the interests, livelihood capitals and participation of poor rural stakeholders through hybrid partnerships.

The CIP-Papa Andina initiative illustrates this new approach to agricultural research and development through 'collective learning processes' between the partnering stakeholders – public sector organizations, agricultural producers of roots and tubers, the private sector processing and manufacturing firms and representatives of consumer interests. Papa Andina played the role of facilitator of this multi-stakeholders platform. One of the methodologies that have emerged from this shift towards a multi-stakeholder process is the **Participative Market Chain Assessment** (PMCA).

The PMCA lies on the idea that 'participatory and market-oriented innovation involves diagnostic research including all stakeholders, identification of potential business opportunities, and the development of market innovations such as new products, technologies and institutions. A conscious process is needed to link innovation systems to market opportunities for diverse commodities and products in local, regional and international markets. Opportunities are likely to exist in the non-farm rural economy, requiring development of post-harvest enterprise and innovation in rural institutions and organisations' (Poole and Penrose Buckley 2006: 4).

The PMCA comprises of three phases: (1) rapid market survey leading to the first workshop; (2) stakeholder meetings for trust-building which are leading to applied research; (3) joint innovation- commercial, technological or institutional-, presentation and closure. Bernet et al

³⁵ Member of the Alliance of the 15 centres of the Consultative Group on International Agricultural Research (CGIAR)

(2006) summarize the PMCA process in Figure 23.1 which draws attention to the gradual transfer of responsibility and initiative from the facilitator, usually the leading R&D organization, to the market chain actors.

'As the participatory process advances, from Phase 1 to 3, the facilitator progressively hands over responsibilities to market chain actors. It is important that these actors take ownership of the innovations by the end of the PMCA process, when all innovations are presented to a wide audience' (Bernet, Devaux et al. 2008: 2). This transition process managed through increasingly participative activities is fundamental, 'empowering participating key actors by allowing them to gain responsibility and recognition; and by facilitating the inclusion of new actors in the PMCA process.' Bernet et al (2006: 20).

Latterly the PMCA process has been emplaced in a more elaborate conceptual framework concerning collective action and market chain innovation (Devaux, Horton et al. 2009). In a so-called 'Innovation Arena' the processes of social learning, formation of social capital

and joint innovative activities result in an increased capacity of individual actors and the chain as a collective to develop an enhanced capacity to innovate, and to stimulate more effective commercial, technical, and institutional innovations.

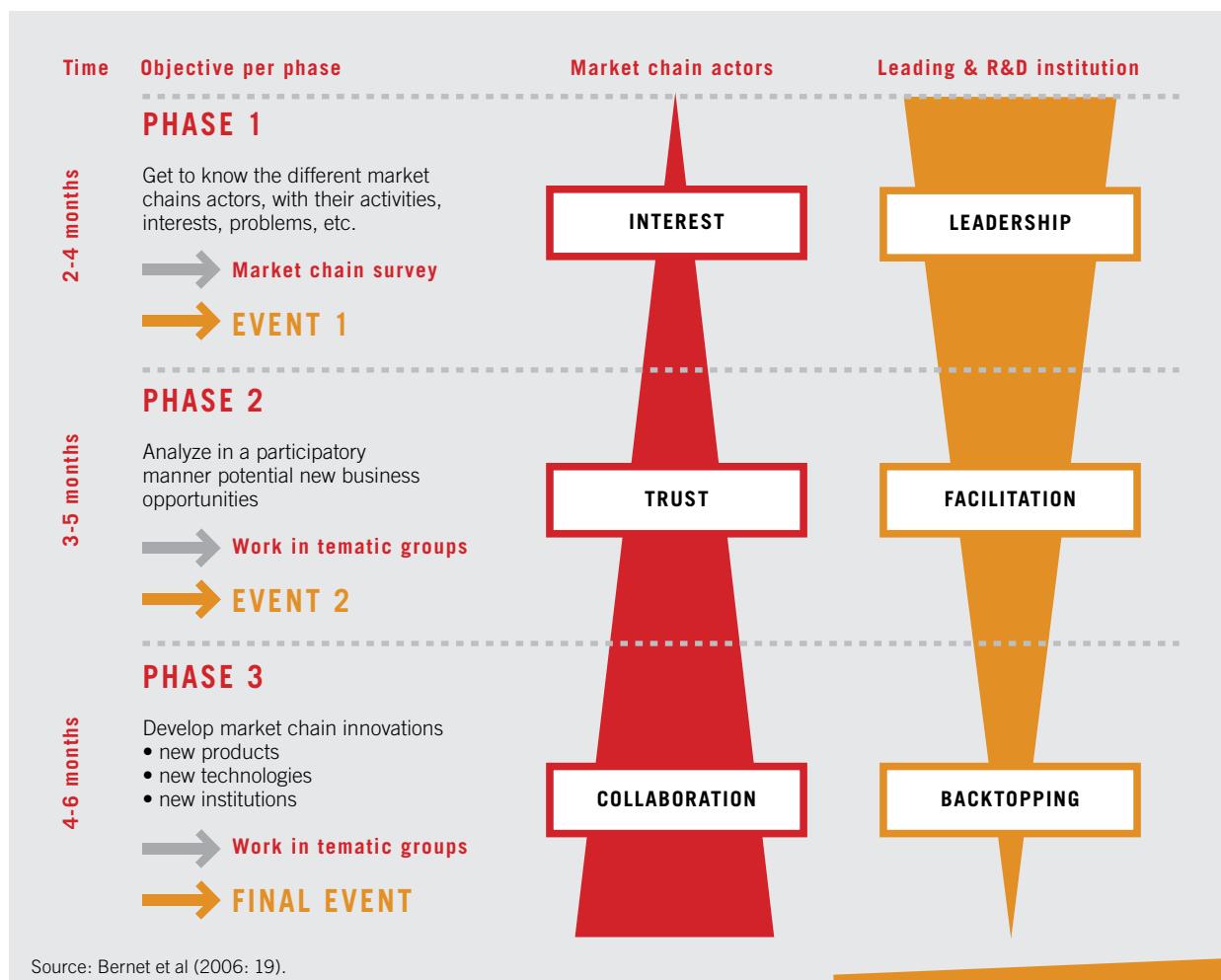
RESULTS AND IMPACTS

The PMCA methodology enables heterogeneous players to learn to collaborate and agree on joint market development strategies to the benefit of all.

Value-addition in commercial innovation

It is argued that creating and exploiting new opportunities has led to immediate economic returns to producers. In Peru, the results of the PMCA in the potato sector have led to improvement in the livelihoods of smallholder farmers, and benefits for consumers. New products have been developed and launched into new markets for high

Figure 23.1 The three phases of PMCA



value-added staple foods e.g. selected traditional potato varieties were processed and presented in attractive packaging and distributed through multiple retail chains under the brand *Tikapapa*.

Household impacts

The Andean experience demonstrates benefits to vulnerable groups such as disadvantaged ethnic groups and female market chain actors. Distributional impacts vary with the local context: Women were involved in all cases, more actively in marketing and processing than in production. In most of the cases, men assumed leadership at the community level, while women assumed leadership in R&D organizations in Bolivia and Peru (Devaux, Horton et al. 2009: 36).

There are still scarce data on actual household impacts in the PMCA literature. Benefits for the livelihoods of the Andean potato growers have been noted as the following (Devaux, Andrade et al. undated):

- Added value and increased incomes
- Self-esteem created from the 'valorisation' of native potatoes and the maintenance of cultural assets
- Incentives emplaced to better use and promote regional biodiversity
- Higher levels of trust and better relationships between producers, buyers and R&D organisations

The quantifiable evidence from Peru for branded fresh potatoes first marketed in 2004 is that sales increased from 14-70 tons in 2006, with more than 300 families in 10 highland communities achieving a market price premium of 10-30% (Devaux, Horton et al. 2009).

Replication of the initiative

Uptake and diffusion of the model of institutional development is taking place through partner organizations of CIP in Indonesia as well as four Andean countries and Uganda. In 2005 in Uganda, the CIP-Papa Andina supported a stakeholder platform³⁶ in the implementation of a PMCA in the tubers markets for potato and sweet potato, and in the tomato and hot pepper chains. Results of the assessment included the emergence of new products such as sun-dried tomato rings, branded potato crisps, sweet potato-enriched porridge flour, a bottled tomato chilli appetizer, and packaged fresh hot pepper

for export. From the experience in Uganda, Horton commented that results exceeded initial expectations, and highlighted the creation of knowledge, attitudes, skills, and social capital in market-oriented innovation (2008). This is illustrated by three specific examples of commercial and institutional innovation involving the development of entrepreneurial skills and local social capacity building:

- a vegetable exporter who, motivated by his participation in the PMCA process, launched a contract farming operation to produce and export fresh hot peppers;
- members of the sweet potato commodity group formed a 'Sweet potato Market Chain Club,' representing all market segments, with the intention of formalizing the club as a sector association to serve as a platform for future innovation processes;
- in Kabale, a sector-wide initiative brought together potato growers, traders and processors to identify ways in which potato production could be oriented towards the needs of processors and manufacturers in Kampala.

Substantial interest from the national research community and even a degree of institutionalization of the process has been manifest. Nevertheless, follow-up is important: 'With the completion of Phase 3 of the PMCA, the role of Papa Andina in introducing, validating and refining the approach has ended. The main issues now are who will lead future work with the PMCA, how the work will be organized, and how the necessary resources will be marshalled' (p. ix). In Uganda, Competitiveness and Investment Climate Strategy, the Secretariat for which is based in Uganda's Ministry of Finance, Planning and Economic Development has committed to further PMCA projects.

SUCCESS FACTORS

The enthusiasm of participants and beneficiaries for the process and the evidence of new product development and enhanced market access are important indicators of success.

Among the key elements of the process:

- **The fundamental participatory nature of the process** ensures that all actors in the supply chain are engaged. The whole chain and sector approach requires commitment from other organizations and national and international researchers. The weakness

³⁶ Five main Research & Development organizations with Regional Potato and Sweet potato Improvement Network in Eastern and Central Africa (PRAPACE) as a overall coordinator, providing technical inputs and administrative support; Africa 2000 Network (A2N), Mukono Zonal Agricultural R&D Institute (ZARDI), the Competitiveness Investment Climate Strategy (CICS) Secretariat, and the Ssemwanga Group.

is that, at least initially, there is a high degree of dependence. Costly, skilled external facilitation is necessary for start-up at least. While the objective is to create a sustainable independent process, this can only be demonstrated over time. Farmers have demonstrated the ability to access new markets opportunities and engage with intermediaries in an equitable way – at a cost.

- **'Win-win' arrangements between small scale farmers and chain-wide actors.** The three types of innovation: commercial, institutional and technological depend on the successful creation of a supply chain management mentality. The linkages between producers, economic, social and technical research and extension activities, and the delivery of new products to consumers have created new capacities in all participants by building new skills and sharing new knowledge. Notwithstanding the implementation of PMCA in what tend to be 'fertile' or conducive environments, the trust, cooperation and reciprocity evidenced in the creation and management of new sector organizations (eg in Uganda) and the institutionalization of deliberative fora are new characteristics where these initiatives have been launched.
- The dynamic linkages between small farmers, researchers and commercial actors have generated new knowledge about natural resources, processing and manufacturing capacities, and entrepreneurial skills and even vision. The tutoring in business development specifically addresses the need for strengthened knowledge and skills among poor participants.
- **The existence of a facilitator.** In the case of Peru, Papa Andina has performed as facilitator or 'broker' among the different and sometimes competing players through overcoming their mutual mistrust and lack of communication. It enhanced communication and knowledge sharing within the stakeholders' platform implemented capacity building activities including formal training workshops and practical hands-on work with commodity groups. Perhaps the greatest skill required of the facilitator was to engage commercial participants and secure counterpart resources.
- **Staff time and financial commitments** from the facilitating Research and Development organization were essential to support and implement the initiatives. Whilst costs vary from case to case, an

average cost for one assessment – taking about 12 to 16 months – is in the order of US\$25 000-30 000, in addition to staff time provided by participating R&D organizations. A substantial commitment is needed from the facilitating organization with at least one person assigned for 50% of their time during the PMCA.' (Bernet, Devaux et al. 2008: 2). Hence, the process depends on sustained external support.

Devaux et al (2009) comment that among the factors influencing the outcome of the PMCA process, the **organizational constitution of the external environment** is important: political support and pre-existing organizations accelerate the specific activities. The product and organizational characteristics of the market chain influence the type of outcome, be it commercial, technological or institutional innovation.

RECOMMENDATIONS AND CONCLUSION

PMCA is a 'new form of collective action' (Devaux, Horton et al. 2009: 32). It is an on-going collaboration between the international public sector and research organizations, national research organizations and domestic stakeholders ranging from small rural producers throughout the supply chain to consumers – with potential for linkages to international markets and actors. The purpose is to strengthen the supply chain links – or introduce supply chain management – and thereby enhance market access through improved commercial relationships by small rural producers. PMCA enables commercial and institutional innovation, built upon technological that has the additional benefits of conserving and promoting native biodiversity – ie in the case of the Andes creating awareness and realising the value of the wide range of indigenous potato species. The result is good natural resources management.

Innovative products resulted in each case, and new business arrangements were formed between intermediary organisations and researchers that resolved technical problems of product storage and pest control.

The CIP team argues that the method can be implemented in many different types of markets and under a range of geographical, economic, social and cultural contexts. However, practitioners comment that certain market chains do not lend themselves to value chain development. PMCA is unlikely to work where chains are characterized by monopolistic practices, in low value commodity markets with little potential for value addition, or chains where there are unidentifiable pro-poor

benefits, and where the R&D capacity is not conducive to sustained multi-stakeholder value chain coordination.

The PMCA requires follow-up to sustain the innovation and to institutionalize market relationships and continue the capacity building. In some cases the creation of formal 'deliberative fora' or 'stakeholder platforms' has enabled continuity of innovation in the market system. Proponents argue that the ideal is for market chain actors to assume full responsibility for the innovations and for the R&D organization to distance itself from commercial activities. This does not necessarily mean withdrawal, but that the R&D organization should adopt a responsive, demand-led, service provision role in relation to the stakeholder platform of market chain actors – eg from producers to retailers of new products – external consultants and relevant public sector agencies. Bernet et al (2006) acknowledge that issues of confidentiality and co-investment in commercial relationships are problematic: 'there are critical issues which need to be taken into account when dealing with the private sector. So far, PMCA has no concrete answers to this, and relies rather on very capable facilitators who are able to manage such issues on a case-by-case basis'.

Finally, questions of efficiency remain for the potential uptake and up scaling of the PMCA. Replicability and diffusion of PMCA is dependent upon international researchers whose own resources are limited. Moreover, having begun with significant external support levels the sustainability of the process once completed is yet to be proven. Will the initiatives endure? After the external launch, or 'jump-start', the careful participatory nature of the process gives the best chances of sustainable commercial initiatives and relationships.

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PROVIDING ACCESS TO INFORMATION AND KNOWLEDGE



THE FARMER FIELD SCHOOL APPROACH IN WEST AFRICA AND IN COLUMBIA

CONTEXT, PROBLEM

Farming systems worldwide have been going through dramatic changes as a result of globalization, liberalisation and rapid urbanization. Farmers are intensifying their patterns of production and diversifying their farm enterprises to meet their livelihoods needs. In order to be competitive and take advantage of the new opportunities that are arising, farmers have to adapt their farm business to market changes and improve efficiency, profitability, income and as a consequence improve food security.

The decline of public extension services is one of the most striking changes in the agricultural landscape over the past decade. In many cases, extension services have been outsourced to the private sector or other institutions have evolved to step into this vacuum. Increasingly farmers turn to the private sector or to informal farmer-to-farmer networks or farmer organizations to obtain information on seeds, fertilizer, pesticides, veterinary services, and alternative cropping patterns. This has fostered local participation in decision-making but it has also resulted, particularly in regard to food staples, in a generally slow or only partial supply response from the private sector, which

in many cases has lacked the incentives to replace public advisory and technical services.

The presented institutional innovations take from good practices in West Africa and in Columbia. In Columbia, the approach was part of a program aiming at improving food security (Seguridad Alimentaria y Buenas Practicas Agrícolas), implemented between 2005 and 2008. In West Africa, the approach was part of a larger regional program in agricultural extension and capacity building.

INSTITUTIONAL INNOVATION

General framework

Farmer Field Schools (FFS) are an original capacity building approach that originates with the pioneering work done by FAO in South-East Asia beginning in the late 1980s.

The programme in West Africa involved three countries – Senegal, Mali and Burkina in 2001, and has since grown into a programme that comprises several projects directly administrated by FAO.

Generally the programme works with a variety of agricultural extension related services at country level,

including government agencies, NGOs and Farmer Organizations. National research is engaged as a service provider to assist with developing training curricula although usually not directly supported in the form of “research projects”.

In West Africa, the programme also sought to exchange information with various regional organizations such as various CILSS agencies and the two river basin authorities as well as with regional research organizations such as IITA and WARDA.

In Columbia, the program also worked with private enterprises (MUNDIAL DE GRANOS Y PANELA S.A., COOPANELA, CORPORACIÓN AGROPAISA) in actions related to the marketing of products from participating Farmer organizations.

Principles of action

The approach, in terms of extension method:

- Focuses on developing farmer skills to improve agricultural management;
- Emphasizes on an experimental, self-evaluative and therefore adaptive approach to agricultural development;
- Applies discovery-based learning methods at the farmer and trainer level;

In terms of technical content, exploratory learning sessions:

- Assist farmers to better understand and manage their economic environment in order to increase profitability. This includes helping farmers to better understand concepts related to marketing and to better connect with markets at scales appropriate to the context.
- Develop improved agronomic management techniques from soil preparation to post-harvest management;
- Focus on soil fertility management practices in order to improve water penetration and retention, nutrient-holding capacity and levels of soil biota;
- Optimize the use of available inputs, including the elimination or large-scale reductions of all toxic inputs.

In terms of institutional setting:

- Involves all relevant actors at multiple levels: community, district, national and regional level and promotes stakeholder's networks;

In parallel, the approach aims at raising awareness on the negative externalities associated with poor agricultural practices and the existing alternatives, including:

- Developing capacity in local laboratories and universities for environmental monitoring of toxic chemicals in food and water;

- Communicating results from the programme with all levels, from farmers to decision makers, through all appropriate media;
- Assisting with the development of better national policies with regard to agriculture and its interaction with communities and the environment.

RESULTS

The West African programme was targeting 130 000 farmers in over 5 000 Field Schools in seven Sahelian countries over a 6 years period.

In Colombia, the programme concerned 28 FFS in 21 communities in Antioquia Province, implemented in collaboration with 28 producers' organizations that already existed. Those organizations selected 4 products of major economic and social importance to work with the FFS approach (beans, tomatoes, cane and livestock). About 11 000 farmers participated to FFS events and meetings.

At farm level

Development of a proactive learning processes among farmers

The core of the project is the “discovery based” approach of the FFS, which has clearly been seen to stimulate proactive learning by farmers and farmer groups. This has lead communities to develop a culture of experimentation and local adaptation through better understanding the underlying mechanisms of “how things work”. One of the “by-products” of this is a high demand by farmers to engage in local literacy programmes.

Improved cropping systems and diversification, increased yields and incomes

Although difficult to measure, the approach has had substantial direct impacts on the physical and natural capital.

An emphasis on **diversification of cropping systems** is starting to change the farmscape in project areas. In West-Africa, the work undertaken in the moist savannah cotton systems is promoting new on-farm associations of cereal, legumes, vegetable and tuber crops, seeds, forage crops and livestock management. Diversification of farming systems provides increased resilience against both economic and environmental uncertainties;

Soil enhancement increases water-holding capacity and provides some buffer against random rainfall which is common in the region. Hence, farmers are more likely

to achieve a harvest in poor rainfall years and increase their yields in good rainfall years;

The substantial reduction in toxic inputs (pesticides) should result in lower toxic loads in soils and aquatic systems reducing impacts on aquatic plankton and macro-fauna such as fish and birds;

Improved agricultural practices lead to **optimization of inputs** by participating farmers, which in turn leads to improved quality of outputs and higher returns.

In West-Africa estimates show that participating farmers reduced their use of pesticide by 75%; increased yields across all cropping systems by an average of 23% and their net farm profits by about 42%. This is confirmed by other similar initiatives (62 IPM initiatives from 26 countries, and 54 crop combinations showed an average of 35% increase in yields with 72% decrease in pesticide use – Pretty & Waibel 2005).

In Mali, the cotton farmers increased their yields by 20.8%, while reducing their production costs by 9.9% and therefore increasing their net returns by 58%. Moreover, the slope of the regression of net returns on input costs showed significantly higher returns on every Fcfa invested. This is largely due to shifting of inputs away from pesticides and into fertilizers and soil organic amendments (compost).

Strengthening producers' organizations

In West Africa, another outcome has been the willingness of farmers' organizations involved with the programme to **challenge current practices by parastatal** commodity chains (cotton companies) in which pesticides are bundled as a required part of the credit package. In Mali, due to pressure by farmer groups, this policy has been recently changed by the "Compagnie Malienne des Textiles" and pesticide sales are now at the discretion of the farmers.

In Columbia, producers' organizations were strengthened in organizational aspects and enterprise management skills. They were able to elaborate and conduct **effective marketing strategies** for their products, for example to develop a "label of origin" ("Cosechas del Campo") as well as creating commercial linkages with private enterprises (MUNDIAL DE GRANOS Y PANELA S.A, COOPANELA, CORPORACIÓN AGROPAISA). The success of these linkages came from the farmers collective efforts in producing safe and good quality products (293 tons of products – including beans and tomatoes – were commercialized, for a value of 468 millions pesos).

At the national level

Government field agents received long-term and intensive training and engaged in training activities that lead to improved effectiveness in their work efforts, regardless of where they end up moving in their careers. This change was manifest in:

- greatly improved social skills in relating to farmers and farming communities;
- improved attitudes and enthusiasm for work;
- greater self-confidence and ability to work in a team;
- greater respect from farmers, peers and administrative superiors.

National extension agencies found new and improved way of linking with **national research institutes**. National FFS teams are able to assist in the elaboration of appropriate curricula to engage with farming communities. Content of curricula is iteratively developed over time with the contribution and feedback from all stakeholders, including farming communities.

Replication of the approach

There is a strong and **increasing demand for community based, participatory discovery based learning methods** in West Africa as well as in Columbia. This demand comes from donors and governments, but also develops from the bottom up, beginning with farmers and field agents who are trained by the programme. This in turn tends to influence local officials and NGOs and eventually, through the medias draws the attention of senior officials in the government. As the outcomes are process-based and serve stakeholders at all levels, the perceived value of the approach, and therefore its durability tends to grow with time.

A specific strategy for quality replication is worth noting. In 2010, the West Africa programme will be expanded from four to seven countries. The training of new potential Master Trainers (MT) in the three new countries will be done with trainers and already trained farmers from the already established programme countries across the three respective borders (Mali to north-eastern Guinea; northern Senegal to southern Mauritania; northern Benin to southern Niger). These three respective groups share the same eco-regions, local language and culture with their cross-border colleagues.

KEYS TO SUCCESS

Internal factors

A strong involvement of local communities

The programme succeeds in this endeavour by being based on process, not on fixed content. The process starts by involving local communities in the establishment of a baseline diagnostic assessment. This diagnostic is based on a range of participatory methods (e.g., individual and focus group surveys) as well as purely analytical measures (e.g., measures of toxic chemicals in water) and provides a point of departure for applying an appropriate curriculum for training, as well as a set of measures of indicators for post-training analysis of impacts.

Adapted to farmers' needs

By involving farmers in the design and implementation of the FFS layout, the programme, ensures that content as well as capacity methods are adapted to the local context and the specific needs of local communities. Furthermore, capacity building does not focus just on production, but also on marketing issues, helping to connect farmers to local, provincial and regional markets.

Building capacity at multiple levels

The FFS approach aims at building capacities not only at farm level but also within farmer organization, and all institutions that interact with them: national extension agencies, research institutes, etc. The programme seeks to build teams, networks among and between groups; and foster confidence of all actors.

Factors related to the alliances/linkages between the institution and key stakeholders

One major key of the success of the programme is that it works with a variety of agricultural extension related services at country level, including government agencies, national research, NGOs and Farmer Organizations, strengthening coordination among them so they share a common vision and collectively elaborate and implement capacity building solutions.

Enabling environment

FFS programmes are part of national and regional strategies for food security (Columbia) and/or agricultural extension strategies (West Africa). They closely collaborate with national agencies (ministry of agriculture, national extension services, etc.) as well as research institutes and universities, and other relevant regional institutions.

CONCLUSIONS

Major lessons learned

Community-based training and education is key to short, medium and long-term solutions and the foundation for adaptation by communities to address existing and future challenges in an increasingly complex and unpredictable world. Many government, parastatal and Farmer Organizations are demonstrating their ability and enthusiasm to shift into this decentralized, knowledge-based mode of engagement.

Participatory, discovery-based learning in FFS and local group building provides a **foundation for local action and future learning** for a wide range of subjects relevant to the farming community:

- diversification of farming systems;
- access to micro-credit (under development);
- development of warehouse receipt systems (*système de warehouse receipt system*).

New systems for individual farm diversification are a key to sustainable intensification and increased adaptive management, especially in high potential productivity areas (e.g., the moist savannah band of the Sahel). Communities should be assisted to develop multiple crops, appropriate livestock, inter-cropping, alley cropping, minimum tillage, cover crops, forage crops, tubers and vegetables. This approach should reverse past trends in soil fertility degradation and provide greater opportunity for farmers to connect to local and regional markets, earn cash and, in bad years, at least produce enough food to feed the family. Over time these high-potential areas can be the drivers of change leading to national and regional food sufficiency.

- **Sustainability:** successful projects tend to be scaled-up to the point where they attract those who are more interested in access to the resources than in the proper management of those resources. Therefore, the key is to avoid a project becoming too large. Another risk, again related to success, is the development of "copies" that are poorly conceived projects and that take advantage of the name FFS without providing (or understanding) the content.
- **Replicability** is a major concern. Historically the FFS approach has been or is active in about 90 countries around the world, with more than 5 million farmers trained in Asia alone. The challenge for any such programme is to increase efficiencies in cost while maintaining a consistently high-quality training process and without applying a "rubber stamp" approach (the same practices blindly repeated everywhere).

Implications and recommendations

- Extension and capacity building programs lead by state, parastatal agencies and donors should always recognize the highly heterogeneous nature of agricultural systems (social, economic and ecological) and the need to adopt an **adaptive management approach** to the local context.
- The **research communities need to better link to decentralized, community-based** training programs to develop new efforts at action research to help communities, at the individual farm level. For their part, the Field School programme needs better linkages with the applied research outcomes to enable a more “whole-system” approach in each of the several agro-ecosystem ecologies.
- **Local communities should be closely associated** to the design of capacity building approaches, methods and content.
- **Institutionalization remains a key goal.** One outcome from the programme at the country level could be a “National Coordination Unit” (NCU), which would be able to address the increasing demand by donors for community based training related to their respective project technical goals. In Mali, for instance, some 30% of the project’s training activities actually relate to training funded under other donor projects, who seek easy access to the network of farmer trainers and the pedagogical skills to translate a technical message into a discovery-learning curriculum. The NCU would:
 - i) provide access to existing networks of trainers and FFS farmer groups,
 - ii) provide assistance in the joint development of an appropriate training curriculum;
 - iii) provide the follow-up and independent checks on field activities through an established system of focal points (M&E),
 - iv) provide baseline and post-training quantitative and qualitative analyses (impact analysis), and
 - v) provide report writing functions.

■ **Linking farmers to local, regional and international markets.**

Producing more, healthier food with reduced input costs is a favourable outcome of the project, but if this increased production cannot be sold in the market, it fails to adequately serve the farming community. Attention to internal savings and lending systems for FFS, along with “warehouse receipt” systems (“warehouse receipt system”) can help to translate increased production into increased profits, and thereby stimulate further production.

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DEVELOPING SMALL FARMER ENTREPRENEURSHIP THROUGH FARM BUSINESS SCHOOLS

CONTEXT, PROBLEM

Farming systems worldwide have been going through dramatic changes as a result of globalization, liberalisation and rapid urbanization. Farmers are intensifying their patterns of production and diversifying their farm enterprises to meet their livelihoods needs. In order to be competitive and take advantage of the new opportunities that are arising farmers have to **adapt their farm business to market and global changes** and improve efficiency, profitability and income.

The desire to increase income by taking advantage of market opportunities requires farmers to become better decision makers and better at competing in this new environment. The emphasis on the market and the need of farmers to be competitive, calls for better farm management skills. Marketing and farm management have rapidly gained predominance globally over the last two decades. Farm business management skills and knowledge is recognised as important for farmers to effectively respond to present day farming challenges. Farm management advice helps farmers to make the right choice between different enterprises according to individual levels of financial, labour and land endowments and their levels of risk aversion.

Most capacity building programmes earmarked for farmers have focused on technical issues that include production aspects. Little has been done to impart knowledge and skills among farmers in business management and marketing. Farmers have been on the receiving end of training programmes and in most cases this has been done on an ad hoc basis and determined by the interests of extension workers rather than the needs of farmers.

INSTITUTIONAL INNOVATION

In order to address this gap the concept of the **Farm Business School** was developed with the aim of strengthening the competencies and skills of farmers in business management and marketing.

This Farm Business School is a forum where farmers gather together for a given production period usually a season or a year, to learn about farm business. It borrows the principle of Farmer Field Schools (FFS), thus, "*a school without walls*". It is a process, where farmers come together to learn as part of a group and are assisted in their learning. The Farm Business School concept enables farmers to learn and improve their knowledge, change their attitudes and enhance their skills toward improved farm commercialization.

What is the difference between FBS and Farm Field Schools?

The difference between the FBS and FFS is that the FFS focused on production and initially started on Integrated Pest Management (IPM). The FBS is more concerned about the economic and financial aspects of farming. The FFS ensured that that farmers used the best agronomic practices and produced recommended yields. The FBS ensures that the farmer secures or is aware of the market before production, s/he plans the production, produces and gets the best return from the produce. FBS focuses on translating the productivity to income. The FBS assumes the agronomic or production aspects are addressed. The FBS can therefore be introduced to a group of farmers that have gone through the FFS or the two can be merged together to create synergy.

This learning takes place at village level in circumstances that are familiar to the participants. The training covers subjects in farm planning, management, marketing and linkages to buyers and sources of finance. It emphasises developing the analytical skills of the farmers to understand why things happen and how to solve their own problems. It follows a learning by doing process where the extension worker is a facilitator of extension meetings with farmers.

The Farm Business School concept has successfully been introduced in Malawi, Nigeria and Ethiopia through the government structures and other supporting organizations. The agents employed by the project ("Agribusiness Officers") within the Ministry of Agriculture and some within FAO funded projects have been implementing the FBS within their communities. In Ethiopia, the FBS was introduced in one zone in Arsi, Asella and thirteen FBS were established. In Malawi, the FBS were initially introduced in eight Agricultural Development Divisions, one in each district. More FBS were also established in FAO funded projects.

The Concept is promoted by the Extension Agents (these can be government staff, non-governmental organization) staff or the farmers themselves. The farmers can be empowered to be Lead or Contact farmers of the concept, like community Facilitators and they train fellow farmers.

In Malawi, Lead Farmers were trained totalling to 121 farmers for 8 sites. Each site had an average of 15 farmers. The Lead Farmers will establish a total of 29 FBS each targeting about 15-20 farmers after the graduation resulting in positive multiplier effect. The FBS encompass gender equity as both men and women are encouraged to attend.

In Ethiopia the promoters are the Agribusiness Officers under a FAO supported project. They established 13 FBS sites and reaching 373 farmers. After the training the farmers shall continue utilising and practising the skills gained. The farmers are organised into groups and cooperatives and some are linked to unions and processors for marketing the produce.

RESULTS/IMPACTS

The farmers have developed a more market-oriented mind-set

The FBS methodology has changed the mind-set of the farmers, they can check why things are happening and seek solutions. They are more focused on planning. The farmers learnt farm business plans that have assisted them to be focused and have a clear vision of what they want to achieve.

The FBS training has been useful and helpful to the farmers as it taught them what enterprises to choose based on profitability assessments. In addition, the farmers could utilize resources efficiently for example maximum use of land and optimum use of inputs like fertilizer.

On record keeping, previously some of the farmers were just keeping records in their minds, but now they keep the records to be able to calculate profitability of enterprises and profit.

Farmers used to do subsistence farming, but now focus on market-oriented production. For instance some farmers could grow barley or teff and the lack of planning led to misuse of the grain. A number of farmers visited in Ethiopia indicated that they would put grain in storage, but family members from the husband, wife or even children would take the grain and sell without the knowledge of others. This led to unplanned food insecurity. After the training there is a household approach: everyone is aware of what is happening and marketing of grain is transparent at household level. The planning component in the FBS training has enhanced their planning they know what amount to leave for food security or strategic reserves for the family, amount to sell and when to sell for better competitive advantage. The training opened and changed the minds of farmers to realise or unlock their business potential.

Previously the available seed used to be the determinant for selected enterprises, but now they plan and purchase the required seed based on the profitability of the enterprise and marketability of the produce.

Setting up of marketing collective action

FBS has resulted in group marketing, thereby gaining competitive advantage and good prices through improved bargaining power. Most groups have seen the FBS as an opportunity to get strengthened into a cooperative, they have started working towards that and this will provide them with more advantages as they will be able to sell directly to the traders, processors, unions etc.

When farmers are organised with a common shared goal, it is easy to receive outside support. The FBS farmers in both countries were under the pilot phase, but have realised positive gains due to the group formation. Access to credit was not realised yet, but farmers have highlighted changes in income and diversification of enterprises and re-investments. The farmers managed to sell products as groups, making their produce competitive due to the economies of scale and bargaining power. Farmers are also able to find markets for commodities in advance before planting such that they are able to make financial projections on what financial resources they need to meet the demand perceived.

The business skills attained, have assisted the farmers to channel back proceeds from the sales to the farming business through re-investments and diversification. Some farmers are diversifying from the cereals/grain

into tomato and seed onion production which are more profitable and have short production periods.

Lemu Burkitu and Tijo FBSs in Asella, Ethiopia indicated that through the FBS training they organised themselves for group marketing their produce (seed and malt barley). In the previous season (2008) they managed to sell at 590 Birr per quantile malt barley to a middlemen, but in 2009 they managed to sell at 690 Birr/quantile by direct selling to the processors. They realised that marketing as a group enhances bargaining power and result in competitive prices.

Case Story On Investment: One farmer from Shalad FBS, Asella, Ethiopia

One farmer planted onion seed and sold one quantile for 17 000 Birr. From the sales proceeds the farmer bought 2 oxen for fattening, procured improved seed and fertilizer and started building a new house at his homestead. This happened from November 2008 to September 2009. This shows the shift and movement towards expansion, diversification and investment.

More effective use of physical and natural capital

The concept has led to efficient and effective utilisation of land and physical resources. For the case of Asella FBS farmers in Ethiopia, they have realised that optimum use of fertiliser results in more benefits than costs. Previously they thought it cost more to buy and apply the recommended fertiliser, but now have realised that the accrued benefits outweigh the costs. Previously farmers could apply limited number of required or recommended fertiliser. After the FBS training and field visits conducted they realised the importance and value of using the recommended fertilisers. Initially farmers looked on the cost side of the fertiliser without seeing the incremental net benefits.

Farmers now consider labour and use of draft power as a cost. Before the training they could just use draft power as a way of life or their own labour without realising it is a cost. The awareness of enterprise budgets have enhanced the understanding of costing.

In addition, farmers used not to value livestock production, but now they see it as income generating enterprise.

The land resource is efficiently used in all seasons. In Asella, the FBS farmers are utilising the off season, planting short maturing high value horticultural crops. The numbers have not been quantified, but of the FBS visited, two indicated the diversification in Ethiopia.

Farmers' increased confidence and negotiation skills

At farmer level, confidence is built in many aspects. They learn negotiation skills and by understanding the production management and costing, the farmers understand the produce pricing. Therefore, when they negotiate the prices, it is based on covering production costs, not on what the neighbour is charging.

The FBS has also impacted positively as the farmers can easily take up new technologies and initiatives that enhance their productivity.

Sustainability and replicability of the model

Farmers continue utilising the knowledge and skills gained after the training. They use the records to analyse the actual cost and benefits of the enterprises they have engaged in. This on its own motivates them to keep practising record keeping and putting into practice the skills acquired.

The FBS encourages sharing of knowledge and skills beyond the training. In some countries knowledge sharing is highly regarded and leads to farmer-to-farmer training. The training can be both formal or informal diffusion of knowledge and skills.

The Extension Agents trained as Facilitators in most cases they are based in the community and they are able to continue the training with minimum financial requirements. The training of the Extension Workers should be done by the government or the institution introducing the FBS concept. This will then ensure sustainability of the training programme. On the other hand the trainees once graduated are encouraged to form their own schools where they train others interested to transform their farming businesses likewise. On this regard two or more trainees are encouraged to work together to facilitate the lessons in these new schools so that they beef each other up thus ensuring further sustainability.

The low cost involved in the FBS means that it can be replicated with less financial demands. The training approach can focus on Lead Farmers or Contact Farmers, who can replicate the training to other members in their group or locality. The selection of the Lead Farmers normally include those willing to train others at no cost. Once this is clear for them it becomes easier to implement as farmers will be aware of the non financial reward to the training of other farmers.

KEYS TO SUCCESS: WHY DOES IT WORK?

Internal factors

A demand driven model of extension

The concept result in demand driven extension. This transforms the extension system that has been top down for some time. By demand driven, farmers' needs are directly addressed. The FBS lead to farmer-to-farmer training, complementing extension systems which have been characterised by high extension worker to farmer ratio.

Solutions adapted to farmers' needs

The concept assists extension workers to be more organised and knowing "what to do and when" and delivering subjects to farmers that are related to their needs at any particular point in time. This eases the work of extension workers as well as the evaluation of the extension worker by supervisors.

So the FBS training materials are relevant to the needs, livelihoods and farming practices of the farmers, as they cover subjects such as marketing, farm calendar, planning for inputs, profitability analysis (cost benefit analysis) leading to enterprise selection, farm business plans, vision for change. As a consequence, FBS were effective because it has managed to resolve the farmers' business problems and resulted in improved incomes.

Internal rules set by the farmers

Under the FBS the objective is to have a learning and sharing experience forum address the market-oriented production needs. The group operates with agreed rules and operational guidelines. The curriculum for the training is conducted based on agreement and consensus. If the farmers under the FBS mobilise own finances to sustain the FBS, the Treasurer takes custody of the funds and usage of such funds is based on agreement. The FBS also set up simple committees to run the affairs of the group, they have the Chairman, Secretary, Treasurer as the main office bearers. The Facilitator of the FBS, applies participatory approaches always and his/her role is mainly facilitation.

Factors related to linkages between the institution and key stakeholders

A collaboration between farmers and extension agents

Farmers groups are supported by Extension Agents, who can be government staff or from non-governmental organization, or farmers themselves who have been trained in that perspective. Where Farmers become Facilitators they can not be paid in cash as this is not

sustainable. They can be rewarded through some incentives and also furthering their knowledge base. In Ethiopia the promoters are the Agribusiness Officers under a FAO supported project.

External factors

The FBS concept is established within the Ministry of Agriculture framework. The FBS objectives are in line with agricultural commercialization. The Ministry benefits in terms of staff training in the concept, training manuals and financial support for the trainings.

Challenges that may affect success of FBS

The success of the FBS requires initially the support of the government institutions (goodwill) in supporting the paradigm shift from production oriented to market oriented production. The FBS concept is mainstreamed in the existing structures hence, such support is paramount.

Furthermore, at meso at micro level they should be support of the framers in the FBS in terms of infrastructure development, improved markets, creating market linkages, provision of processing plants. This will complement the acquired knowledge and skills in market oriented production. Hence, the FBS key success requires complementary and supplementary factors. The sustainability of FBS also requires provision of innovative information and technology to the farmers to ensure that they keep abreast of new market developments.

The FBS has been implemented over a short term duration. There is need to have more impact evaluations to gain more lessons of the concept, but so far what has been done proves that the approach is more rewarding for the smallholder farmers in developing countries.

CONCLUSIONS

Major lessons learnt

- The FBS brings **change of mind set** amongst farmers, they view farming as business and aim to derive sustainable and profitable benefits from the farming venture.
- The FBS lead to **farmer-to-farmer training**, complementing extension systems which have been characterised by high extension worker to farmer ratio.
- Training of farmers through the FBS is **low cost**. In Malawi the cost was calculated to about US\$150 per year for a group of 15 farmers. The Extension Workers (FBS Facilitators) being provided by the Government.

The costs cover stationery (flip charts, markers/chalk, ball pens, books, calculator), transport cost to the market, fuel for the Facilitator (where necessary), otherwise the Facilitator should walk to the School. It requires limited financial resources as farmers would be coming from their homes (field based). Financial resources are required during the training of the Facilitators and provision of the training materials (these may require translation in some localities).

- The concept result in **demand driven extension**. This transforms the extension system that has been top down for some time. By demand driven, farmers' needs are directly addressed.
- The concept leads to **formal group formation**. For the case of Ethiopia, enterprise groups formed under the FBS are now strengthened and result in formation of cooperatives. When registered as cooperative they have comparative and competitive advantages that leads to sustainable business management.
- The FBS concept is more effective to be introduced in groups that are already existing and working in **income generating** projects. The extension system should be functional to offer technical backstopping support.

Implications and recommendations

Combine FFS with relevant business development services

The FBS concept, is a vital component towards commercialization of smallholder agriculture. The critical success factors for the FBS include proper support in terms of input supply or credit and creating market linkages that sustain the business focus of the farmers. Market intelligence needs to be availed to the farmers at the appropriate time to make informed decisions. Hence, there is need to develop systems and strategies that ensure effective and efficient transfer of information.

Develop infrastructures for value addition

Most farmers are located far from the markets; there is also need to look into value addition infrastructure development. Thus, need for processing plants to add value to the product(s) and enhance competitiveness and increased shelf life is important. Value addition can be done through a number of ways. Infrastructure or processing plants can be provided for the farmer cooperatives or individual farmers to provide the service to a group of farmers depending on the situations.

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PROMOTING EMPLOYMENT AND ENTREPRENEURSHIP FOR VULNERABLE YOUTHS IN GAZA STRIP AND WEST BANK

CONTEXT

Youth in the West Bank and Gaza Strip (WBGS) face enormous challenges related to occupation, conflict, deep rural poverty, food insecurity and lack of extracurricular activities. As the Separation Wall and other security zones deny Palestinians the right to access agricultural areas, trade restrictions and dumping of Israeli goods in the markets limit the achievements of the agriculture sector. High unemployment and underemployment coupled with the high cost of non-food items continues to impact food security negatively, especially among poor rural households and female-headed households.

Unemployment rates in the West Bank rose from 17.7% in 2007 to 19.0% in the first quarter of 2008, while unemployment in Gaza has remained at a high 29.8%. Young people are the hardest hit by unemployment: 36.2% of 20-24 year olds (West Bank: 29.6%; Gaza Strip: 48.8%) and 38.6% of those aged 15-19 (West Bank: 33.5%; Gaza Strip: 52.4%) are jobless. Among youth, women aged 20-24 are worst off in the labour market with unemployment rate of 46.0%. When considering educational attainment, the high unemployment rates,

28.8%, are found among women with 13 years of schooling and more, whereas for men in this category unemployment is 13.5%.

More Palestinians have become poor, their poverty is deeper, and yet more people are at risk of falling into poverty if the current socio-economic conditions continue. Poverty in the Gaza Strip is more pronounced, at 70.0% in February 2008, up from 52.0% in March 2006. In the West Bank, the share of poor households over the same period of time appears to have remained stable, moving from 49.0% to 51.0%. In an uncertain environment characterized by high unemployment and poverty rates, and severe constraints in movement and access due to closures, a large number of Palestinians consider migrating, whether abroad or internally in the occupied Palestinian territory (oPt). A 2006 survey revealed that 39.5% of all Palestinians were living outside the oPt, and are part of 'the Diaspora'.

INSTITUTIONAL INNOVATION

From Junior Farmer Field and Life School (JFFLS) to Youth Farmers' Associations

The JFFLS schools are inspired by the experience of the Farmer Field Schools (FSS). The programme previously successful in several African countries, takes an innovative approach to empowering youth through self-esteem raising and life skills teaching. The JFFLS³⁷ approach provides a unique learning methodology and curriculum, which combines both agricultural and life-business skills, including issues such as psycho-social protection, child labour prevention, property rights, health, nutrition, environmental awareness and agri-business skills. The JFFLS approach in Gaza and West Bank has been piloted by FAO in the school year 2008-2009.

The objectives set during the pilot phase (2008-2009) were the following:

- To empower vulnerable youth in the WBGS most affected communities, by providing them with knowledge of and access to good and sustainable agricultural practices and life skills;
- To economically empower JFFLS graduates in the delivery sites with entrepreneurship skills;
- To support women's groups in delivering in-school feeding during JFFLS sessions and train them on the principles of good nutrition, health, entrepreneurship skills and on the fundamentals of the JFFLS approach.

The activities were developed in partnership with the Ministry of Education and Higher Education (MoEHE) and Ministry of Youth and Sport (MoYS) and in line with the Palestinian Reform and Development Plan for 2008-2010, the Educational Development Strategy Plan for 2008-2010 as well as the Youth Development Strategy 2009-2011.

Since 2008, 1180 youth between the age of 15 and 18 directly benefited from this initiative. An eight months curriculum was developed specific to the contexts of the WBGS; the lessons for the youth took place twice a week after school hours (the JFFLS is an extra curriculum programme) for 2 to 3 hours each time. Youths were selected in the schools in collaboration with school headmasters, selected facilitators, local leaders, women and men from the community and representatives of the nearby women's associations. Selected youths resided nearby the schools in order to avoid having to travel

37 Burundi, Cameroon, DRC, Ghana, Gaza & West Bank, Kenya, Malawi, Namibia, Nepal, Rwanda, Sudan, Swaziland, Tanzania, Uganda, Zambia and Zimbabwe JFFLS Inventory
[ftp://ftp.fao.org/docrep/fao/012/ak595e/ak595e00.pdf](http://ftp.fao.org/docrep/fao/012/ak595e/ak595e00.pdf)
 Getting Started! Running a Junior Farmer Field and Life School
<http://www.fao.org/docrep/010/a1111e/a1111e00.htm>

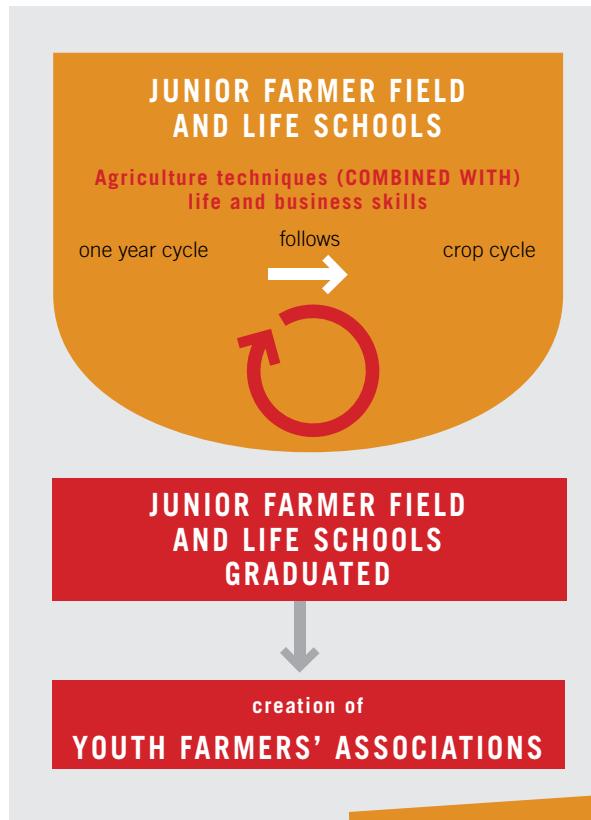
long distances. Two facilitators from each school were selected: one to work with youths on **agro ecological knowledge and production skills** (i.e. extension worker or science teacher) and one to work on **life-business skills, youth's potential, self-esteem and confidence, and gender equity issues**.

In 2008, a number of 24 JFFLS facilitators and 2 Representatives from the MoEHE were trained in Jenin (West Bank) on the methodology and 8 JFFLS facilitators and 1 Representative from the MoEHE were trained in Gaza. All selected teachers had a high educational knowledge level and an open mind for learning new skills, a good base for the JFFLS training, which turned out to be very successful. A refresh 3 days training-workshop for all the facilitators was organized both in WB and GS, mid-way through the programme in February 2009 in order to capture the progress made up to then and share the obstacles faced. At the beginning of phase II of the activities during the school' year 2009-10, additional facilitators have been trained in the JFFLS approach and in monitoring and evaluation issues specific to their activities. The approach has been widened to youths from selected refugee camps in the Gaza Strip in partnership with the United Nations Agency for Relief and Works for Palestine Refugees in the Near East (UNRWA).

Two innovative mechanisms were developed that aim at the sustainability of the approach:

- **The delivery of food to the JFFLS students by local women's associations.** From the local communities where the schools were selected, 16 women's associations officially registered at the Ministry of Women's Affairs and close to the schools also directly benefited from the programme through income generating activities. They were in charge of providing and distributing the meals for the youth during the JFFLS lessons. The small grant given to the associations to cover the costs of the meals was re-invested in other activities carried out by the women's associations (i.e. horticulture, honey production, livestock, aquaculture etc).
- **The systematic enrolment of all youth beneficiaries in local youth clubs,** and local farmers' and/or women's cooperatives at the end of the 8 months JFFLS cycle. The graph below presents how employment opportunities and jobs are created in a systematic mechanized way. Youths are full members of the associations and receive further trainings and gain profits out of their membership.

Figure 28.1 How jobs are created and people engaged

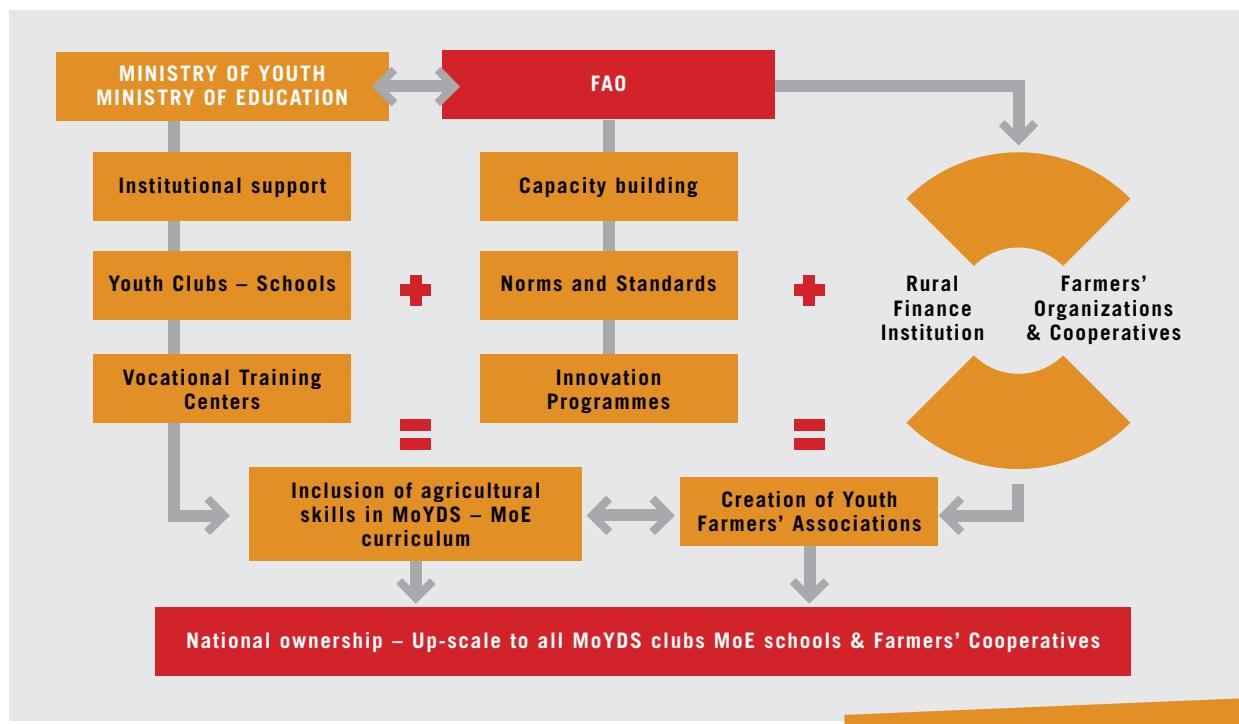


At the end of phase I of the programme, FAO grouped 540 youth in 8 youth farmers' associations (activities undertaken: greenhouse cultivation of vegetables,

beekeeping and honey processing, livestock and cultivation of thyme and marketing skills); phase II has seen 640 youth grouped in 10 additional youth farmers' associations. This process was done in partnership and in collaboration with the MoYS, the Youth Development Association (YDA) and with local farmers' cooperatives and women's association. A successful example of this initiative comes from the West Bank, in the Hebron district. The JFFLS graduates from the selected JFFLS schools from Hebron were re-grouped in the Al-Shiva Hive Cooperative Society. The students were trained in beekeeping, bee hiving and honey processing twice a week in the afternoons after school hours. They were given full membership with the Al-Shiva Hive Cooperative Society and gained their share of profits.

The graph above presents the **up-scaling and institutionalization process for the JFFLS in WBGS**. The process goes on one side through the MoEHE and the MoYS and on the other side through Rural Finance Institutions and Farmers' Organizations and Cooperatives. This twin-track process ensures first the inclusion of the education and vocational education sector and a consequent inclusion of agricultural skills in the national educational curriculums and second the employment generation in the agri-business sector with the Farmers' Organizations and Cooperatives.

Figure 28.2 Institutionalization process



RESULTS

The overall potential for the youth to become healthy and positive young adults is evident from pre- and post-programme evaluations carried out at the end of each school' year.

Snapshot impact assessments are always carried out with the youths, the schools' headmasters, facilitators, women's associations and farmers' cooperatives, youth clubs coordinators and focal points of the initiative from the MoEHE and MoYS.

The evaluation confirmed that all the youth had gained knowledge about different types of crops, were able to identify pests and insects and knew how to protect them and felt extremely comfortable in pursuing a job in the agriculture sector and overall more confident and with hope for the future. Many of the youth enrolled expressed their wish to enrol in further education and study agriculture. As reported by the schools' headmasters and teachers the youth enrolled in the JFFLS after the 8 months cycle, did sit the exams and exit them with better results of others not enrolled.

Evaluations done by the MoEHE, on the extra curriculum programmes done in Palestine, did show that the initiative undertaken by FAO was one of the most successful ones.

The inclusion of agricultural lessons in the MoEHE national curriculum is still under discussion but very much welcomed by the Ministry, while the inclusion of agricultural lessons in the MoYS's youth clubs has been piloted through FAO's intervention in the region and in consequence of the enrolment of the JFFLS youths in their clubs.

KEYS OF SUCCESS & CONCLUSION

Investing in Palestinian youth in order to facilitate the evolution of a Palestinian state is essential. More over, the development of a Palestinian youth workforce is one of the most important priorities and challenges in order to realize a good national development that will create a more peaceful Palestinian society that can encourage the promotion of a two-state solution.

This initiative in WBGS has been showcased at global level at the YES Summit on youth employment in Sweden in 2010 and was selected on the basis of its potential to turn into a real force of change. Furthermore, it has also been recognized as being a valuable contribution to the work programme of the UNESCO-promoted "Decade for a Culture of Peace and Non-Violence for the Children of the World (2001-2010)".

The strong partnerships with the ministries involved as well as the **Youth Development Association** and **UNRWA**, are crucial for FAO's role in strengthening the capacities of public administration and civil society and fundamental for the institutionalization of the JFFLS approach.

The linkages between former JFFLS graduates' groups and existing youth clubs, women's associations and local farmers' groups have proved to be key to ensure the continuation, replicability and sustainability of the activities undertaken by FAO in the region.

The so-called "small farms" by the MoEHE and MoYS have been praised by the involved ministries as being key in strengthening the relationship between the school and the community through the involvement of youth clubs, local women's associations and farmers' cooperatives in the implementation of the activities after school (Source: Al Quds June 2010).

FAO continues to cooperate with the Ministry of Education and Higher Education (MoEHE), the Ministry of Youth and Sport (MoYS), the Youth Development Association and with UNRWA to promote the idea of JFFLS and youth farmers' associations throughout the WBGS as the benefits of the programme on youth's self-esteem, entrepreneurial and agricultural skills, and overall potential to become healthy and positive young adults is evident from pre- and post-programme evaluations.

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RURAL AND AGRICULTURAL DEVELOPMENT COMMUNICATION NETWORK FOR DEVELOPMENT. EGYPT: AN INTEGRATED APPROACH TO COMMUNICATION AND KNOWLEDGE SHARING

NATURE OF THE PROBLEM – BACKGROUND

Weak linkages between extension and research often result in systematic knowledge and information “bottlenecks” that limit the effectiveness of research to contribute to agricultural development. Yet, knowledge and information gained through agricultural research are essential for improving food security. The Ministry of Agriculture and Land Reclamation (MALR) in Egypt recognizes that there is a considerable gap between research, extension and the rural population involved in agriculture and agrarian businesses. Research in many cases is not related to demand, and many relevant research results are not translated into practical extension packages or made accessible to farmers. Latest information on technologies and even very practical issues such as costs and prices, market information etc. are also not timely available to small producers.

INSTITUTIONAL INNOVATION

In order to solve this problem, the MALR undertook with support of FAO a very challenging pilot project called “**Virtual Extension and Research Communication Network**” (VERCON). A communication network was established using internet-based technologies to link research with extension services, creating the first application of VERCON. The pilot VERCON linked the Agricultural Research Centre (ARC) through its Central Lab for Agricultural Expert Systems (CLAES) and the Agricultural Extension and Rural Development Research Institute (AERDRI), with the Central Administration for Agricultural Extension Services (CAAES), and the Agricultural Directorate (AD) of the Kafr el Sheikh governorate. Two extension centres in Kafr el Sheikh were linked to this network in the pilot phase.

VERCON proved to be successful in facilitating the exchange of information and experiences among the

various stakeholders, and providing extension staff with access to a vast repository of agricultural information and online support. Based on the positive impact of the VERCON, the government decided to expand it at national level, to serve as a Rural and Agricultural Development Communication Network (RADCON). RADCON was developed with technical assistance from FAO and funding from the Italian government, covering 200 nodes in 7 governorates. RADCON expanded the existing network with diversified content and a wider range of stakeholders, including research institutes, extension centres, farmer's organizations, local community associations, youth centres, universities (11), NGO's and the private sector.

This implied an expansion of the stakeholder base, the range of end-users and the services provided. RADCON was therefore established as a community-based network, with a bottom-up approach to identifying the information needs of the end-users using Participatory Rural Communication Appraisal (PRCA) methods. Community facilitators worked at village level to engage local communities in mutual learning, and to identify farmers' problems and document local experiences and success stories.

RADCON network consisted of two core components:

- *Human component*: a network of people and focal groups in seven governorates of Egypt, and 115 village facilitators (the facilitators are chosen by the villagers and trained to help bridge ICT literacy barriers in rural areas);
- *Technological component*: An online agricultural and rural development information and communication system linked to all participating sites.

This integrated approach solved the dilemma of using ICT for the benefit of the poor especially in rural areas. Moreover, the model is flexible enough to work under governmental, private or NGO lead, or even a combination of it.

RADCON operates in seven governorates, partly through 96 existing extension centres usually located in a 'central' village and served three to five nearby villages. A typical centre is run by a director and had three to

five extension workers. Furthermore, in 50 resource-poor villages not covered by existing extension offices, RADCON centres were established in cooperatives, NGOs, youth centres and other facilities, depending on what was available. Under RADCON, the centres' main tasks are to train and support the community facilitators and to serve as an access points to the RADCON services.

The establishment of the communication network started with the identification and analysis of stakeholders and their information and communication needs. These served as the foundation for the development of content of RADCON systems and a user-friendly interface. This analysis suggested that the five modules for the RADCON were those related to youth, women, environment, marketing, and NGOs. As a result, 12 systems, two forums and one statistical database were created reflecting the five priority areas. A RADCON "system" is designed as a repository of common knowledge related to a particular topic, providing an interactive and dynamic communication medium between all users of the network; a "forum" is a virtual public space where all stakeholders could post upcoming activities and discuss various topics.

RADCON enabled rural residents to be proactively engaged in resolving their information and communication challenges. This was achieved through a consultative process that put the needs of users foremost and built the system that served those needs.

Diversified communication activities complemented the online information and communication system. There were regular meetings, approximately 2 per month, attended by 45 participants on average, from extension, research and DSCC³⁸, who are the main operators of the RADCON.

There are regular upload of the extension document, 3 documents/ month on average. This upload is done remotely by DSCC personnel. There are regular uploads of new growers' problems and their solutions. An average of 170 new problems – for which relevant information or suitable solution was not available in the existing resources and databases – were uploaded every month.

A media and communication plan was implemented, including TV and Radio programs. The plan included 24 TV and Radio episodes to be produced in DSCC in close cooperation with TV Ch6 and MDRS³⁹. The episodes included drama, interviews, documentaries and demonstrations, about the good agricultural practices and recommendation for making non traditional fodder, milk processing, wheat, Green Bean

crops, and Weed control. Some topics were introduced in media production to reflect the local experiences, the problems, the traditional practices and the successful stories of rural people.

The broadcast of this information as well as the upload of it to RADCON system (in Mp3 & *.mwv summarized files) benefits the researchers, the RADCON stakeholders, the service providers, the farmers.

Farmers are also considered creators of knowledge.

The response to farmer information needs and problems on RADCON enrich the system and increase its benefits building on real needs of rural people (e.g. the traditional practices to process milk, the successful stories of youth in implementing some small projects, and people experiences and problems in feeding their animals).

RESULTS

RADCON Sites Planned Achieved: The project connected and mobilized 50 resource-poor communities to the RADCON network, bridging the ICT and literacy gaps through a dynamic network of village facilitators and participatory communication methods. It further expanded the research and extension component to cover 19 agriculture directorates, 96 extension centres, 44 research stations, and 8 research institutes.

Over 115 village facilitators (at least one man and one woman per village) from 50 villages were trained to work with farmers to link rural communities and enable them to participate in generating, developing and sharing knowledge through the system. They are supported both online and offline through an extensive network of experts and mentors in research, extension, health and nutrition, environmental waste, women's affairs, community development and rural enterprise.

Besides making existing knowledge and information readily available to its users, RADCON helped highlight and identify solutions for farmers' problems. A total of 8 174 new problems were identified and their solutions uploaded on the system. Over 26 500 farmers benefited from adapted solutions – an average of 885 per month. Further studies are needed to measure the impact of solving these problems on farmers' livelihoods and income.

On the institutional side, RADCON enhanced linkages among public and non-public institutions involved in agriculture and rural development and provided a platform for active dialogue and knowledge sharing. It connected research stations and institutes in

38 Development Support Communication Centre

39 Middle Delta Radio Station

various regions of the country with one another as well as with extension services and faculties of agriculture. This helped make research results readily available to its intermediaries and end users, and helped shape a more relevant research programme, and a more responsive extension service. In this way, RADCON provides a foundation for a modern and innovative approach for extension and rural development in Egypt.

The impact of developing such system and how the information could affect the livelihood of small farmers need also to be assessed. More studies are still required to be conducted to measure the impact of solving these problems on the livelihood of the farmers and how their incomes have increased as result of getting these solutions.

KEYS TO SUCCESS

The main factors that contributed to the successful implementation of the project include:

- **A community-based information network:** RADCON was established as a community-based information network, focused on identifying and meeting the information needs of rural communities. It was based on using innovative and tested PRCA methods tailored to the specific context of the communities that the project was designed to assist.
- **Decentralized system:** Once stakeholders were convinced of the benefits of the network, its decentralized nature quickly gave them a sense of ownership of the information they generated, eliminating 'communication bottle-necks' and allowing for dynamic exchange among information providers and recipients.
- **Engaging local leaders:** The formal and informal engagement of local community leaders in the early stages of a project can accelerate its acceptance and use by the community. From the outset of the RADCON project, the management and implementation team worked closely with local leaders, engaged them in decisions related to establishing the RADCON centres and identifying the community facilitators, and kept them informed about project implementation and progress in their respective communities.
- **High level of end-user participation:** Although the rural people were the main users of the information provided by the project, they also generated their own information and improved the information generated

by research and extension organizations; in identifying success stories in their own communities and uploading these stories onto the network, they served as examples for other rural end-users.

- **Expanded stakeholder base:** RADCON identified and brought together many national and local stakeholders whose work related to improving the livelihoods of the rural people, which provided a broader base of experience on which to draw when identifying the needs of rural communities and how to address these needs. The practice was well-accepted and widely supported by the stakeholders (rural community members) as they share ownership, participate in content creation and are gaining benefits from knowledge sharing and exchange. The network increased the collective knowledge pool, facilitating flows of information amongst stakeholders, and also the rural service providers that touch rural communities directly or indirectly. It is developed to enhance the effectiveness of existing networks or groups of stakeholders, to introduce new actors to such networks, or to create networks where they do not yet exist.
- **Use of enabling solutions:** The use of ICTs provided the basis for a continuous and multi-directional communication network for the stakeholders, a timely flow of information among the stakeholders and a dynamic and pro-active system.
- **Increasing ICT literacy:** Through its training of the community facilitators in participatory communication methods and the RADCON systems, the project helped to improve the level of ICT literacy in rural areas; the facilitators served as information mediators and as the interface between the rural people and ICTs, which facilitated access to ICTs and helped rural people to apply the information provided in their communities.

Enabling environment

- Political will and support (strong commitment and political will from national actors, and embed capacity building in national development plans/policies).
- A Steering Committee composed of 11 members representing stakeholders. The main tasks of the Steering Committee were to review and approve the work-plan for the project; coordinate the work of the project with the related institutions; assist and advise in the preparation of the training activities; provide advisory services to the project team; evaluate, revise and approve the operational framework for RADCON; evaluate, revise and approve the recommendations and guidelines for the potential expansion of

RADCON beyond the pilot phase; evaluate, revise and approve the proposal(s) to be submitted to donors for extending RADCON to national level; and general monitoring of the project activities.

- Teamwork, collaboration and partnership between FAO and national counterparts played a driving force for success. Building partnership and helpful alliances (FAO with national counterparts' software development team and ICD team for content development) not only ensure the quality of the system but also reduce risk and production time.

RECOMMENDATIONS

One of the key areas to be addressed as part of the planning must be the long-term financial sustainability of the network. A business model for self-sustainability of RADCON was developed and proposed for external funding. The proposed business plan is based on revisiting the RADCON mission and objectives to include paid services such as: facilitating business companies registration procedures for new products; providing producers with access to the network to broadly reach farmers and increase awareness of their products and services; providing extended services like recruitment facilities; providing technical assistance on business problems; providing expertise and assistance in projects management and feasibility studies; matchmaking with buyers locally & internationally, and linking them with donors, financial, shipping, storage, and transportation services. The proposed business plan foresees that RADCON can become fully self-financing in four years. The proposal calls for financial support by either the government or donors over five years, to maintain the operation of the network, consolidate capacity and ensure full sustainability.

To use the project resources more effectively and efficiently, and maximize the benefits from the knowledge and experience of the stakeholders, there should be formal agreements with all stakeholders. These agreements should clearly identify the roles and responsibilities of each stakeholder in relation to RADCON, the resources and contributions that they will commit to the project, the incentives for fulfilling obligations and the benefits that they can derive from the project.

A successful project enables the community to take ownership of the project or its relevant components. In the case of RADCON, community ownership could be enhanced by: identifying local champions and working with them to expand awareness of the project at community level; engaging rural people in various activities that reflect community diversity in terms of gender, economic status, education level, etc., enabling everyone in the community to see themselves as a potential user of a RADCON centre; and improving the quality and quantity of information provided by RADCON so that the centres become the focal development-related information centre in the community.

Currently, the community facilitators share their achievements and challenges only with facilitators within their particular Governorate. By establishing an online network through which facilitators can exchange information with each other, whatever Governorate they are working in, would maximize benefits and enhance mutual learning.

The development and implementation of RADCON in Egypt has followed a flexible approach adaptive to the needs and realities of its stakeholders and end-users. In this context, RADCON is seen as an adaptable concept that can be adjusted to different development contexts and realities.

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COOPWORKS, AN OPEN SOURCE BUSINESS INFORMATION SYSTEM FOR PRODUCER ORGANIZATIONS

BACKGROUND

Most agricultural cooperatives in Africa are using time intensive manual accounting systems that do not allow access to real time information and causes a slow information transfer to members on the status of their accounts. It also delays information transfer on the overall performance and operations of the enterprises and leads to slow and less informed management decisions. The lack of transparency and accountability to members, coupled with an eroding farmers' trust in cooperative management and governance, has largely contributed to membership withdrawal in many countries and has resulted in weakening of cooperatives. The conclusion then was that for profitable cooperatives of a certain size, which have a functioning management in place, investing in an affordable open source licensed business information management system that is adapted to the specific information needs of a member based and member owned enterprise, could improve the overall business performance and member satisfaction.

FAO with a wide range of partners including the Kenyan Government, the Information Technology Sector, Producer Organizations and the research community developed and pilot-tested CoopWorks in dairy cooperatives in Kenya. CoopWorks is available on the Internet for free downloading and new versions with additional functionality have been developed by IT companies without being sponsored for this, but because of seizing business opportunities to expand and adapt the system for a wider range of business operations and different types of agricultural cooperatives.

INSTITUTIONAL INNOVATION

At the level of the cooperative: In the Tulaga dairy cooperative the application of CoopWorks has improved cooperative efficiency, returns and competitiveness. Membership has tripled within two years from the introduction of CoopWorks and members receive both

higher quality services and a wider range of services. CoopWorks enabled the cooperative to maintain a full list of members, to keep track of their product deliveries, purchases on credit and loans guaranties, to monitor member deliveries and rejections, and to calculate transport costs and pay-out rates without time delays. Management and the Board use a wide range of CoopWorks reports to inform their management and Governance decision making.

Coordination of the initial software development, pilot testing and promotion: A rather complex set of public and private partners have collaborated closely to introduce the good practice, much of which is coordinated through a Joint Coordination Committee (JCC) which continues to exist beyond the projects through which FAO participated. Main partners included the Kenyan Ministry of Co-operative Development and Marketing, FAO Rome and FAO Kenya, Kenya Information Communication and Technology Federation (KIF); five CoopWorks certified IT service providers from Kenya, Kenya National Federation of Agricultural Producers (KENFAP); Agriterra (Dutch Agro Agency), Universities from Finland and Kenya.

The approach took into account the participation of major stakeholders. In general, there has been a good collaboration, communication and harmonization of activities and approaches between the different stakeholders. However, since the idea was from the beginning to make CoopWorks freely available for further adaptation and improvement it has also created competition among IT service providers, which at times limits the interest for a high level of cooperation.

A wide range of organizations and programmes are currently promoting the uptake of the software.

IMPACTS

Currently six cooperatives are using CoopWorks in Kenya and another 12 expressed their interest in using it in the near future. Initially tested in the dairy

sector, uptake of CoopWorks is now underway for coffee cooperatives and a number of producer organizations from different countries (e.g. Ethiopia and Burkina Faso) are exploring to use CoopWorks.

The corporate image of cooperatives using CoopWorks has improved through the computerization. New members, buyers and the banks have been reported to regard them as more credible and reliable, which improved their access to markets, financial services and increased the membership base.

In the cooperatives, the staff using CoopWorks for daily management operations is proud to be able to use computers, and has led to increased self-confidence, skills and knowledge and employment opportunities. Staff previously involved in manual accounting either have been re-trained to use CoopWorks, or have been offered new tasks that arose with the business growth of the

cooperatives. Most of the accounting staff are women.

Cooperative members report that the milk sales to the cooperatives now provides a reliable source of household income while in the past selling to individual buyers at the farm gate was not reliable and annual income from milk sales were lower. It is likely that the increased income led to improved food security, as many cooperative members are small scale producers, many having 1-5 cows.

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INCREASING POLITICAL CAPITAL





THE SUMILAO FARMERS CAMPAIGN AND THE AGRARIAN REFORM LEGISLATION IN THE PHILIPPINES

CONTEXT

The Philippines is an agricultural country long suffering from highly skewed land ownership system brought about by more than four hundred years of Spanish and American colonization transferring control of vast landholdings to national and local elites not very much unlike Latin American states. While neighbouring countries such as Japan, Taiwan, South Korea, Vietnam, and China have successfully lifted their country from poverty through successful agrarian reform measures, albeit through authoritarian rule, the Philippines was struggling to undertake reforms under a democratic setting.

The People Power Revolution of 1986 against the Marcos dictatorship produced a Constitution and a law subjecting a third of the total land area under a comprehensive agrarian reform program. Twenty years after, the government boasts of some 75% accomplishment but most of the big plantations especially sugar and coconut, remain in the hands of powerful landowners. Most (80%) of the three million farmers who received titles have not been provided support services. With no access to credit, irrigation, marketing facilities, a fourth of them were forced to sell or mortgage

their acquired landholdings and most of them continue to live below poverty line. Nevertheless, various impact studies suggest that agrarian reform beneficiaries and those especially belonging to farmers' organizations were better off than the other unorganized landless farmers.

In 2007, less than a year before the end the first ten year extension of the Comprehensive Agrarian Reform Program, more than two million hectares of land still needed to be distributed, most of them are prime and irrigated lands situated in the lowlands owned by powerful landowners. Majority in both houses of Congress, largely because of strong landowners' influence, were not keen on passing a new law extending and putting budget to CARP. The big landlord bloc was led no less by the brother in-law of the President. The President's family has successfully prevailed over the coverage and distribution of its hundreds of hectares of sugar lands. Big business attitude on land reform was largely negative. Except for a small but dedicated and competent group, most NGOs and federations of farmers organizations were fragmented and weak and most were not in the advocacy for agrarian reform. There was very limited media coverage and students and schools were largely uninformed about agrarian reform issues. The most powerful institution

such as the Roman Catholic Church was largely silent. Given these context, it was almost impossible to pass a legislation to extend much more introduce reforms to the Comprehensive Agrarian Reform.

Without a new legislation extending and introducing reforms in the agrarian reform law means at least a million landless farmer-families (or 7 million individuals) would have no more hope to acquire an asset that would secure their access to food. Most of those who already got land (3 million farmer-families or 21 million individuals) may eventually give up farming and sell or lease their landholdings to big agribusiness corporations or individuals and therefore frustrate the equity, productivity, and sustainability goals of the agrarian reform program. Eventually, it can be expected the number of food insecure and malnourished children/population will increase and the current social conflict and armed insurgency will intensify.

INSTITUTIONAL INNOVATION

On August 8, 2009, the President signed a new law (RA 9700) extending and introducing 36 reform measures and allotting 3 billion dollars to ensure the Comprehensive Agrarian Reform Program gets done faster, fairer, and more meaningfully in the next five years (2009-2014). How did this happen? What were the factors that helped transform the situation?

The key factor was the **sustained campaign by a strong social movement** focused on enacting a new law on agrarian reform. The movement was composed of a broad coalition of farmers' federations, other people's organizations (labour and urban poor), NGOs, Churches especially the Roman Catholic Church, schools especially the Catholic schools, media people and institutions, political parties and formations, and government bureaucrats. At the centre of this movement, was a group of highly disciplined, persistent, and dedicated landless farmers from Southern Philippines, called the **Sumilao farmers**. They caught public attention and steered the movement through a very innovative long march, much longer than the Salt March of Gandhi, and unlike it, the march was not led by a middle class charismatic leader. This march was led democratically by 55 farmers themselves. Though one of them became the natural leader and became prominent in the broader agrarian reform movement, they took turns in their various leadership functions and roles as they traversed 1 700 kilometres of challenging terrain over 73-day period.

The march was primarily aimed at reversing the earlier decision of the President to deprive them of their 144 hectare land. The property was earlier twice given to the farmers based on the agrarian reform program but twice returned by the government to the former landowner over a twenty year period. The farmer-claimants fought persistently, creatively and non-violently through legal and direct action activities the most dramatic of which was the land march. It won over broad multi-sectoral, multi-stakeholders support eventually pushing the President to negotiate with the farmers and recognize their just demands.

The Sumilao farmers' land victory inspired many other groups of farmers around the country and catalyzed the formation of a broad coalition of farmers and their allies in various sectors for a firm non-violent campaign for CARP Extension with Reforms (CARPER!). This broad coalition and the sustained public campaigns which caught broad media coverage, the coming out and open support by the Roman Catholic hierarchy especially the Cardinals and the Bishops, the upcoming national and local elections, the continuous negative popularity rating of the President, and the murder of the Sumilao farmers' leader Rene Penas, all combined to overwhelm the strong defence and fight of the landlord bloc in Congress and eventually predisposed the President to push her party and allies in Congress to enact the CARPER bill into law.

IMPACTS

The farmers were able to get 144 hectares

The campaign helped 165 farmer-claimants to achieve a major victory, though admittedly incomplete, in their almost two-decade struggle for agrarian reform implementation. The campaign was able to force the President of the country to reverse the earlier decision of her office and revoked a 1999 Supreme Court-sanctioned land conversion order on the basis of the landowner's violation of strict government rules on land conversion. The farmers were able to obtain 144 ha, 50 ha of which (within the original contested property of 144 hectares) were donated by the San Miguel Corporation (SMC) (the other party involved in the land dispute,) and 94 ha (outside the original 144-hectare property) purchased by SMC from neighbouring landholdings for sale to the Sumilao farmers under the Voluntary Offer to Sell scheme of the government.

Enactment of a new legislation on agrarian reform

But more importantly, it made possible the enactment of a new legislation on agrarian reform that allocated budget for government to compulsory acquire/buy big private landholdings and redistribute them under a subsidized amortization rate to a million landless farm workers and support a government bureaucracy to transform another million of sugar and coconut tenant farmers from serfdom as they gain access and control over a piece of land or better share in the fruits of their labour as leaseholders. The new legislation also has enshrined the registration of women/wives of farmer beneficiaries in the certificates of landownership awards to ensure equal women access to the land.

Access to credit to start cropping cycle

The Sumilao farmers immediately were able to access 2 million peso production credit support from government and marketing support from an NGO. Since then, each farmer was able to plant organic corn in the awarded $\frac{1}{4}$ hectare property and assured her family food to eat the rest of their lives. The new agrarian reform legislation has allocated 40% of the total 150 Billion peso Fund for production credit, irrigation facilities, farm to market roads, and other support including market access to increase their productivity and income. This fund could potentially support some five million farmers.

Strengthened civil society

The campaign helped strengthen the MAPALAD Multi-Purpose Cooperative and the new organization (SALFA), facilitated the revival of the provincial federation PALAMBU, the consolidation of PAKISAMA members and leaders, and the broadening of a network of agrarian reform advocates under the broad coalition: Lakaw Sumilao. This broad multi-stakeholder civil society coalition of Producers organizations, NGOs, academe, and Churches aided by supportive elements in the media sector have transformed itself into a watchdog and a countervailing force to ensure the timely and honest-to-goodness implementation of CARPER law. They learned better and can be expected to perform better in the coming years in their continued advocacy campaign.

Replicability of the innovation

The community organizing technology as espoused by Saul Alinsky and enhanced by the popular education pedagogy of Paulo Freire can be replicated and adapted in other contexts to ensure the empowerment and the transformation of the victims of unjust systems into

their own liberators. In the Philippines, the Philippine Community Organizers' Society continues to affirm the wisdom of the Ten Steps to Community Organizing: Integration, Social Investigation, Tentative Program, Groundwork, Meeting, RolePlay, Negotiation/Mobilization, Evaluation, Reflection, and Organization. Also, the Active Non-Violence (ANV) Technology, providing a systematic theory and practice to non-violent action as espoused by the International Fellowship of Reconciliation (IFOR) introduced in the Philippines in 1984, has been the guiding technology of the 1986 People Power Revolution and the various non-violent campaigns after that including the latest Sumilao Farmers March. A movement called AKKAPKA or Action for Justice and Peace provided inputs and accompaniment to the Sumilao farmers and continues to give a two-day seminar on this technology to various social actors in the country and Asia. The combination of CO-ANV can be very powerful in pushing for public policies where power relations are very much skewed against the poor.

KEYS TO SUCCESS: WHY DOES IT WORK?

An action led by a group of well organised farmers

At the heart of the Sumilao campaign were the dedication, competence, and discipline shown by the 55 Sumilao marchers as observed by the public and their supporters. They marched with cadence and shouted their calls vigorously. They endured physical challenges and eventually arrived safely to their destination. Every marcher could tell the Sumilao story and the march objectives. They could readily cite legal as well as moral arguments supporting their cause. They could both appeal to the mind and heart. They were deciding on most matters from the conduct of the march to the crucial decision of what to demand from government. All of the marchers have their own specific task to perform and are being given opportunities to hone their leadership skills. They met daily to assess and plan and make their leaders to account on their action.

They eventually were able to confidently meet and discuss with the President and top ranking government, Church, and NGO leaders. Surely, the catalytic role done by the professional community organizers from Balaod-Mindanao helped a lot in training the fifty-five marchers into effective speakers and marchers for themselves as well as for the broader peasantry and struggling sectors. Professional community organizers

helped build leadership very much along the tradition of issue-based organizing as espoused by Saul Alinsky and an empowering dialogic pedagogy as espoused by Paulo Freire.

A creative tactic

First, the Sumilao farmers had the capacity to do the long walk. Walking long distances in search for food and endurance to suffering were very much part of the daily experience of the farmers and most Filipinos. In fact, walking 30-40 kilometres everyday was less harder than the 8-hour back breaking work they had to endure as farm workers. Timing was also best. Agrarian reform bills were already being discussed in Congress. While leaving the family and walking long distance were hard, they had also the great opportunity to see the Philippines (San Juanico Bridge, Mayon Volcano, Manila), be seen in television and talked about in radio and read in the dailies, meet so many people personally including the President and the Cardinal, eat better and more food, train themselves to speak in public, and have an exciting event almost daily: including confronting policemen.

Second, the primary target was very clear from the start, the President. SMC, DAR, the Church hierarchy, and others, were secondary. The pressure was already felt by the President on the first day of the march. Her office immediately issued an order citing the Supreme Court ruling to dissuade the farmers from walking. But of course it only affirmed that their tactic of doing the long walk was correct and had an immediate impact. They continued to walk.

Third, there was real power in the demand for the revocation of the land conversion order and the redistribution of the land: legal, moral, intellectual, physical. The long march, the Jericho march amidst the Jun Lozada NBN-ZTE people's uproar, the threat of a nationwide consumer boycott of San Miguel products and continuous Catholic school and parish conscientization visits/talks by the farmers all helped, pushing Malacanang and San Miguel Corporation to negotiate.

Finally, the tactic was never done before, and therefore played well in the media. Gandhi's Salt March covered half the distance the Sumilao farmers walked. As Winnie Monsod mentioned in her column in the Philippine Daily Inquirer, the walk captured the imagination of the public.

A credible nationwide machinery

The Sumilao farmers were known to many people and had established themselves ten years ago as the group of farmers that waged a similar dramatic action, inflicting

suffering to self to achieve their objectives. According to a Social Weather Stations Survey, their 1997 hunger strike generated 46% awareness level among Filipino adults and virtual unanimity (90%) of support. Their highly disciplined march provided a new benchmark in mass mobilization in the country.

The Sumilao farmers' campaign machinery, the PAKISAMA and People's Campaign for Agrarian Reform Network (ARNow!) had broad nationwide and international networks⁴⁰ of competent and dedicated lawyers, community organizers, media writers, fund raisers and networkers. Their organizational credibility in civil society are also high generating further support from church, academic, media, and even government institutions. But PAKISAMA as the major campaign organizer during this period had very limited human resource, its member organizations still had to consolidate and revive after three years of organizational conflict. Without the ARNow! members and other support institutions that joined along the way, the campaign could not have achieved the unexpected results.

The democratic setting

The current Constitution, approved in 1987 and unamended until this day, is a product of the 1986 People Power Revolution which re-established democratic institutions allowing **political freedom** including the right to organize and protest. The same constitution has enshrined the role of people's organizations and NGOs in nation building. Most national farmers' federations including PAKISAMA and NGO networks were born after the ouster of the Marcos dictatorship in 1986. Media (television, print, radio) outfits blossomed and have established stations in key cities, provinces, and towns providing platforms and venues for the voices of marginal groups such as the Sumilao farmers to be heard in the mainstream news locally, nationally, and even internationally (Al Jazeera).

Freedom of religion was also enshrined giving the Roman Catholic Church institution more space to express publicly its solidarity with the poor through

40 PAKISAMA networks: Reform CARP Movement, Kilos AR, Asian Farmers' Association (AFA); Fr. Bernas, S.J., Chris Monsod and Alternative Law Groups (ALG) especially SALIGAN, BALAO-Mindanao, and KAISAHAN; Cardinal Rosales, Bishop Pabillo and other Bishops and priests and church institutions (NASSA, Caritas, Simbahang Lingkod-Bayan (SLB) and JPIC-AMRSP); School organizations (Catholic Education Association of the Philippines (CEAP) esp. Ateneo, de La Salle, and Adamson, and MAPSA); NGOs (CODE-NGO, PMP, AIKKAPKA, PhilCOS, etc); funding agencies (International Land Coalition, Agriterra, FSSI, PEF, Oxfam, Misereor, ICCO, etc); key media personalities (e.g., Ceres Doyo, Winnie Monsod, Maher Mangahas) and institutions (e.g., PDI, ABS-CBN, GMA7); political parties (e.g. Akbayan).

their masses and structures present in every town/city. The 1,200-member Catholic schools comprising the Catholic Education Association of the Philippines (CEAP) provided the Sumilao farmers venues to interact with their students who in turn mobilized and provided logistical and campaign support. Thus, with two sacks of corn when they started the long walk, the farmers returned two months after with three jeep loads of goods mostly food and clothing from supporters.

The country is noted for a vibrant civil society exacting government accountability and transparency. Very much smaller, perhaps comprising only of one percent of the total number of NGOs and people's organizations in the country, those who work for agrarian reform are among the most visible, militant, though predominantly non-violent, comprising very dedicated and competent community organizers and campaigners, lawyers, media persons, and technical people.

The Constitution has also enshrined a policy on industrialization based on sound agricultural modernization and agrarian reform. This provision provided the basis for the enactment of a Comprehensive Agrarian Reform Law in 1988, which was extended for ten years in 1998, and eventually extended to 2014 after the successful advocacy campaign triggered by the Sumilao farmers march.

International Organizations such as the UN: FAO, IFAD, UNDP may well consider putting back in the mainstream the **advocacy for agrarian reform** and **mobilizing enough funding and technical resources** for this purpose. The Land Tenure Institute estimates some 100 million landless or near landless tillers affecting more than half a billion individuals in rural Asia, Latin America, and Africa constitute the majority of hungry people. Agrarian reform measures then can be the most strategic intervention in these agrarian societies. UN Agencies can provide the countervailing "persuasion" to national governments usually controlled by national and local elites/landlords in partnership with the struggling landless farmers organizations.

Donor agencies can help push for meaningful agrarian reform legislations by supporting programs and projects aimed to empower and organize a huge segment of the landless/near-landless farmers in these agrarian societies. It may be important to support the strengthening of federations and broad coalitions of Producers organizations, NGOs, schools, churches, and media.

Peasant federations may need to continue to undertake direct community organizing as well as coalition work in various aspects of farmers' empowerment such as building capacities to **acquire production assets such as land and credit** and to increase their power to have greater influence in and access to market.

CONCLUSIONS & RECOMMENDATIONS

What was novel in the campaign in the Philippine experience was the tactic itself of making Mindanao a walking distance, the highly disciplined march shown by the 55 marchers acting like a company of non-violent soldiers, and the unprecedented involvement of the Catholic Churches and schools.

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A PARTICIPATORY PROCESS APPROACH FOR DEVELOPING A PLURALISTIC, DEMAND LED AND MARKET ORIENTED ADVISORY SYSTEM – CASE STUDY OF NIGER

BACKGROUND

The national agricultural extension system has gradually declined in terms of support for producers since the end of the Training and Visit Support Program which was financed by the World Bank until 1998. Thereafter, the rare organized initiatives have been carried out only through development projects. While some have been valuable, they have been very limited compared to the needs of the country (1.267.000 km²), its large rural population (83% live in rural areas) and a high rate of rural poverty (62%). In consequence, there is very little formal support for rural producers in Niger through ongoing technical agricultural services.

Niger has identified 8 priorities for public action from 2007 to 2009 within the framework of its Rural Development Strategy (Stratégie de Développement Rural, SDR). One of these priorities concerned the study for the implementation of an integrated advisory system for rural development. Mid 2007 the Government of Niger requested FAO's technical assistance and set up a National Steering Committee for this project.

INSTITUTIONAL INNOVATION: A STAKEHOLDERS' PROCESS

Convinced of the fact that a future advisory system can only be sustainable when it will be developed under national ownership and through the involvement of all stakeholders concerned and interested in advisory services in Niger, FAO designed a stakeholder process for assessing the existing and for developing the future advisory system with them.

The objective was hence to put the emphasis on the process and on considering the features of pluralism, demand and market orientation. There was no emphasis on a particular advisory model which gave room for developing a country-specific system based on existing institutional and organizational capacities and targeted to the poor and vulnerable producers. One of the main

objectives of the initiative was to promote farmers' participation in the design process and to enhance their empowered role in the future advisory system.

The **core process** consisted of two main parts: (a) analysing and assessing the present extension system, and (b) designing a new advisory system, both parts were undertaken with the various stakeholders concerned.

The National Census of Agricultures and livestock which was finalised in 2007 gave a lot of insights which contributed to clearly identifying the agricultural priorities in Niger for the markets and for subsistence agriculture. This allowed developing the advisory services in relation to the agricultural production in the different zones and the financial capacities of the population.

Given the objective of farmers' participation and their weak capacity, FAO suggested a parallel **process of strengthening the farmers' organizations** to enable them to take their roles and position in the core process and in the future demand led advisory system. The **support process** in terms of technical and methodological advice to these two processes was provided by FAO. Additional support was provided by the donor community, particularly the EU who also contributed financially.

FAO provided training to all seven consultants with respect to a new vision of a pluralistic, demand led and market oriented advisory system. The training and continuous discussions changed their view on extension systems and their "public administration" mind. They have considered the new vision of the advisory systems during the analysis and guided the different regional workshops in a new spirit. Furthermore, FAO supported the national consultants in developing assessment tools like a field investigation quiz which is an analytical framework to appraise the primary organizational goals, functions, resources, methodologies and linkages of all stakeholders (public and non public providers) of the current extension system.

The core process which FAO developed with the main stakeholders included the restitution of the assessment and of the proposal to the various stakeholders. This was done through regional workshops conducted by the national consultants held in French for public offices and

NGOs and in local languages for farmers. The restitutions to the National Steering Committee were done by FAO. All stakeholders provided then comments and inputs to the reports on the analysis and assessment as well as to the proposal for the new advisory service system which were then incorporated into the reports.

FAO further conceived the process in support of the farmers' organizations so that they could develop their future role and expectations with respect to the new advisory system. This was done through reflections in a series of regional workshops which were held in local languages.

The first round of workshops (1), animated by national consultants, focused on the assessment of the current extension system within the core process. The second round (2) were part of the process of supporting the farmers' organizations. They were held at regional level and moderated by a farmer leader of the West African Farmers and Producers Organizations' Network (ROPPA). During these workshops the farmers defined the capacity development needs of the FOs to elaborate the demand for research and extension services and developed a mechanism for the expression of demand which builds upon farmers' consultations in each community, at departmental and regional level. This was complemented by a component of technical advice for the formulation of the demand and by a fund for financial support called "Fonds d'appui aux services rural régis par la demande" (FASRRD) to help farmers to pay for advisory services provided by NGOs, the private sector or public agents. This demand driven approach will be entirely managed by the FOs. The third round of workshops (3) concerned the restitution of the proposal of the new advisory system which was also commented by the FOs.

RESULTS OF THE STAKEHOLDER PROCESS

- Breaking the system of planning and programming "top down" and instead relying on participation from the farming communities to help set directions. Changes in the kinds of technical support to be provided and the improvement of institutional and financial capacities on which the process focused.
- Improving the quality of the technical agricultural support for both the "non-public actors" (NGOs and FOs) and for the poor in rural areas is a priority.
- The elaboration of a strategy to improve the agricultural and rural training and to adapt the trainings to the

current agricultural system. Key elements of the strategy are the demand led and market driven orientations.

- (iv) The elaboration of a strategic plan for agricultural research to improve the knowledge and the technical agricultural support.

Why the stakeholders' process worked? or How farmers and their organizations were enabled to participate in the process of defining a demand led extension system and play a role in it

- **Firm commitment** by the national Government and the secretariat of SDR acting on its behalf. The process was supervised through SDR (Stratégie de Développement Rural) secretariat and the National Steering Committee to ensure in the future the support for the implementation of the developed proposal.
- **Involvement of various stakeholders from the beginning**

All relevant stakeholder groups were involved in the National Steering Committee of the project (Five national consultants which belonged to the five Ministries concerned by the project (Agriculture, Livestock, Water, Community Development and Environment), a national consultant for the NGOs and another national consultant for the FOs). The tasks of the seven consultants were to undertake the information and data collection and primary analysis, to conduct the regional workshops and to assist in the development of the proposal.

Through their membership in the National Steering Committee and their own workshops, the FOs participated in all steps of the process from contributing to the terms of reference to the last version of the proposal of a new advisory system. They put pressure to establish a demand driven system and participated in the development of it.

Non-Governmental Organizations (NGOs) participated in the National Steering Committee and in the regional workshops. Presence of NGOs in regions affected by the different food crises allowed foreseeing them as future advisory service providers in these regions.

The role of the private sector was weak as they hardly provide advisory services. Nevertheless, private service providers used by the development projects, such as the PIP2 which was financed by the World Bank, participated in the process. Their role in the future advisory system was also determined through their experience in the main development projects and water related services (irrigation), farm management as well as the commercialization of agricultural products and processing.

The donor community participated in all steps of the core process in the framework of the SDR and the National Steering Committee. Regular consultations with and feedback to the donor community in the country under the umbrella of the SDR allowed obtaining their visions of the reorientation of the advisory services and their feedback all along the process.

■ **Support process adapted to the farmers**

The process included the training of the national consultants providing them new visions of advisory services. The national and regional workshops organized with the farmers and organizations were held for them in local languages. FOs and their federations contributed to the process, even with financial contributions to have their own workshops. FAO intensive backstopping adapted to the rhythm of progress made by the national stakeholders.

The inputs of the farmer leader of ROPPA to conflict management and to the design of the demand led approach especially with the sharing of experiences from projects using private service providers.

CONCLUSIONS AND RECOMMENDATION FOR THE IMPROVEMENT OF THE PROCESSES

The assessment and redesign of an extension system should be done in the larger framework of agricultural services (research, education and training, extension) and their institutions. A process is required in which the various stakeholders are involved from the very beginning, i.e. with the elaboration of the TORs, in order to express their views and reorient the advisory system based on the capacities in the country and on lessons learned over the past decade. The support process to the core stakeholder process was critical in reorienting the extension system towards pluralism, demand led and market oriented services. In addition, the involvement of the farmers' organizations and support to them in the process was crucial in order to translate the idea of a demand led system into concrete mechanisms. The support through ROPPA brought also in experiences from other countries, an aspect which could be further strengthened in the process with respect to the entire innovation system.

Overall, there is the need to consider the specificities of each country regarding (a) the level of structuring and organization of the FOs and their capacities, (b) the capacities of NGOs to provide agricultural and rural services, (c) the experiences and lessons learned in development projects, and (d) the potentials which the private sector might have and how they can be developed.

SOME DIFFICULTIES AND WEAKNESSES

One of the main challenges of the process was to deal with rivalry between the national federations of FOs. This situation was addressed by organizing individual and common meetings. The ROPPA leader moderated conflicts between the federations and then identified with them the needs to strengthen their capacities and reunite forces to occupy the driver seat in the new advisory system. The FAO mission and the ROPPA leader consulted the donors to identify financial support in order to organize consultations between the different federations to establish their priorities into a common program with the objective of reinforcing their capacities in participating in the process of analysing the existing and defining the new advisory system.

Among the weaknesses of the processes, the lack of thorough participatory needs assessment, the need to analyse and improve the research system as well as agricultural and rural education system, the weak capacity of FO representatives to make contributions in workshops with other stakeholders.

Finally, smallholder income is weak in Niger which makes financial contributions to advisory services difficult. In addition, there is no culture to pay for these services.

CONDITIONS FOR A SUSTAINABLE IMPLEMENTATION OF THE NEW ADVISORY SYSTEM

The future system can only be sustainable, pluralistic, demand led and market oriented, if the implementation of the proposal is accompanied by an organizational development and change management approach. This includes support to accompany the institutions providing advisory services as well as their platforms and linkages within the entire innovation system to overcome their difficulties and to expand their potentials for improved performance, adaptability to up-coming challenges and for client satisfaction. Hence also in the future, a continuous process is required to clarify the roles and tasks of the different actors in the innovation system. This holds true with respect to the roles of the public, private and NGOs service providers, particularly with respect to who takes which role in a market oriented approach.

It holds also true of the roles of FOs and their federative structures in a demand led advisory system. Given the substantial efforts needed for the capacity development of the FOs, a separate organizational development approach for the strengthening of FOs is indispensable in order to ensure the empowerment of the farmers' organizations in all aspects. This would include support to them in their respective roles in the implementation process of the new advisory services and their roles and position within the overall advisory system.

In Niger, a review of the agricultural education and training needs to be done, in order to up-grade human capacities of the innovation system in the long run. As an immediate action, training programs need to be designed for NGOs and for the remaining public extension staff in order to be able to respond to demands for services and to provide up-to date information, technologies and knowledge. In addition, financial resources need to be foreseen for advisory services undertaken by NGOs and other private advisors.

Gradually, a culture of cost sharing for advisory services which would involve fees for services for remunerative activities needs to be developed, as this is already the case in the onion sector. However, given the weak financial capacities of most smallholders, long-term financial support will be needed by the public sector. While financial support is required for the supply side, financial mechanisms are needed which enable smallholder farmers to pay for their services and to select their advisory service providers.

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Key Words

Participatory stakeholder process, developing a pluralistic, demand led and market oriented advisory system.

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FARMERS' ORGANIZATIONS CONTRIBUTE TO FORMULATION OF THE AGRICULTURAL ORIENTATION LAW

BACKGROUND

Following implementation of structural adjustment and decentralization policies, the steady withdrawal of the State in developing countries has given increasing responsibility to farmers' organizations in the supply of services to their members and participation in the formulation of agricultural policies. However, the fact that the leaders and technical staff of certain farmers' organizations lack sufficient understanding of their socio-economic and political environment, and also have poor capacities for analysis, the drafting of proposals and negotiation, diminishes the quality of their participation in the formulation of policy.

The Senegalese agricultural sector is basically made up of small farmers, with family farms still the norm, practising rainfed agriculture. Productivity is low, mainly because of small farmers' difficulties in gaining access to inputs. Despite this, the sector is still important, although its contribution to overall GDP is decreasing. It provides employment for more than 54 percent of the workforce, plays a strategic role in the supply of raw materials to industry and gives a boost to the service sector, particularly through the trade and transport of agricultural produce. However, those who make their living from farming are the poorest segment of Senegal's population, despite the many agricultural development policies implemented by the State.

The National Rural Coordination and Cooperation Council (CNCR) was established in 1993 in a context of structural adjustment policies at the end of a long process of awareness-raising and mobilization, which enabled farmers' organizations in Senegal to agree on the need to join forces in order to meet the challenges facing small-scale farming through the socio-economic promotion of family farms.

The CNCR has the mission of **contributing to the sustainable socio-economic promotion of family farms** through the development of small-scale farming, a goal that raises a certain number of questions concerning the two central concepts of family farms and small-scale farming. Construction of a dynamic process that is fed

day by day by the action of farmers' organizations and other partners. Its promotion within Senegalese society is the foundation of the CNCR's action strategy.

The advocacy developed by the CNCR and other stakeholders in Senegal's social and economic life and the observed failure of the agricultural policies implemented since accession to international sovereignty led to the State's decision to make agriculture a motor for national economic growth. With this in view, the State wanted to provide new orientations for the agricultural sector. These orientations concern the creation of an encouraging environment in rural areas for the transformation of family farming, providing support to family farms in a shift from extensive systems to intensified, diversified and sustainable systems that are respectful of natural resources. They also seek to foster the emergence of an agricultural and rural business sector.

INSTITUTIONAL INNOVATION

At the end of 2002, preparation of **a draft agricultural orientation law** intended to "offer a long-term view of the sector" was officially announced. The CNCR approved the principle of passing an agricultural orientation law so long as it was the outcome of a participatory process. Its hope was that the law would be consensual and be passed unanimously by the National Assembly. In April 2003, the CNCR's request was accepted by the State, and the Ministry of Agriculture launched a consultation concerning the draft law.

The phase involving the consultation of farmers in the process of drafting the agricultural orientation law was a major innovation for Senegalese farmers, who were being consulted for the first time on the formulation of a law that concerned them in more ways than one.

After the CNCR received a draft law drawn up by the relevant government services, it was convinced of the need to **share the draft law with rural inhabitants** as the main parties concerned, in order to gather their opinions and encourage their assumption of its

ownership. It therefore expressed its disagreement on the methodology and the calendar proposed for the drafting process, considering that they did not allow for any real participation of farmers and local communities, and drew up a methodological note defining the procedures to be used in the preparation and the participation of farmers' organizations regarding the draft orientation law. These conditions defined by the CNCR for real participation were shared with the State and development partners, who recognized the validity of the proposal and agreed to support it. For several months, the CNCR therefore worked with the support of an expert to conduct consultations from village level right up to national level. The expert's input was decisive for the CNCR in guaranteeing the quality of the consultation process and the relevance of the rural inhabitants' analyses and contributions.

The strategy advocated by the CNCR for the process of formulating the law is based on principles of:

- moving forward at the farmers' pace (taking the time needed) allowing time for reflection;
- decentralization of the debate;
- consultation of the State's devolved, decentralized services at regional and national levels (technical services, local communities, National Assembly).

Thirty-three local workshops were thus organized in local communities – two to four per region. Apart from the basic aspects raised here and later taken up in the national workshops, the participants stressed some points of a general nature, which showed how useful and necessary the democratic debate stimulated by the CNCR was. The main points here involved the need to:

- design simple, well-coordinated mechanisms;
- make sure that government policies are in harmony with one another (Poverty Reduction Strategy Paper/ Strategic Policy Paper/Agricultural Orientation Law/ National Rural Development Programme);
- make sure of the link between what is planned and what already exists;
- make sure that the proposals are taken into account;
- show prudence regarding the length of the law's validity: no more than ten years.

Five interregional workshops were organized in the framework of regional groups. The participants included representatives appointed by the local workshops and regional elected officers of the CNCR. Three teams, each made up of one national elected officer and one expert, divided up the task of animating the regional workshops. During the same period, workshops were organized by

organizations specializing in the following value chains: rice, horticulture, cereals, livestock production, fishery and groundnuts.

These workshops allowed the results of local reflections to be systematized and consolidated by fine-tuning analysis of the agricultural context in the regions, **formulating an overview and defining strategic thrusts and priority actions specific to the various regions and the main value chains**. These preliminary exchanges would facilitate the achievement of a regional consensus on amendments to the draft law. The State's technical services took part in the last two days of each workshop.

To close the reflection, the CNCR managers organized a three-day national workshop at which farmers' leaders discussed at length the issues papers presented summarizing the positions of the regions and the concerns of the various stakeholders in the value chains. Representatives of the State and the development partners who had supported the process also attended the workshop.

The leaders of farmers' organizations spoke at this national workshop on points to be negotiated with the State, making reference to the results of the reflections carried out at all levels. They adopted the document amending the draft agricultural orientation law through the formulation of alternative proposals.

The national workshop thus allowed an overall picture to be drawn up of the rural world of the Senegalese farmers' movement with regard to agriculture and other similarly important issues.

In their final declaration, the rural people attending this national validation workshop urged "the Government to carry out this task step by step, with the participation of all the stakeholders in development", confirming the view of the CNCR that "development is not a speed race but a consistent, coordinated process".

This is the context for the CNCR's position that the law should be "re-examined by the National Assembly three years after its promulgation" on the basis of "a prior assessment made with all the professional organizations".

IMPACT

Farmers play an active role in formulation of the law

The approach adopted has allowed farmers at various levels – local, regional and national – to play a role in formulating the law. Their amendments to the draft law, together with their proposals in the form of a "counter-draft", were

disseminated in the media, thus putting the CNCR in a strong negotiating position vis-à-vis the Government regarding formulation of the new law and allowing farmers' viewpoints to be taken into greater consideration.

The farmers' movement was able to have a real say on the content of the law

One of the major innovations of this law is that it enhances the value of agricultural occupations in Senegal through their formal recognition, giving them not only juridical status, but also access to social security. Professional agricultural organizations also benefit from a recognized, protected status and a system of public aid.

Another prospect opened up by this document is the announcement of a land reform formalizing the land rights of individuals, farms and communities, with a view to modernizing agriculture.

An advance brought about by the law is that of ensuring social equity in rural areas, both through a balance between town and country with regard to living conditions and access to basic social services, through gender equality, assuring parity of rights between women and men and facilitating access to land, and through the incorporation of young people into agricultural occupations.

Lastly, one of the major advances brought about by the law is the institutionalization of dialogue, consultation and coordination between the State and rural stakeholders through the creation of a Higher Agrosilvipastoral Orientation Council chaired by the President of the Republic and the establishment of regional committees chaired by regional governors. Monitoring of implementation of the law is ensured through the organization of an annual agricultural conference.

KEYS TO SUCCESS

Internal factors

A very dynamic farmers' movement

When it was first established, the CNCR decided to devote its efforts specifically to representing the interests of rural inhabitants in policy processes. In pursuit of this mission, it has adopted an approach combining major concern for autonomy of thought with recognition of the paramount role of the State in such processes. This approach is seen not only in the use of a whole set of relatively measured collective protest actions, not excluding trials of force such as the boycott of negotiations with the State in 1996, but also in lines of action similar to those of interest groups, for example by

bringing local government expertise into play and the use of workshops and seminars to build up an overview and promote ideas.

By affirming the importance of public commitments to the rural world and clearly expressing the "need for the State", the CNCR is in a way supporting the State against the dominant pressures brought by the donor community, which has often criticized it and sometimes sought to circumvent it. When the CNCR demands its place in policy dialogue, sometimes vigorously, it bases such claims on the strategic choice of donors to involve non-government stakeholders in policy processes, in this way helping to support this choice. There is thus a three-handed game involving the CNCR, the State and donors, which must be grasped in order to understand the building up of the political influence of Senegalese farmers' organizations.

The CNCR is recognized as the State's main dialogue partner

The CNCR is today recognized by the State and by technical and financial partners of Senegalese agriculture as the main defender of the interests of the rural world in general and family farms in particular. This recognition was gained after some bitter battles that enabled the CNCR to prove its legitimacy and its capacities to mobilize the stakeholders in the Senegalese rural world, carry on negotiations and present proposals at major decision-making moments, especially during formulation of the agrosilvipastoral law, reflections on land reform and the design of agricultural programmes.

External factors

Withdrawal of the State and decentralization encourage the emergence of new stakeholders

The progressive withdrawal of the State as a consequence of structural adjustment and decentralization policies fostered the emergence and growing empowerment of new stakeholders in the framework of the country's socio-economic development. This context helped raise farmers' awareness and led to their decision to organize themselves from village level up to national level with the aim of taking their future into their own hands. This situation justified the creation of the CNCR, which was able to claim and very soon obtain a place in policy dialogue on agricultural and rural issues, even though precisely for these reasons its relations with the State are often confrontational and stormy.

Support from technical and financial partners

The position assumed by the CNCR as representing the

rural world is also facilitated by the strategic decision of donors to involve non-governmental stakeholders in the negotiation processes for the programmes they support.

CONCLUSIONS – MAIN LESSONS

Fostering autonomy and multi-stakeholder coordination

The initiative taken by the CNCR during formulation of the agrosilvipastoral orientation law is a result of the maturity gained in optimizing and capitalizing on the expertise of its leaders, who were the founders of the farmers' movement in Senegal. It is also based on the fundamental principles of the CNCR, the most important being autonomy and coordination within itself and with all the public and private stakeholders involved in agricultural and rural development.

Promoting farmers' participation at all levels

The approach adopted allowed farmers at various levels in the country – local, regional and national – to play a part in formulating the law, and their amendments to the draft law and their proposals in the form of a “counter-draft” were disseminated in the media, thus putting the CNCR in a strong negotiating position vis-à-vis the Government regarding formulation of the new law.

A clear analysis of the context

The main lesson to be drawn from this experience is that if an organization has a good grasp of its socio-economic and political environment and sufficient expertise, it can influence decisions at all levels in order to render service to its members.

Implications and recommendations

Promotion of autonomy by boosting the capacities of farmers' organizations

The organizations' partners must focus their support on actions enabling the beneficiaries to become autonomous, in other words to have freedom of action. This will entail boosting the organizations' know-how, which will in turn entail improving their leaders' and technical staff's capacities to understand their socio-economic and political environment and also their capacities for analysis, proposition and negotiation.

Provision of material and financial support and appropriate expertise

Moreover, material and financial support is vital, inasmuch as the organizations cannot undertake any significant action without resources and will be unable to enlist the services of qualified consultants, as all the major institutions in the world do.

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FARMERS' ORGANIZATIONS GIVE SMALL-SCALE FARMERS A VOICE IN POLICY MAKING PROCESSES

CONTEXT

In Africa, the development of the agricultural sector has been hampered by inappropriate policies, mainly implemented within structural adjustments strategies and focusing on liberalisation and promotion of exports. Government support to the sector decreased, resulting in increased poverty in rural areas, in particular for small-scale farmers who do not have the means to compete on the international market.

Small farmers' interests are often overlooked due to their lack of participation in policy dialogue. Therefore, the rural sector remains neglected by national agricultural policies. Smallholders' potential to contribute to the agricultural sector's growth is not recognized. In many cases, government support to the sector decreased, resulting into low production, weak productivity and consequently increased poverty in rural areas. In order to improve the situation, it is essential to make changes at the macro level and to develop coherent national and regional policies that support small farmers. In order to do so, small farmers need strong independent organizations to represent them and give them a voice. For this reason, the Network of Farmers' and Agricultural

Producers' Organisations of West Africa (ROPPA) became very active in promoting the direct participation of Farmers' Organizations (FOs) in the formulation of agricultural policies. Farmers and their organizations, as main actors in rural development and as a vulnerable group, expressed the desire to take part in the debate on agriculture development and policy making at the regional level.

In this context, various initiatives were undertaken with the support of IFAD to enable farmers to make their voice heard at international level and to influence policies for more support for small-scale agriculture and the promotion of regional integration.

INSTITUTIONAL INNOVATION

In 2001, ROPPA undertook negotiations with the Economic Community of West African States (ECOWAS) – a regional group of fifteen countries founded in 1975 – to enable participation of FOs in the agricultural policy formulation process. This resulted in the active participation of ROPPA in the regional task force in charge

of formulating the policy. ROPPA organized consultations with various national platforms within ECOWAS countries and provided tools and resources to undertake studies on the role of small-scale farming in rural development and to work with external experts on key issues.

This enabled farmers and their representatives to better understand the underlying concepts of the agricultural policy. FOs proposed various strategies to develop the agricultural sector in Africa, including better knowledge exchange between farmers and researchers, access to appropriate financial services, public support for productivity, access to credit, protection of national markets and promotion of indigenous food. Following the consultations, FOs elaborated a common proposal and jointly identified the challenges, roles and responsibilities of the various actors involved in agricultural development. Under the umbrella of ROPPA, this common proposal was presented to government officials and led, among others things, to increased support to small scale agriculture at national and regional levels. It also resulted in increased farmers' organizations ownership of the ECOWAS Agricultural Policy.

IMPACTS

The participation of FOs in policy formulation led to the recognition by regional organizations and governments of the importance of small-scale agriculture and the necessity to promote food sovereignty as well as to work toward higher income and improved living conditions for small farmers. FO involvement in agricultural policy development in ECOWAS is now institutionalized.

The participation of FOs in policy formulation led to the recognition by regional organizations and governments of the importance of small-scale agriculture and the necessity to promote food sovereignty as well as to work toward higher income and improved living conditions for small farmers.

Formulating joint policies also had the following results:

- regional policies that promote modernization of small-scale farms in the region
- FO capacity to negotiate was strengthened and farmers' knowledge was improved in many different areas (international trade, policy analysis, economics, adoption of best practices)
- protection and increase of national agricultural supply and productivity
- FO visibility at international level was strengthened, as well as their credibility among political authorities and in the agricultural sector as a whole

- FOs from various countries were able to develop networks and come to a consensus on future challenges and opportunities

KEYS TO SUCCESS

A facilitator: as an umbrella organization, ROPPA helped national organizations develop strategies to influence national agricultural policies and supported them in better expressing their needs to make a convincing case. Among other support, it supplied them with expert advice and methodologies for drafting policies.

A progressive policy formulation processes, including consultation at all levels, from grassroots members to policy makers:

- awareness raising among policy makers on the advantages of opening negotiations to FOs
- mobilization of FOs to share their ideas through consultations and agree on common proposals
- field studies to better understand the role of small scale farming and opportunities offered by regional integration
- involvement of experts to strengthen the credibility and negotiation skills of farmers and their representatives
- participation of FOs in official meetings and organization of media and communication campaigns to sensitize public opinion

Strategic linkages: IFAD played a major role in supporting regional consultations with FOs, experts and policy decision-makers for the joint formulation of the Comprehensive African Agriculture Development Programme (CAADP), proposed under the New Partnership for Africa's Development (NEPAD). In particular, IFAD supported the organization of regional consultations to facilitate discussions among farmers from various countries, share their ideas and discuss proposals for NEPAD's agricultural policy. The consultative process benefited from the financial support of IFAD and the Italian Development Cooperation Agency, as well as the technical support from the Food and Agricultural Organization of the United Nations (FAO), sub regional economic integration organizations and the NEPAD secretariat.

CONCLUSIONS

Government and regional organizations should systematically consult farmers' organizations on the formulation of policies related to agricultural development. International Organizations and donors should increase their support to initiatives aiming at empowering farmers' organizations and give them the capacity and possibility to influence policy decisions.

The involvement of FOs in policy formulation can be improved through various initiatives, including capacity building for FOs (international trade, policy analysis, economics, negotiation skills...) at national and regional level, assistance for monitoring the impact of the policies on small-scale farming systems, innovations to develop small-scale agriculture and help protect national and regional markets.

Author**IFAD**



NATIONAL FISHERIES POST HARVEST OPERATORS PLATFORM – THE GAMBIA

CONTEXT

The post-harvest sector is a critical entry point for poverty alleviation in fisheries in the Gambia. Poor communities along the coastline and inland areas develop a wide range of activities such as fish handling, processing, storing, trading, and marketing of fresh and processed fish. On the whole the post-harvest sector in the country is dominated by women (more than 80% of the workforce) while the supply of fresh fish/raw material is dominated by men.

Access to credit is limited due to high interest rates, lack of collateral, lack of information and lack of representative bodies. This situation is aggravated due to the reluctance of formal credit institutions to deal with fishing communities and the poor uptake of micro-finance by the poorest and most vulnerable post harvest stakeholders. The post harvest actors work in a context where there is a lack of viable organizations. This has reduced the potential for fisher folk to improve their livelihoods, particularly in terms of access to credit and informational services, participation in decision making and implementation of policies. The poorest, women (such as the oyster harvesters and fish unloaders) and the youth are rarely involved in organizations.

High rates of illiteracy also contribute to the poor functioning of organizations.

The Sustainable Fisheries Livelihoods Programme Post-Harvest Fisheries Project (SFLP/PP3)⁴¹ interventions have contributed tremendously to the development of the capital assets (in particular social and human assets) of selected coastal and inland fisheries communities. One of the project's achievements is the creation of an environment of trust and partnership amongst community groups and other interest groups at village, regional and national levels in several aspects including decision making process. The views and concerns of the community fishers are now taken into account by Government and NGOs at all levels.

INSTITUTIONAL INNOVATION

The SFLP/PP3 initiative has opened up several opportunities for the establishment and consolidation of Fisheries Post Harvest Operators (PHO) Community

⁴¹ November 2004-December 2006

Based Organizations (CBOs) at village level and the formation of Apex Post Harvest Fisher-Folks Associations at regional level (Local Government Area level), leading to the establishment of the present National Fisheries Post Harvest Operators Platform.

Post-harvest operators are now represented at the following three levels:

- At the village level, individual post harvest operators organized themselves into legalized in-village groups of fish dryers, smokers, vendors, un-loaders, and salt and oyster harvesters. They are operating together. These different in-village groups formed Community-Based Fisheries Post-Harvest Organizations (PHO CBOs) with equal legal status and entities.
- These Post Harvest Operators CBOs mutated horizontally into clustered Local Government Area Apex Groups (LGA PHO Apex groups) with the ability to address regional level issues through the assistance of partners. The groups have benefited from a **gender sensitive** credit scheme and are using their renovated fish processing facilities on a user charge operating system. Funds obtained from this scheme have helped them to build new fish drying racks and renovate other smoking ovens that were broken down. These Apex Groups and Associations have been legally constituted and established with respective Council recognition and support within the framework of signed Memorandum of Understanding between the Project and the respective Councils. This was a landmark for the Post-Harvest Operators to influence regional-level policy and ensure that their views were taken into account in divisional/regional development programme planning and implementation.
- In August 2006, the Post-Harvest Operators Apex groups have formed a National Fisheries Post Harvest Operators Platform. The National Fisheries Post Harvest Operators

Platforms (NFPHPOP) is comprised of 10 community-based organizations (CBOs) in The Gambia and four Apex Groups, representing 1 550 members.

IMPACTS

Enhanced social capital

- **Partnership with service providers.** Signing of Memoranda of Understanding with strategic partners (Government, NGOs, Micro-Finance Institutions and other development partners, Municipal and Area Councils) at Regional and National levels have provided access to information, guidance, services and technical backstopping;
- **Partnerships for policy making.** Capacities of post harvest operators have been significantly enhanced through training, sensitization and coaching especially with regards to influencing “Policies, Institutions and Processes”, a key component of livelihood approaches. Furthermore, the establishment of Apex associations and the national platform has improved communications between post harvest CBOs in different communities within the same division and at national level. Strengthening of these organizations and the formation of this platform ensure that the fisheries post harvest operators can effectively articulate and advocate for their concerns and participate in decision making process at policy level. In 2005, the Fisheries Bill provided for the inclusion of a representative from post harvest operators into the National Fisheries Advisory Committee. This opened the way for the National Platform of PHO to participate in the formulation of the Fisheries Act (2007) which recognizes the important contribution of artisanal fisheries in the economy.

Table 33.1 Number of PHOs and their organizations at CBO, LGA and national platform levels

Type of Organisations	Divisions/Local Government Areas (LGAs)				Total
	KMC – 2 Fisheries Communities	WD – 3 Fisheries Communities	NBD – 2 Fisheries communities	LRD – 3 Fisheries Communities	
Community Based Organizations	2	3	2	3	10
Local Government Areas (LGAs) Apex Groups	1	1	1	1	4
National Platform		1			1

Source: Coaching Reports and Registration Certificates, Sirra Njai, 2009

- The implication of the Platform in the development of this Act resulted in the inclusion of Fisheries Post Harvest (PH) issues in the Poverty Reduction Strategy Programme II (October 2006) and in the Fisheries Policy.
- A new National Fisheries Bill is being proposed and a representative from the National Platform would sit as a member of the Steering Committee. The proposed new National Fisheries Bill would be sent to the National Assembly in September or October of 2009.
- **The training/sensitization activities on management of natural resources** had helped to enhance post harvest stakeholders' understanding of what sustainable management meant and how this can be done. This helped PHOs to actively participate in the formulation of by-laws for the responsible management of resources and in the dissemination of the Code of Conduct for Responsible Fisheries.

Positive impacts on economic and human capital

- **Improvement and construction of fish processing infrastructure**

The renovation of eight and construction of two newly built fish smoking houses and drying racks for women has enhanced the productive capacities, reduced post harvest losses and improved the quality of fish produce. The implementation of a user charge systems for these improved Fish Smoking Facilities and the institutionalization of beach/landing site cleansing in each of communities guarantee the sustained management of the infrastructure. Improved awareness about environmental health issues at fish landing/processing sites by the Post-Harvest-Operators CBOs has facilitated periodic institutionalized beach cleansing exercises with the participation of village heads and in collaboration with local authorities that provides transport to collect waste. This exercise is conducted once every month in all the project fisheries communities. This has created a conducive environment for operators to process fish under good hygienic conditions.

- **Set up and improved access in project sites of fisher-folk gender sensitive savings and credit schemes**

These pro-poor and gender sensitive Savings and Credit Scheme have reduced one of the most important factors causing vulnerability in fisheries communities. The provision of affordable credit facilities (at a reasonable interest rate) has boosted the Post-Harvest Operators' activities. Post-Harvest Operators especially women oyster harvester and fish processors can now buy fish from the fishermen or middlemen with cash without having to take it on credit. This has improved and expanded their businesses thereby increasing their incomes. The Saving and Credit Scheme started with a grant from SFLP/PP3 with a total of US\$50 000. The loans are given on a short term basis ranging from 3 to 12 months. Based on earlier national experiences and to ensure that the value of the sum is maintained, the interest on the loan is pegged at 10% per annum. This rate is expected to attract and enable the targeted Post Harvest Operators access and make best use of the scheme. The average amount given as loans is about US400 per person for fish traders and US\$200-300 per person for fish smokers and dryers, whilst the oyster harvesters and fish un-loaders receive about US100-150 per person.

This scheme has fostered a closer partnership between the PHOs and the responsible Micro Finance Institution (NACCUG).

Post Harvest Operators also benefitted from relevant training in the areas of organizational development, business skills, literacy as well as in fish handling, processing and sanitation. In the communities of Brufut and Kartong, the group management training conducted for the PHOs have significantly resulted in new ways of doing business at many landing sites and has enabled PHOs to develop their entrepreneurial skills; they are now able to separate business from personal expenses. The Post Harvest groups have now become more dynamic

Table 33.2 Number of Post-Harvest Operators, benefitting for the Credit Scheme

	Fish Smokers		Fish Driers		Fish Traders		Fish Unloaders		Oyster Harvesters		Total
10 Pilot Project Fisheries Communities – Community Based Organizations	M	W	M	W	M	W	M	W	M	W	
Total	11	152	9	124	91	61	1	51	0	55	555

Source: Progress Report from NACCUG

and cohesive and their sense of collective purpose has evidently become more visible. In addition, it has increased the participation of PHOs in decision making processes.

- **Improved bargaining power** to influence decisions in terms of access to markets and pricing of products. Hence, Post Harvest Operators increased their opportunities to create linkages with marketing outlets. Market information was also enhanced through the networks of different PHOs organizations at different levels. PHOs are able to communicate prices of fish in different regions taking into consideration demand and supply for each area. This has increased their bargaining power as they are able to fetch higher prices for their produce.

in group management and functional literacy and supporting the establishment of literacy classes according to demand in its project partner communities. With this gender sensitive training and sensitization, women are becoming more effective in participating in decision making within their associations and can now understand basic numeracy and literacy. According to PHOs that benefitted from this training they are now able to read and understand the scale for weighing the fish that they purchase.

- The FAO “West Africa Partnerships for capacity building in small scale fisheries and SARD” assisted the National Platform to extend activities into two additional coastal fisheries communities, Kartong and Brufut, by providing funds to continue the good work already started by the SFLP/PP3 project.

SUCCESS FACTORS

Membership in the CBO made a difference at the individual and collective levels. The CBOs developed mutual understanding, trust and confidence among the members. They provided a venue for socialization and discussion of common problems and issues, and enabled members to organize health and sanitation campaigns such as beach clean-ups. Being member of a legalized CBO which became member of the NFPHOP has enabled them access to credit and savings. As a CBO, members can own assets. For example, in Kartong, the village authorities have given the CBO the land where their drying racks would be built. The CBO is now working on the legal transfer of the ownership rights.

- Fisheries communities are levying fines to PHOs that do not comply with the rules. Environmental Health and Sanitation Sub-committees are set up in all the pilot project fisheries communities in order to ensure that PHOs are abiding by the set rules at these landing/processing sites.
- **Strategic partnerships** were established with relevant institutions at all levels for the implementation of various training programmes. The Pilot Project (SFLP/PP3) identified focal persons in four Local Government Areas (LGAs)⁴² who lead the Area Councils in informing, influencing and legalizing PHO activities at meso level and help in easing bureaucratic harassment especially at markets.
- **External support.** The pilot project has intervened by training PHOs (the majority of whom are women)

⁴² (KMC: Kanifing Municipal Council; WD: wester Division; NBD: North Bank Division and LRD: Lower River Division. These are the four regions in the country where the pilot project operated)

CONCLUSIONS

The National Fisheries Post-Harvest Operators Platform needs critical funding for the consolidation and expansion of activities in existing and future fishing communities.

It is strongly recommended that the National Platform be supported and strengthened by development partners in areas such as co-management processes and local development, capacity building of actors in the management of organizations and entrepreneurship, implementation of gender strategies, training in post-harvest technologies and in the use of energy and cost efficient processing technologies for fishery products, promoting the participation of poorest and most vulnerable in decision-making process, improvement and set up of pro-poor, gender-sensitive micro-finance systems for other fishing communities, improvement of infrastructure, information systems and Monitoring Control and Surveillance to monitor artisanal fisheries, protection of the environment and promotion of safety at sea.

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THE GHANA RICE INTER-PROFESSIONAL BODY: A MULTI-STAKEHOLDER PLATFORM TO FACILITATE DEVELOPMENT OF THE RICE SECTOR

CONTEXT, PROBLEM

The rice sector is considered as a strategic sector for Ghana at the macro economic level and also in terms of food security and poverty reduction. The local production has been stagnant for 10 years at around 160 000 tons of milled rice, coming from around 120 000 ha of paddy field, 8% being irrigated field and the majority being lowland fields.

On the other hand, the rice consumption grows at a higher pace than the population growth because of a rapid urbanization and a change in the food consumption habit. Rice is gradually becoming a staple food in Ghana. In 10 years, the rice consumption per inhabitant increased from 19 Kg to 28 Kg a year. In 20 years, the total consumption has been multiplied by 10, reaching over 700 000 tons in 2006. Besides, after years of strong advertisements, urban Ghanaians seem to show preference for imported rice and are very specific about the quality required. Consequently, the importations of rice have soared and are now estimated at 600 000 tons in 2005, representing a value of roughly \$185 million, contributing 6% of trade balance deficit. Ghana self sufficiency in rice is below 30%.

The rice value chain is facing the following cross-cutting issues:

- Lower quality of local rice
- Hard competition from imported rice of relatively equivalent price and higher quality for which consumers seem to be ready to pay more.
- Irregular supply of local rice
- Lack of credit along the chain
- Weak extension and research linkage so low level of stakeholders
- Lack of investment in proper land development, machinery and processing equipment.

Many weaknesses are also due or worsened by the low level of organization of the stakeholders along the chain: most stakeholders are atomised along the chain, have little bargaining power and make few economies of scale, additional costs are incurred by the high number

of intermediates and few private industries are ready to invest seriously in the sector.

However, the rice sector offers great opportunities: Local rice remains price-competitive to the imported rice. Regular current increase in rice price is confirming this fact. Besides, pilot marketing experiment showed that urban middle and upper class Ghanaians had an interest in consuming local rice, provided that the quality was acceptable. Therefore, with proper investment to improve the quality, local rice should not be threatened by the current importations.

In many areas of Ghana, especially the three poorest regions of the North, rice is one of the only cash crops that peasant farmers can crop. It is mainly grown by small scale farmers. Besides, parboiling, milling and selling the rice employ many small scale processors and brokers. Consequently, rice is a strategic crop as far as poverty reduction is concerned.

INSTITUTIONAL INNOVATION

A **Rice Interprofessional Body** was created in July 2004 following a series of national consultations gathering the stakeholders of the sector. It is called GRIB (Ghana Rice Interprofessional Body). The interprofessional body is a private organisation made of producers' and processors' organisations and marketers.

The GRIB main objectives are:

- to create a platform to build dialogue and consensus between the rice stakeholders;
- to identify the problems of the sector and develop strategies in consultation with the stakeholders;
- to produce, collect and share information on the sector;
- to favour the contractual networking of the stakeholders of the sector and to ensure respect of agreements;
- to contribute to the design of appropriate rice policies for the development of the sector and to ensure their implementation,
- to advise the Ministry of Agriculture (MoFA) in order to streamline the investments made in the sector.

GRIB is located at the Department of Crop Services at MoFA. It was registered as a company limited by guarantee in October, 2004. The concept of inter-professional body is quite new in Ghana and there is no specific legal context concerning them.

GRIB is made of the different stakeholders of the chain. Membership (65), representing roughly 7 500 stakeholders comprises of:

- Rice farmer Based Organizations (27 groups representing around 7 000 farmers),
- Rice miller groups (12),
- Women Rice marketers' groups (8)
- Parboiler groups (7)
- Rice brokers (6)
- Importers (3), input dealer (1)

The highest organ of decision is the General Assembly, gathering all members and meeting once in a year. Notable, the GA gives the overall orientations of the working plan.

The second main organ of decision is the executive committee, which meets 3 times a year and gather: 11 regional representatives (mainly producers but not only), 4 representatives from the brokers / marketers, 1 representative for the miller and 1 for the parboilers, 1 representative of importers. The executive committee notably: Implements decision of the General Assembly; follows up the implementation of the work plan and budget; appoints auditors and present the audit to the General Assembly.

Finally, the last organ of decision is the board of directors, made of the president, vice president and secretary – treasurer. This organ was created officially at the end of 2006 so as to ensure closer supervision and involvement of the executives in every day management. They meet monthly so as to monitor the secretariat, review activities implemented during the month and plan next activities, set up and monitor contracts and look for funds from other agencies.

One of the environmental constraints of the GRIB is that the stakeholders are little organized. For instance there is no national or regional apex of farmers – processors – millers' organizations. Individual local organizations are members. GRIB is therefore starting a process to support the stakeholders to organize themselves, both at the grass root level and at national level.

GRIB is support by the “food security and Rice producers organizations project” (FSRPOP), first financed by the French Embassy and now by the Agence Française de Développement, implemented since 2003

in Ghana. Meant for 3 years at first, it has been extended till December 2007. The FSRPOP provides a grant to the GRIB to cover part of its running costs.

RESULTS/IMPACTS

GRIB made a number of achievements in relation to its different objectives:

Creating a platform to build dialogue and consensus between the rice stakeholders

Since its creation, GRIB has facilitated dialogue of various stakeholders during its general assembly and executive meetings. It has been called for conflict management among different stakeholders.

In 2007, GRIB was requested by the Ministry of Agriculture to facilitate a meeting to discuss the strategies needed to develop the rice sectors. GRIB organized preparatory meetings with its members to analyze the key factor chain constraints and build consensus on the proposed strategies which were later discussed with the Ministry and rice experts. Following the workshop, GRIB facilitated meetings between other rice experts to come out with a five-year strategic plan presented to the Ministry.

Developing strategies at different levels to develop the rice industry

GRIB undertook a series of **pilot actions** to test development strategies and promote collective action among rice stakeholders. For example:

- Support to the rice parboiling chain in the North. The process of parboiling is mainly done on small scale and with high quality variability. It is therefore difficult for brokers to purchase large quantities of quality parboiled rice or to purchase paddy and organize its parboiling. It is even more difficult to control the quality. GRIB subsidized the purchase of improve parboiling equipment for parboilers' groups to test the benefits of the equipment.
- Pilot actions to improve marketing of local rice: a 3 day campaign was funded to promote local rice in service stations. Special advertisement was designed. The operation was successful and showed interest of Ghanaians in local rice.

Facilitating negotiations and fair profit sharing mechanisms

GRIB facilitated a marketing agreement between a multinational company and a broker in relation with

producers' organisations, related to the supply of local rice for the production of infant milk cereal. GRIB participated in two inspection trips in the rice production site and the mill site. GRIB then facilitated the setting of prices between the broker and producers' organisations with all the stakeholders in attendance.

GRIB negotiated a marketing agreement with the "Ghana School Feeding program", a public program aiming at supplying school children with meals. The Ghana School Feeding Program is committed to purchase quantities representing 25% of current rice production upon some standards of quality. So as to enable the rice stakeholders to supply the government with enough paddy, GRIB started a negotiating process with marketers' groups and farmers' groups to secure their supply.

GRIB negotiated with a private bank a marketing credit line to alleviate the problem of unavailability of local rice and difficulties of marketing. The marketing line is to support brokers to purchase large quantities of local rice. Ministry of Trade, Ministry of finance and Ministry of Agric accepted to partially secure the credit line by ensuring that all stocks would be bought by the subsidized "school feeding program". Based on this security, negotiations were then held with private bank.

Collecting, producing and disseminating information

GRIB is now regularly collecting and analysing import data. They produce articles on the rice sector and international negotiation, they issue news letter for GRIB members and other stakeholders (5 issues so far). GRIB organize training of members during General Assembly on issues concerning the rice sector. It also commissioned studies on the effect of increased in tariff on the poor, and on the raising of a rice development funds.

Lobbying the government for the implementation of relevant rice policies

GRIB is advocating for the **creation of Rice Development Fund** through imposing 5% levy on imported rice. The rice development fund would be used to fund the development of the local rice industry (development of rice paddy fields, provision of extension, strengthening of farmers and processors groups, implementation of micro-credit schemes, and development of markets). Various memos were written, a workshop held with parliamentarians and representatives from the Ministry of Agriculture, a study undertaken to further describe the use of this development funds and its impact and other stakeholders (consumers, civil society) involved.

GRIB is also advocating for the following to be taken into consideration in CET negotiations: rice shall be

considered as Type B exception for economic and food security reasons, current 10% tax proposed for the CET shall be increased to 20% and rice shall be put on the list of product that can attract the IST (import safeguard tax) and the DPT (decreasing protective tax). Memos were written to the Ministry of Agriculture and GRIB tried to meet the negotiation team.

KEYS TO SUCCESS: WHY DOES IT WORK?

Internal factors

Different stakeholders are well represented and actively participate

GRIB has a model of governance that aims to ensure the participation of all rice stakeholders, as it has representatives from producers, traders, processors etc. The important role of the general assembly (GA) in strategic decision making ensures the participation of all members in important decisions, all the more that information and training is always part of GA meetings. It is also in GRIB constitutions that the Executive Committee (EC) should be comprised of the diversity of stakeholders, fostering equity in the management bodies.

Moreover, GRIB aims at ensuring not only representation of different rice stakeholders but also a regional representation. Local interprofessional structures have been set up in the different rice producing regions of Ghana. Those structures are also represented at the national level.

Executives are accountable

The regularity of the GA meetings ensures that executives report on activities and information on the rice sector environment on a regular basis, making it possible for members to have a say in the progress of actions conducted by GRIB.

Members are provided information and training

Capacity building of members and staff is a permanent concern of the institution. Training are regularly organized on issues, such as understanding the rice sector context, the analysis of the value chain, calculating costs and prices. And also at local level, training on organisational issues, administrative and financial management etc. to strengthen the capacities of grass roots organisations.

Factors related to the alliances/linkages between the institution and key stakeholders

Public and private actors closely collaborate

One of the main partner of GRIB is MoFA (as well as Ministry of trade), but GRIB also works with private actors, such as banks, commercial firms, to defend rice stakeholders interests and negotiate on their behalf.

GRIB closely collaborates with the technical directions of MoFA. on all issues related to the rice sector, such as: support stakeholders' meeting on rice sector development (preparation with secretariat and executives, synthesis of previous policy proposals, review of weaknesses of the sector and formulation of adequate proposals); support MoFA in planning of activities to develop the rice sector; support in the review of the general policy document. GRIB is used as a resource center on the rice sector by MoFA.

Enabling environment

The government of Ghana supports the GRIB

The government of Ghana has always expressed its interest in the rice sector. However, it has failed to make appropriate policies and investment to develop it. In the new context of liberal policies and structural adjustment, the government of Ghana showed much interest in the strengthening of the rice sector via its private stakeholders and the reinforcement of the chain. The building of an inter-professional body was seen as a positive trend toward the development of the rice sector. In the 2007 agricultural policy document, the Ministry acknowledged the importance to build consultation mechanisms with private stakeholders and that private stakeholders shall play their roles of lobbying.

GRIB activities are in line with the public agricultural policies. The Food and Agriculture Sector Development Policy II (FASDEP) (2007 to 2012) was published in August 2007 and focused on food security and emergency preparedness (selected five staple crops: maize, rice, yam, cassava and cowpea), improved growth in incomes, Sustainable management of land and environment, and Enhanced institutional coordination (to name a few priorities). An action plan was prepared in August 2008, identifying priority intervention in selected commodities and value chain development. Rice is the one of selected food crops to improve the entire sector from production, processing, marketing to consumption.

GRIB is supported by the “food security and Rice producers organizations project” (FSRPOP), since 2003, providing funding and technical assistance at the national level, as well as at local level with grass root stakeholders organisations (notably producers and small scale processors – usually groups of women).

CONCLUSIONS

Major lessons learnt

- Building such an inter-professional institution is a long process, notably because different stakeholders need to learn to dialogue, to know each others' constraints and specificities, to built confidence and work together. This is something that is progressively built over time, while experimenting joint pilot actions.
- GRIB does not have a very big capacity in implementing many actions. Pilot activities take a lot of time to be implemented and only benefit a few. However, they can generate proper information and lessons learnt if properly monitored and disseminated and benefit to a larger audience.
- Participation and equity is the result of combined elements: not only governance mechanism (that are necessary) but also actions to strengthen access to knowledge, information, know-how, for the stakeholders that are in a disadvantaged position (rural producers, rural small scale processors).

Implications and recommendations for donors and decision makers

- For donors, to have constancy in their support because such organisations need time to develop and usually build their capacities and refine their strategies with trials and errors (here notably through testing pilot actions)
- Adapted mechanisms should be promoted to ensure participation of different stakeholders, based on clear representation, decision making and reporting rules and capacity building programs.
- It is important that all levels of organisation is strengthened, not only the national level, but also local and regional levels to ensure coordination, so specific needs of local contexts are taken into consideration and information circulates effectively.

Author

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NACA – AN INTERGOVERNMENTAL MECHANISM FOR COOPERATION ON AQUACULTURE

Network of Aquaculture Centres in Asia-Pacific (NACA) is an intergovernmental mechanism for expanding the development of aquaculture in Asia, by building social capital (coordinating research, training and information exchange) and disseminating the results of national-level activities to a wider regional sphere. As a deliberative forum, it facilitates the formulation of regional policy and is a platform for a collective voice in international debates on various issues such as food safety and trade.

BACKGROUND

Currently, aquaculture accounts for 50% of the global food fish consumption. Global aquaculture production (without aquatic plants) in 2007 was estimated at 64.8 million tonnes, valued at US\$97.2 billion (FAO Fishstat, 2007). More than 92% of this was produced in Asia, by volume. In this regard, aquaculture in some regions is the backbone of rural economies, and provides many millions of livelihood opportunities.

Asian aquaculture is characterised by small-scale family-operated farms that are typically less than one hectare in area. The sector is a major source of income

and employment for rural communities. The small-scale nature of the sector poses special challenges in confronting emerging issues such as globalisation, the evolving international trade environment and maintaining environmental integrity.

The Kyoto Declaration on Aquaculture of 1976 advocated technical cooperation in the dissemination and use of proven technology among developing countries. As aquaculture was an emerging sector, the Kyoto Strategy addressed the linked issues of absence of distinct policy and regulations that applied to aquaculture, its non-recognition as a distinct sector from capture fisheries in national development plans, and the urgent need for disciplinary studies similar in nature, purposes, and sophistication to those in crop and livestock husbandry. The research and development structures and trained personnel were developed for capture fisheries, livestock or crop husbandry, and forestry. Scientific manpower development had to build from a lower level than the other disciplines. (For instance, when the Philippine agriculture research system embarked in 1975 on a program to develop research manpower for agriculture, scholarships had to be granted for fisheries studies at the bachelors level rather than at the MS and PhD levels, as in the other disciplines).

Meanwhile, as there were already proven aquaculture systems available from developed and developing countries, the Kyoto Strategy urged the governments and private sector to promote aquaculture production projects.

Probably the most important offshoot of the Kyoto Strategy of 1976 was the networking approach, which was the result of the thinking that one single centre of R&D excellence would be unable to cost-effectively address the issues posed by the wide diversity of aquaculture species and farming systems. This approach resulted in the establishment of the Network of Aquaculture Centres in Asia-Pacific.

INSTITUTIONAL INNOVATION & RESULTS

A network

NACA was established as a regional project in August 1980 and became an autonomous Inter Governmental Organization in January 1990. Current member governments are Australia, Bangladesh, Cambodia, China, Hong Kong SAR, India, Indonesia, I.R. Iran, Korea (DPR), Lao PDR, Malaysia, Myanmar, Nepal, Pakistan, Philippines, Sri Lanka, Thailand, and Vietnam. The network is coordinated and administered by a Secretariat based in Bangkok. The core of NACA is a collaborative network of aquaculture research centres distributed thought-out the region. The network also includes five Regional Lead Centres, which serve as support hubs for others in the network. Participating centres share their expertise and facilities for mutual benefit, to avoid duplication of effort and to maximise return on limited R&D resources.

NACA's mandate is to promote the expansion of regional aquaculture to increase food production, improve rural income and employment, and diversify farm production and increase foreign exchange earnings and savings. The ultimate beneficiaries of NACA activities are farmers and rural communities.

To fulfil its mandate, NACA's focus on five main areas of Asian aquaculture concern, namely: (1) higher productivity and better returns; (2) better environmental performance; (3) enhanced livelihood opportunities and socially responsible farming and (4) market access and trade (IBRD/ WB, 2007). A fifth area would now be risk management especially applied to the impacts of climate change. NACA has initiated work on this area and implemented with several partners a regional project on strengthening the adaptive capacities of small farmers and aquatic users to the impacts of climate change, supported by the Norwegian Agency for Development

Cooperation (NORAD). The broader context of a programme on climate change is risk management, in which the Aquaculture Management and Conservation Service of FAO (FIMA) initiated a project on risk analysis applied to aquaculture and complemented by a regional initiative on insurance of Asian small-scale aquaculture farmers by FAO and NACA.

With a multi-stakeholders participatory approach

NACA's work plan is developed by a Technical Advisory Committee which comprises of technical experts from member countries and other participating governments, joined by representatives of farmer groups, industry, civil society, partner organizations and development agencies. This plan is brought to the Governing Council for approval. The Council members are representatives of fishery or aquaculture departments of the member governments, with FAO as a non-voting member and the Secretariat of the Pacific Community as associate member. The plan is then implemented through specific projects by the network of participating research centres in partnership with governments, development agencies, farmer associations and NGOs. (www.enaca.org/)

The projects' activities include technical exchange and capacity building, institutional strengthening and the development of policies for sustainable aquaculture and aquatic resource management and cover six thematic: Aquatic Animal Health, Coastal Aquaculture, Emerging Global Issues, Food Safety and Quality, Genetics and Biodiversity and Inland Aquaculture.

And multilateral and bilateral support

Member governments make a mandatory financial contribution to the core programme under the Agreement of the Organization; collaborative projects with various multilateral and bilateral agencies are developed in line with the work programme. As an independent organization, the total government core (obligatory) contribution to NACA from 1991 to 2005 has been \$4.42 million. The total external and other non-core sources of funding it generated over the same period was \$10.53 M or a ratio of 2.38, which is in effect the amount generated for every dollar invested by governments. It has been increasing: the average ratio for 2000-2005 was 2.63, and those in 2004 and 2005 were 2.97 and 3.24, respectively. This does not include a 34M\$ emergency assistance project funded by Asian Development Bank and managed by NACA in Aceh from Sept 2006 to June 2009.

By enhancing technical cooperation among developing countries and facilitating the collaboration with other international and regional organizations, NACA mobilizes

national expertise and institutional support to implement regional projects that complement or strengthen the national capabilities in a particular field. To facilitate on-farm research and technology transfer, NACA plans to establish a regional aqua-farmers' network in order to field its activities.

IMPACT

"The value of NACA is in its networking, acting on behalf of members in addressing common problems of countries, providing a forum for a common stand, advice on policy and technology and promoting collaboration on common issues of regional interests. NACA should assist countries to address national issues with regional relevance."

Member government's Director General for Fisheries.

The existence of NACA raised the profile of aquaculture on a par with fisheries in policy and development plans. The demonstrable increase in farm yields and national outputs served the purpose of persuading the policy makers to allocate more funds for Research and Development in this promising sector (something policy makers tend to be reluctant to do as a research project takes a long time to finish and still more time for its impacts to be seen by the public).

The implementation of comprehensive studies

One extremely effective collaboration mode is the consortium, such as the one on shrimp aquaculture and the environment, which brings together FAO, NACA, World Bank, WWF and recently UNEP. It demonstrates the effectiveness of having a commonly agreed programme without having to deal with institutional bureaucracies but nevertheless with a focal organization (i.e. NACA). The basic achievement of the Consortium was the development of a body of knowledge from a comprehensive worldwide study of the policies and practices in shrimp aquaculture and transforming that into a broadly acceptable set of principles and guidelines for responsible shrimp farming. The process by which the work was done demonstrates the cost-effectiveness of a Consortium arrangement. Each partner brings its own funding and other resources into the program.

Higher yields and economic returns from the application of better technology

In less than three decades, global aquaculture production raised from 6.1 million metric tons to nearly 65 million metric tons by 2007. It became the main growth sector

of the fishery industry, even as growth in wild fishery began to slow down.

From an investment standpoint, a rough cost-benefit assessment of the NACA Project could be based on the value of production increase that came in the wake of its operations. From available assessments, the annual percent rate of growth in Asia between 1988 and 1997 was 11 percent by volume from 13.4 to 34 million mt and 9 percent by value from \$19.3 Billion to \$42 Billion. In perspective and as an indication of cost-efficiency, the total cash input over 11 years (including the 4-year UNDP/FAO Seafarming Development Project managed by NACA that terminated in 1991) from donor and government funding to the NACA Project and the Seafarming Development Project was \$9 million.

Improved food security

NACA promotes resource-efficient aquaculture through its regional centres in China and India, which aim to benefit resource-poor rural communities. Its strategy to promote aquaculture for rural development can contribute to food security and rural poverty alleviation. In Bangladesh, a programme supports the development of sustainable inland aquaculture to improve the livelihoods of rural communities where fish accounts for 60-80 % of the animal protein consumed by the population.

KEYS TO SUCCESS

The success of NACA's sustainability lies in its institutional foundation, which outlines the members' willingness to cooperate and their commitment – responsibilities and resources – to make the programme work.

Commitment of the members

A network is a flat entity; it operates with no concept of hierarchy and makes decisions by consensus and democratically (i.e. one member one vote). As such, it is not dictated to or imposed on by any one authority. The UNDP-advocated and FAO promoted concept and practice of technical cooperation among developing countries (TCDC) provided the framework for NACA collective commitment. NACA's Governing Council (GC) had extended this concept of TCDC with the principle "the stronger members shall commit to help the others".

NACA member governments have accepted that individually, the distribution of benefits shall not be equitable, with the smaller and resource poor countries standing to benefit more from pooled resources and

results. But they have also realized that having the less aquaculturally developed countries eventually closing the gap with the others, will serve everyone's interest better and ultimately accelerate the expansion of aquaculture development (and trade) in the region.

Continuity of participation is, thus, assured by each member seeing the benefits of its participation from the standpoint of the region, not alone from the country's perspective. The initial work programme of NACA shows what a government gains from it individually, but also what the region benefits from collectively.

The participation of different stakeholders, especially farmer groups and civil society, in the formulation of the Work Programme, ensures that their concerns will be taken into account and reduces the infusion of vested interests or opportunistic agenda.

Human and technical resources

NACA staff is considered regional civil servant, rather than representative of their country in the Secretariat. They comprise professionals from diversified expertise found in the various research, development, education and related institutions in member and participating governments which can be utilized for implementation of regional and national activities.

The new information and communication technology (ICT) has made it quicker to respond to the member's needs in three ways: (1) by enabling a quick way of gathering intelligence or point-of-source feedback, (2) rapid processing of the information and (3) if information is all that is needed, disseminating it. But response to a need is not only through information. It sometimes needs staging and fielding a rapid response team. This is exemplified by two events I could cite: response to the Epizootic Ulcerative Syndrome (EUS) which was a multi-country concern and response to the Koi Herpes Virus (KHV) epizootic that broke out in Indonesia, which posed a region-wide threat. It is also notable to point out that the rapid and immediate responses were joined by other organizations and that the specific and focused problem-solving exercise subsequently escalated into a programme that is regional in scope and multi-organizational in participation.

Information and Communications Technology or ICT especially the web-based communication technology and strategy has done wonders to facilitate information development and exchange, reduce costs of information management and improve the efficiency of network and project coordination.

Partnership and collaboration in the programme

NACA benefited from a UNDP/FAO (US\$7 million) and governments (almost 1 million dollars) support, not counting in-kind contributions (over a 10-year development period from 1980 to 1989) that allowed it to become a functional and self-sustained regional mechanism for aquaculture development, with the core function of coordinating research, training and information exchange.

Governments subsequently took over and, over the past 17 years since autonomy, had invested more than US\$5 million or a recurring cost of around US\$350 000 a year.

The in-kind contribution of members has not been quantified, but can be illustrated: China, starting in 1992, took over and funded under its TCDC program the 3-month training course on integrated fish farming (IFF) in the NACA Regional Lead Centre in Wuxi. The course intake is usually 40 from Asia-Pacific, Latin America, Africa, the Near East and Eastern Europe. Over 25 years of uninterrupted yearly offering, the IFF has trained nearly 1000 personnel. The centres in Thailand, Indonesia, and India also offer or host courses for personnel of government, industry, farmer associations and NGOs. Their courses are partially supported by the governments.

Over the years, NACA has forged close and active partnerships with a range of institutions and organizations. These have included donor agencies, development organizations and other like-minded organizations. Public-private partnership has been fostered with NACA's program to promote industry collaboration and farmers organizations under a number of collaborative projects in various members' countries, particularly India (with MPEDA), Indonesia (in Aceh), Thailand and Vietnam.

NACA also operates, on request, government-funded or bilaterally funded national projects. Two cases are described to provide an example of this aspect of its program, in India (government-funded) and Vietnam (donor funded). An important point to be made of these two cases is that the results of national projects are shared among countries through NACA's networking and TCDC activities. The experiences in India had in fact informed the work in Vietnam and Iran on shrimp health management. In turn, these have been benefited by the results of ACIAR-assisted projects (in which NACA is also involved) on shrimp diseases in Thailand and Indonesia. ACIAR has also embedded a research and capacity building project into the project in India. A second point is that external expert assistance is minimal; a cadre of young local professionals and technicians is trained to provide the technical assistance to the farmers. Capacity building activities includes the farmers associations and the institutions providing farm services.

CONCLUSIONS

The unwavering commitment and support of NACA's member governments to its operation and the continuing collaboration and trust of numerous partner organizations are ample evidence that a NACA serves its members and society in general very well.

"Regional goodwill" sums up the NACA spirit. It is expressed through collaboration, various modes of cooperation and sustained participation in the organization. This goodwill has been built and is being sustained by the governments' adherence and commitment to the organization's ideals. Such commitment has yielded the substantive results that in turn confirm the pragmatism of upholding the organization.

What could be a threat to the organization?

There are many but the fatal one would be the politicization of the organization. The Task Force⁴³ put its fingers on this when they stressed the importance of staff acting not on behalf of his or her government, which implies among others not having to obtain clearance for their action or decision from their government. A bigger hazard is when a professional staff comes into the Secretariat on the wings of vested interest. The mechanisms to try to prevent this situation from happening have been set up

and institutionalized, which include no one government being able to exert control over the organization, the presence of FAO in the GC to serve, in this context, as a neutral and disinterested adviser and the system of objective search and screening of the DG, senior staff and project staff that has been instituted.

A lesson for "parent" organizations

One lesson for donor and development assistance agencies is to nurture the institution that they created or helped create without lavish and seemingly endless pampering. It is important to be continuously involved not as a parent but a partner.

Authors

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⁴³ The Task Force is composed of an independent group of experts that conducted an analysis of the strengths, weaknesses or vulnerabilities, opportunities and threats to the organization through an extensive consultation with member and participating governments.