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RAHAMOU HASSOUMI IS A HENNA FARMER FROM GOUMAR VILLAGE, NIGER. THANKS TO THE IMPROVED WATER SYSTEM, SHE IS ABLE TO HARVEST FOUR CROPS PER YEAR AND NOW HAS EIGHT FIELDS OF THE CROP.

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Is GAFSP reaching
small-scale food
producers in Niger?

Introduction: The GAFSP-supported PMERSA-MTZ in Niger

In 2013, Niger ranked last in the United Nations Development Program's Human Development Index with 76 percent of its people living on less than \$2 a day – most of them farmers. Thirty two percent of the population is undernourished and 40 percent of children under five are chronically malnourished¹. Poverty is deepest in rural areas, where more than 80 percent of Nigeriens live. The agricultural sector accounts for almost 37 percent of the GDP of Niger and employs three-quarters of the population. Agriculture mostly relies on small-scale family farms that combine rain-fed crops – mainly cereals and vegetables – with irrigated food and cash crops, when possible, spread in the semi-fertile areas along the country's southern border with Nigeria, Benin and Burkina Faso. The northern half of the country is covered by the Sahara Desert. A semi-arid zone, used for pastoralism and rain-fed agriculture, separates the two areas. Less than one percent of the country's agricultural land is irrigated, but irrigated farming accounts for about 30 percent of the country's agricultural production and 90 percent of its agricultural exports².

Rural farming families own, on average, five acres of dry land. Some families also have access to small plots of irrigated land (less than one hectare). There is an ongoing trend of reduction of the land available per farm, and per farmer, due to the demographic growth and the concentration of inhabitants in rural areas. The deteriorating soil quality has caused farmers to expand the area of land cultivated, often encroaching on land used by pastoralists for grazing, creating the potential for conflict³. Women are among the poorest and most vulnerable groups in Niger. Although almost all of them work in agriculture, they have little economic power, and can generally only access land through male relatives, despite the gender equality of access to land and natural resources included in the Rural Code⁴.

In Niger, the GAFSP supports the Water Harnessing Project to Enhance Food Security in Maradi, Tahoua and Zinder Regions (Projet de Mobilisation des Eaux pour le Renforcement de la Sécurité Alimentaire dans les Régions de Maradi, Tahoua et Zinder, PMERSA-MTZ). The project aims to enhance food security by sustainably increasing agricultural production and productivity through surface and underground water mobilization. The project targets 213,000 direct producer partners⁵ and 460,000 indirect producer partners from the Maradi, Tahoua and Zinder regions, where almost 60 percent of the Niger population resides. The three selected regions have particularly high rates of malnutrition, poverty and food insecurity for Niger.

The PMERSA-MTZ started in July 2012, building on the experience of existing projects such as the Tahoua Water Mobilization Project (Projet de Mobilisation des Eaux de Tahoua, PMET)

¹ <http://www.ruralpovertyportal.org/country/home/tags/niger>

² Idem

³ http://www.usaidlandtenure.net/sites/default/files/country-profiles/full-reports/USAID_Land_Tenure_Niger_Profile.pdf

⁴ The Rural Code of Niger is a legal and institutional framework that defines the principles of land use planning and natural resources management in Niger. It has been praised internationally for the participatory process that its design was based on, and for its inclusiveness, especially for women, youth, and minorities. Niger is, however, facing challenges in implementing the Rural Code and ensuring people's rights become a reality at the local level.

⁵ The term "producer partner" here is being used in place of the term "beneficiary."

and the Zinder Agricultural Sector Support Project (Projet d'Appui au Développement Agricole de Zinder, PADAZ), and is expected to end in December 2016. The PMERSA-MTZ is aligned with the objectives and strategy of the 2012 Nigeriens Feed Nigeriens Initiative (Initiative les Nigériens Nourrissent les Nigériens, i3N), which aims to strengthen national food production and supply, and increase resilience to food crises and natural disasters. The PMERSA-MTZ is also aligned with the sectoral strategies and policies relating to women's and youth empowerment, transportation, land use planning, environment, decentralization, irrigation and water resource management.

| COMPONENT | ACTIVITIES |
|---|---|
| Water-mobilization infrastructure for farming | <p>Construction and rehabilitation of surface water collection and conservation structures: (45 spread irrigation bunds; 9 mini-dams; deepening of 6 ponds; 1,690 vegetable-farming wells; 74 village wells; protection of 7 linear km of river banks).</p> <p>Development of 12,000 hectares of land for flood-recession wheat, maize and sorghum; 260 hectares for irrigated vegetable farming, and 5,600 ha for flood-recession vegetable farming.</p> <p>Construction and rehabilitation of 178 km of farm-to-market roads</p> <p>Water and soil conservation and environmental protection activities: land recovery (320 hectares); hedges (50 km); windbreaks (100 km); natural regeneration (1,600 hectares).</p> <p>Conduct additional studies and comprehensive execution of water works and inventory of the irrigable potential.</p> |
| Improvement of output, support and actions | <p>Support and guidance to farmers through procurement of agricultural, zootechnical and phytosanitary equipment; training and awareness-raising for farmers; construction of 28 input shops, 28 cereal banks and 25 animal feed shops.</p> <p>Promotion of women's initiatives through income-generating activities, processing equipment and capacity building.</p> <p>Establishment of a rural credit fund and institution building to build the financial capacity of producer partners.</p> <p>Rehabilitation of 3 seed centers, support to land-use commissions, support to seed multiplication and certification.</p> <p>Constitution and training of farmers' cooperatives, establishment of farmers' demonstration farms, literacy activities.</p> |
| Project management | <p>Coordination of implementation of the project's technical and financial activities in conjunction with partner services.</p> <p>Management of project financial resources and close supervision of program activities.</p> <p>Preparation of procurement documents.</p> <p>Consolidation of existing national structures responsible for project implementation.</p> <p>Internal monitoring/evaluation of project performance indicators.</p> <p>Annual audits and final project evaluation.</p> |

The main results expected from the project are as follows:

- Water is mobilized and made available through the building of mini-dams, weirs⁶ and re-excavation of ponds.
- Mobilized waters are exploited rationally, effectively and efficiently, through vegetable growing areas downstream of the dams and in flood recession areas.
- Natural resources are preserved through ground water conservation/land preservation and restoration.
- Crops are protected against winds and animals through windbreaks and hedgerows around the developed sites.
- Production assets are reinforced through access roads, garden wells, irrigation networks and motor pumps, and the building of storage warehouses for agricultural inputs.
- The capacities of those involved in production are reinforced.
- Women's economic and social development is promoted through income generating activities and trainings.

⁶ Water-spreading weirs are dams built across a temporary river to manage the flow of rivers created by rainfall, and force the water to spread across the largest surface of land as possible. Weirs increase the surface of land that can be cultivated in flood-recession agriculture or off-season agriculture after the rainy season.

ActionAid's study in the Maradi region

ActionAid commissioned a study to look at the PMERSA-MTZ implementation model and impact, with a focus on small-scale food producers; women producers; the engagement and participation of producer and civil society organizations; and climate resilience. Men and women small-scale food producers that have benefited from the project in the Maradi region were interviewed, in order to hear directly from them about how the PMERSA-MTZ is addressing their needs. Government staff and representatives from farmers' and civil society organizations were also interviewed.

The study interviewed individually twenty-one producer partners (including three women) in eight villages in Maradi or Tahoua regions, and conducted focus group discussions with 218 people from farmers' and women's groups in order to hear directly from them how the PMERSA-MTZ is addressing their needs. Representatives from the Government of Niger in charge of the project implementation, representatives from the NGOs selected for project support, and the chairman of the Plate-Forme Paysanne du Niger (the main national-level farmers' organization in Niger) were also interviewed for the study.

Key findings on the SIVAP implementation

1. Does the project target small-scale food producers?⁷

The Maradi, Zinder and Tahoua regions are characterized by relatively high numbers of inhabitants (more than 59 percent of the Nigerien population live in these three regions), high levels of agricultural production, and high levels of poverty and of food insecurity. More than 62 percent of Niger's poor live in the Maradi, Tahoua and Zinder regions. The Maradi region is the country's biggest agricultural region, its poorest, and the most affected by food insecurity (on average under 2,200 kcal are consumed per individual per day). Farming families work on an average of 1.5 hectares of land in the Maradi region, to sustain an average of seven family members. In the Tahoua and Zinder regions, about seven hectares of land are available per farming family, but smaller amounts – close to 1.5 hectares – are actually cultivated.

The PMERSA-MTZ is one of the projects aiming to reach the objectives laid out in the 2010-2015 National Agricultural Investment Program (NAIP) of Niger, namely to develop and secure the productive capital of family farms, improve – in a sustainable manner – the productivity of land and labor on family farms, improve the income of rural households derived from agricultural production, and strengthen the technical capacity and management for farmers and their groups/organizations⁸. The NAIP explicitly targets rural family farms and producer organizations. By aiming to develop small-scale irrigation for farmers in the agricultural and poorest regions in Niger, the PMERSA-MTZ, therefore, does target small-scale food producers.

⁷ The following two paragraphs are based on "Profil et déterminants de la pauvreté au Niger en 2011, Premiers résultats de l'enquête nationale sur les conditions de vie des ménages et l'agriculture au Niger" (ECVMA), June 2013: http://www.stat-niger.org/statistique/file/Annuaire_Statistiques/Profil_Pauvrete_2011_ECVMA.pdf

⁸ See Niger proposal to the GAFSP: http://gafspfund.org/sites/gafspfund.org/files/Documents/Niger_1_of_7_GAFSP_Proposal_NIGER-VERSION_ANGLAISE%20IV.pdf

2. How does the project reach small-scale food producers?

a. Increased agricultural production

The support provided in terms of agricultural inputs and water management equipment (weirs, mini-dams, wells) by the PMERSA-MTZ has led to more frequent harvests and an increase in crop production, especially in irrigated and flood recession agriculture. In the case of fields located downstream of newly-built weirs that benefit from water releases, crops can be harvested four times a year, compared to once a year before the project was implemented. In two years, the overall annual production of irrigated crops (onion, tomato, pepper, watermelon) has increased by 13 percent (11,017.5 tons per year), a significant progress towards the 19 percent target (from 80,000 tons per year to 96,000 tons per year) set out in the project proposal.

The increase in agricultural production measured in the project can be explained by significant progress made in the yields of the irrigated and recession flood crops:

| | Yields at the start of the project in 2012 (tons/hectare) | Yields targeted by the end of the project in 2016 (tons/hectare) | Yield reached by November 2015 (tons/hectare) | Proportion of 2016 target yield reached |
|----------------------------|---|--|---|---|
| IRRIGATED CROPS | | | | |
| Onion | 19 | 31 | 32 | 103.23 percent |
| Tomato | 9 | 15 | 22 | 146.7 percent |
| Pepper | 16 | 25 | 16.7 | 66.8 percent |
| Watermelon | 9 | 14 | 9.2 | 65.7 percent |
| FLOOD RESSION CROPS | | | | |
| Tomato | 4.5 | 12.5 | 14.64 | 112 percent |
| Watermelon | 8.33 | 11.5 | 12.56 | 109 percent |

The PMERSA-MTZ has focused on support to irrigated agriculture in the wetland valleys, where water mobilization is possible. Cereal production such as maize or rice has not been developed in those rehabilitated or newly irrigated perimeters, because vegetables provide a higher return on investment in irrigated fields.

Meanwhile, rain-fed cereal production has only increased marginally, by 1.6 percent. This is significant as most people do not have access to land where irrigation is possible, and are therefore reliant on rain-fed agriculture. In order to achieve large-scale and have a significant impact on poverty reduction, the project should review its targets in order to put more effort into increasing the yields and production of rain-fed cereal crops.

“In 2013, when the PMERSA-MTZ arrived, I was supported to have a second well and I got a motor-pump. With this equipment, I’m at ease to water the lands. I save time and I work alternatively with the two motor-pumps to spare them. I have managed to have sales up to 1,500,000 and 2,000,000 CFA Franc a year since the PMERSA-MTZ supported me with the well and the motor-pump. I spend less time watering the crops and more time taking care of them, which has resulted in a big increase in my production.” Elhadji Kané Aboubacar, farmer in Magagi Rogo village, Maradi region.

Apart from the main component consisting of optimizing the management of water and developing irrigation to develop flood-resistant and irrigated crops, other elements developed by the PMERSA-MTZ have also contributed to improved agricultural production:

- Training of 315 new, and 109 existing, plant protection volunteers and 175 livestock volunteers – paid by their fellow farmers – to support farmers at the local level to manage pests and diseases, and help with the supply of phytosanitary and veterinary products.

- Support to three cereal seed centers to work with local farmers' groups to multiply selected seed varieties of food crops (sorghum, millet, groundnut, black-eyed pea).
- Distribution of 600 carts that allow the transportation of organic effluents to the cultivated areas for fertilization and increased proportion of soil matter in the soil.
- Building of 28 storage warehouses for agricultural inputs and 25 storage warehouses for animal feed, to minimize the costs of purchase and storage of farming inputs.
- Setting up of 30 one hectare farmer field schools managed by the National Agronomical Research Center (Institut National de la Recherche Agronomique du Niger, INRAN) to demonstrate, test and adapt agricultural practices in a participatory manner. Practices such as fertilization methods, seed varieties and local resource-based organic pest management have been tested with the local farmers from the area and the harvest shared among the participants.

b. Increased access to market

The PMERSA-MTZ has built or rehabilitated 127.86 km of new or existing access roads, therefore significantly contributing to the economic development of the areas connected by enabling access to markets, among other social and economic benefits. In spite of its high agricultural production potential, the valley of the Maradi River (Goulbi N Maradi) is only linked to Maradi City by very slow and basic transportation means (donkey, camel, cart, etc.). The construction of a 17-km-long road with the support of the PMERSA-MTZ has therefore answered the need to connect the vegetable growing areas along the valley with Maradi City.

“Before the road was built, I was afraid to risk my way to the villages on the banks of the Maradi River. There are many things to transport but the way was too sandy and one could easily get stuck. Besides, road bandits would put obstacles on the way and steal money and agricultural products from farmers to sell them in the city. Now in less than 20 minutes and without any worry I can do a trip that used to take half a day.” — Cheibou Brah, Transporter in Maradi, Maradi region

The PMERSA-MTZ also distributed 600 carts in Zinder (in 17 sites), Maradi (40 sites) and Tahoua (25 sites) that allow harvested crops to quickly be transported to adequate storage locations – reducing post-harvest waste – and ultimately, to markets.

The development of 28 cereal banks in areas with irrigation potential in Maradi, Tahoua and Zinder allows producers to reduce post-harvest waste and increase the storage duration for their crops. Farmers can then store their crops and inputs, and wait until prices are higher to sell their products.

c. Income diversification and value addition

The PMERSA-MTZ supported activities aimed at developing the trading and processing of agricultural products to generate value addition in the food sector, but was less successful than in stimulating agricultural production. The PMERSA-MTZ supported the purchase of small processing and storage (conservation) equipment for animal and agricultural products in the three regions concerned. Sixty oil presses, 41 groundnut huskers, 60 mills, 28 cereal huskers, 30 grinders, 41 roasting machines and 29 flour mills were handed over to women's groups, and are in the hands of their management committees. One hundred and twenty millers were then recruited and trained to run and maintain the mills.

These attempts at creating income generating activities and developing food processing



have mostly failed to bring benefits to the women's groups, while incurring additional costs to set them up. For example, in Soura Oubandoma, the PMERSA-MTZ supported the Anfani Women's group with flour mills, oil presses, groundnut huskers, mills for making peanut paste, and cereal huskers. The women's group had to pay 200,000 CFA Franc to buy land to build a warehouse. At the time of the study, only the grain mill was operational and most of the mills distributed in the area are already out of order. The poor quality of parts and the resulting disruptions, the high operational costs (750 CFA Franc of gross benefit per day of work, before paying for the fuel, repairs and other costs), the existence of better quality mills elsewhere in the village, and the lack of support to the women in case of breakdown make the mill more of a liability than an asset.

"The problem with these mills is that every time we put in 3,000 CFA Franc of fuel, we only make 1,500 CFA Franc of sales revenue. The main explanation is that bad machines were initially distributed. The project knows but they haven't done anything to make the businessman solve the problem. Since they were brought here, only two of the mills have been installed. The rest are just standing there." — Hadjia Gomma Chaibou, Chairwoman of Ikon Allah women's group, Soura Magaji Rogo village, Maradi region.

A LOCAL FARMER
TENDS HIS CROPS ON
NEWLY IRRIGATED LAND
SERVED BY THE GAFSP
FUNDED PROJECT.

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It should be noted however, that the distribution of 600 carts has not only eased access to markets as mentioned earlier, but has also created an opportunity for the owners to offer transportation services for products and people to reach markets or health services, which could potentially diversify and increase their future income.

d. Increased income

The PMERSA-MTZ aimed to increase income through the creation of labor-intensive cash for work operations linked with other objectives of the project, such as the rehabilitation of agricultural and livestock grazing lands, the planting of trees in areas needing protection, as well as the development of income generating activities and the development of infrastructure equipment. This additional income has benefited women and men, and allowed households to take care of some of their basic needs, including to access health services. In total, 4,090 vulnerable households from 35 villages in Maradi, Tahoua and Zinder were financially supported, in partnership with the World Food Program, to take part in the rehabilitation of 812.4 hectares of lands. The digging of 1,269 wells also generated 3,807 permanent jobs

THE GAFSP PROJECT HAS INCREASED ACCESS TO IRRIGATION WATER FOR FARMERS ACROSS THE PROJECT AREA.

CREDIT: ACTIONAID

through the newly-available irrigated lands, whilst the building of nine weirs and one mini-dam led to the creation of 7,320 temporary jobs.

In Garin Yari Idi village, the Ground Water Conservation/Land Preservation and Restoration management committee was set up in 2013 to manage the works, aiming to maintain the seasonal riverbeds (wadis) that damage the soil and silt up the valleys in the areas where flood-recession and dry season agriculture is practiced. The PMERSA-MTZ, together with the World Food Program, supported the inhabitants from the 12 affected villages to fix the dunes around the wadis, grub and burn *sida cordifolia* – an invasive plant in degraded grazing areas in Niger – to build half-moon shaped irrigation channels, to sow grazing lands with forage grasses and to plant trees around the wadis. These cash for work activities benefitted 903 people, including 180 women, who each received 82,500 CFA Franc. Twenty four nurserymen were also trained and equipped to be able to supply the project with trees, and earned on average 40,000 CFA Franc each from these activities. Highly labor-intensive activities should be continued in 2016.

The PMERSA-MTZ had initially planned to set up a mechanism of rural credit funded by one of the donors to the project (Agencia Española de Cooperación Internacional para el Desarrollo/ AECID) – not with GAFSP funds – in order to make credit available at preferential rate for farmers to purchase equipment and inputs. The activity has, however, not started due to the reduction in the AECID's support to the project and the review of the project funding scheme.

e. Food security enhancement

The regions of Maradi, Tahoua and Zinder are acutely exposed to food insecurity and poverty. At the time the project was designed, it was estimated that the cereal deficit of those three regions amounted to 130,000 tons. The intervention logic of the project is based on the idea that the rehabilitation of lands to fit irrigation agriculture would result in increased food security, improving the nutritional status of concerned producer partners that would increase their consumption of protein and energy-rich vegetables, such as lettuce, and moringa tree. While the study did not allow for food security and nutritional status measurements to be collected, increased food availability could be deduced from the increased cultivation and selling of moringa – combined with groundnut cake – at local markets in the Maradi river area, where most of the water equipment work was implemented.

While the rehabilitation and construction of water management and irrigation systems has significantly increased the availability of vegetables in project areas, most people live in areas that cannot benefit from such systems for irrigation agriculture, and therefore rely on rain-fed agriculture. In order to achieve faster and more effective progress on food security, greater focus needs to be put on the rehabilitation of the soil in the dune fields and on increasing the yields and production of rain-fed staple cereal crops such as millet, sorghum, maize and rice.

3. How does the project engage small-scale food producers, farmer organizations and civil society organizations?

a. Engagement and participation of small-scale food producers, especially women

The PMERSA-MTZ appraisal report states that the communities in Maradi region were actively involved during the identification phase in 2006 through participatory surveys and feedback workshops, and during the preliminary design study in 2011. For Tahoua and Zinder

regions, the PMERSA-MTZ draws from the direct experience of the implementation of the then ongoing PMET and PADAZ projects.

Throughout the implementation phase, the government's services, subcontracted companies, and economic actors have been taking charge of the activities in the field. The study found that producer partners felt that they had no control over the activities implemented by subcontracting companies, and that there was a lack of follow up in the long term to deal with the inadequacy of work that was incomplete.

"The problem with this project is the lack of monitoring of the contractors in charge of conducting the works. Our inputs on the quality of the works are not taken into account when we receive the materials and the works in the field." — Sani Mijinyawa, Head of Soura Magagi Rogo village, Maradi region

b. Engagement and participation of farmers' organizations and civil society organizations

In the design process: The PMERSA-MTZ is based on a study that included producer organizations, women's groups, NGOs, local authorities, and national authorities. However, the PMERSA-MTZ site identification and definition by a consulting agency was mostly based on technical feasibility for water management equipment for agricultural development. The national coordination cell – Cellule Nationale de Coordination (CNC) – that was subsequently set up to manage the implementation of the PMERSA-MTZ therefore had limited space to incorporate farmers' participation in the project design, including the site selection and implementation.

In the implementation of the project: Farmers' organizations, civil society organizations and women's groups are formally included in the discussions on the management of the project at the national level. A national steering committee (Comité National de Pilotage du Projet, CNP), chaired by the General Secretary of the Ministry of Agriculture was set up to guide the project. It includes representatives from the various concerned ministries and services, administration staff from the three targeted regions, three farmers' and livestock raisers' federations, three representatives from women's groups, three representatives from traditional authorities, and NGO representatives. Greater participation of civil society organizations and farmers' organizations at the national and regional level has, however, been one of the main asks brought up by Plate-Forme Paysanne du Niger – an umbrella organization grouping farmers' organizations in Niger – since the start of the project.

When the project's national coordination cell was created, it tried to identify the existing local farmers' and women's groups in Maradi, Zinder and Tahoua, but failed to do so. Therefore, throughout the project implementation, local producer organizations have not been involved in the support provided, apart from the millet and groundnut processing equipment provided to women's groups. Most activities are implemented through the public administration services and their usual consultation, participation and decision processes. Producer organizations are actually rather dormant. While several national and regional public agencies have benefited from support and training to manage the implementation of the project, and have developed their ability to reach and provide services to the people, federations of producer organizations and civil society organizations have not been supported as partners in the implementation of the project and to help reach local organizations and producer partners.

In effect, producer partners were not mobilized through producer organizations but rather by village heads. As a consequence, collective equipment such as mills or storage warehouses for agricultural inputs were put in the care of the village head's house. This contributes to the reinforcement of existing power relations at the expense of the collective power of producer organizations and women's groups. On the contrary, local producer organizations have not been able to mobilize their members around the project goals.

It appears that in the absence of active and operational producer organizations, the project implementation relied on the systematic creation of management committees (Comités de Gestion Spécifique, COGES) for all activities. The 132 management committees function by grouping representatives of one or several producer organizations or groups. They are the intermediary between the producer partners and the project staff, while the producer organizations they are based on remain outside of the project implementation work. It is often the case that members of management committees do not know the names of the producer organizations that set up their committee.

In order to better tackle the challenge of activating and working with producer organizations, the project decided to recruit three NGOs to inform and sensitize producer organizations and producer partners, support the restructuring and capacity building of existing producer groups, and support the implementation of agricultural activities in the newly rehabilitated lands. The recruitment of three NGOs should be launched shortly.

LOCAL FARMERS USE
THE NEW IRRIGATION
EQUIPMENT TO WATER
THEIR LAND.

CREDIT: ACTIONAID



4. How does the project reach and benefit women?

Women's empowerment is one important dimension of the project design, as shown by the fact that the "involvement of women in decision-making, and self-management bodies set up, and women's access to credit" is one of the seven key performance indicators adopted by the PMERSA-MTZ to monitor its progress towards achievement of objectives. The PMERSA-MTZ planned to support a high proportion of women in a number of areas: 60 percent of stockbreeding producer partners should be women and youth; 50 percent of cooperatives supported by the project should be women's cooperatives; 67 percent of the 5,800 farmers trained should be women; 1,200 permanent jobs should be created for women; and at least 25 percent of the management committee members should be women.

In practice, women have been specifically targeted as exclusive partners of the income generating activities part of the project. This has allowed them to organize collectively and access responsibilities, but has not resulted in significant progress in terms of income generation, due to the low quality and lack of competitiveness of the food processing equipment distributed, and the lack of community support to the women's groups facing challenges (see income diversification and value addition above).

The specific management committees (Comités de Gestion Spécifique, COGEs) set up for income generating activities are women-only, more specifically food processing activities based on the distribution of equipment such as mills, grinders, huskers, etc. The setting up of such committees has allowed women to take collective responsibility for the management of equipment and activities, and allowed some women to develop individual leadership skills, as each of the management committees includes a chairwoman, a general secretary and her assistant, a treasurer and her assistant, and two to four auditors. The management committees were provided with training in organization management and institutional life; 116 secretaries and assistants were trained in meeting reporting, information management, end of campaign assessment and programing; 116 treasurers and assistants were trained in accounting for farmers' organizations. It is, however, to be noted that the distributed equipment was placed in the care of the heads of village – all men – and that the food processing activities have failed to increase the women's income, due to technical failures and the lack of profitability of the activities set up. As reported by the head of village of Soura Oubandoma, some social groups were unhappy with the women being entrusted with equipment management. This resulted in women being left alone to deal with technical problems with the distributed equipment.

As far as the other activities are concerned (irrigation and water systems, support to agricultural production), women are underrepresented in the local management committees. The logical framework of the PMERSA-MTZ adopted as one of its targets that 25 percent of the water management and land distribution committees be women. The study showed that 19 percent of the 140 members of the 20 management committees set up for weir and mini-dam building are women, while 28 percent of the 690 members of the 81 management committees for cereal banks, input shops and animal feed shops are women. The study found that women's participation, albeit in the minority, in PMERSA-MTZ management committees, led to an increase in their participation in general decision making bodies at the village level.

The project activities that support irrigation, farming and livestock have partly benefited women. For example, some women benefited from the training of animal health volunteers. In the last training session for 158 volunteers in 2014, 32 percent of the participants in Maradi

were women, 40 percent in Tahoua, and 24 percent in Zinder. This 30 percent average of female participation in animal health training is considered to be rather good considering that in Niger, this work is generally seen as the preserve of men.

Furthermore, the activities implemented have increased the economic power of women and sometimes allowed them to create jobs for others. Women have benefited alongside men from the cash for work activities initiated by the project, especially in terms of water management equipment construction (weirs, dams, etc.). For example, in Gari Yari Idi village in 2013, more than 180 women took part in the cash for work activities of degraded land rehabilitation and were paid 82,500 CFA Franc for 3 months, on an equal footing with men.

“Before the building of the weir, I harvested henna only once a year. Now, instead of one harvest, I get up to four harvests a year thanks to the positive effects of the weir on water availability for henna. With the benefits I get from selling henna, I have managed to progressively increase the number of fields I work on, up to 8 fields in total for a surface of around 7 hectares. My benefits have been increased four times on each field. I now get an average benefit of 400,000 CFA Franc per year from henna production.” — Hassoumi Rahamou, female farmer from Goumar Village, Maradi region.

5. Does the project enhance climate resilience?

Niger is one of the most vulnerable countries in the world, partly due to its climate. Agriculture – the main economic sector in the country – is especially exposed to risks. Droughts are considered as the main risk affecting food production, with high probability of happening and severe impact. The PMERSA-MTZ addresses this challenge through its main component, water harnessing for food production, with the aim to increase the resilience of vulnerable farming communities in regions where water is crucial for agriculture and food security. Water mobilization for agriculture is developed in the project through two distinct approaches depending on the topographic context. Firstly, ground water conservation and land preservation technologies and restoration in the wetland valleys allow the communities to manage seasonal floods and spread water to support flood-recession and dry-season agriculture for lands in valleys. Secondly, the development of small-scale irrigation systems around vegetable-farming wells supports irrigation agriculture on lands that are not in the valleys, and therefore cannot benefit from the water collected and spread by dams and weirs. Both actions contribute to making communities less reliant on rain-fed agriculture and build their resilience to climate change.

“For about ten years, we have seen that our fields get flooded during almost all the rainy seasons, and our harvests get destroyed. Because we have a big pond in the village, we women, said that it is necessary to grow vegetables around it to make up for the production deficit during the rainy season.

We women had developed 3 hectares of vegetable crops during the 2014-2015 season. With water drying out very fast, we lost the onion, melon and squash crops. We managed to harvest a bit of potato, cabbage, and lettuce that were used for self-consumption. We didn't sell any of our harvest. So we are happy that the project deepened the pond. There is already more water in the pond than last year. We are preparing to develop our small plots around the pond and we hope that water will not dry out before we finish harvesting our vegetables in 2016.” — Habsou Rikki, chairwoman of the Abida Atchida Iyali women's group, Rafa village, Maradi region.



A number of surface water management activities implemented in the PMERSA-MTZ are natural resource management actions that support adaptation to the impacts of climate change: protection of the banks of the wadis, planting of windbreaks, rehabilitation of degraded lands, sowing of grazing lands, creation of hedgerows etc. The planting of 114,927 trees and sowing of 300 hectares of forage grasses on the 812.4 hectares of land already rehabilitated through the project, contributed to limiting the impacts of climate change, droughts and floods on the lands used by the producer partners.

The small-scale irrigation systems put in place around vegetable-farming wells fit the conditions of small-scale food producers in the affected regions, as these technologies are relatively cheap and easy to maintain and repair. In the case of large water infrastructures such as the deepening of ponds and the building of weirs, producer partners have said that the project should support them either to finish works that were stopped, such as digging the Garara pond, or to support communities, technically and financially, to once again rehabilitate the weirs that have already suffered from the effects of sudden rainfall, floods or erosion.

"The weir is very important for us as when the river water comes during the rainy season, the weir spreads it over all the lands located downstream. After the rainy season, the land owners can till the land and plant thanks to the humidity from the weir. Another benefit from the weir is that the mango trees that had started to dry out are now green

A FARMER FROM THE
SARKIN PRODUCERS'
COOPERATIVE WORKS
HIS LAND.

CREDIT: ACTIONAID

again. Unfortunately, with the intense rain this season, water has gone over the weir and damaged it. If we don't act quickly, the whole weir will get damaged and eventually destroyed. We are mobilized, men and women, around the weir management committee to clean up the damaged parts with sand bags. We are aware that this will not be enough to stop the damage. We expect the contribution of all those concerned to neutralize the degradation phenomenon in the long term because this weir is very important for us." — Hamidou Maiwaké, Head of Goumar Village and chairman of the Goumar weir management committee.

As mentioned earlier, the vast majority of small-scale food producers in Niger rely on rain-fed agriculture or livestock rearing, or a mix of both activities. Any project aiming at supporting the most vulnerable farmers to face the impacts of climate change therefore needs not only to decrease reliance on rain-fed cultivation through the development of irrigation, but also to support practices and technologies that allow rain-fed cultivation in a context of erratic rainfall, sudden floods and intense droughts. While the PMERSA-MTZ includes some activities in support of rain-fed agriculture, as mentioned above, there has been no significant progress measured so far in the area of rain-fed cereal cultivation, even though this type of agriculture mostly affects small-scale food producers in Niger. Project documents do not clearly outline whether the PMERSA-MTZ's focus is based on a strategic analysis of the various climate risks affecting farmers in Niger. It is therefore not possible to conclude whether priority has been given to the small-scale food producers that are the most vulnerable to climate risks. A climate risk and vulnerability analysis which considers different geographical areas, models of agriculture and type of food producer, would help to identify which options would allow for increased climate resilience for a majority of small-scale food producers.

Recommendations

On general project implementation:

- Continue the discussions between the government and technical and financial partners to find ways to ease processes and accelerate the implementation of the project.

On participation in the project implementation:

- Accelerate the process of contracting the three NGOs in charge of strengthening producer organizations, and ensure that technical support is provided to producer organizations and women's organizations to play an active role in the project implementation.
- Reinforce the dialogue with CSOs and farmer organizations on the PMERSA-MTZ implementation, monitoring and evaluation, and support their capacity building.
- Reinforce the involvement of CSOs and farmer organizations in the PMERSA-MTZ through their participation in the project's committees.
- Increase the responsibility and space given to local producer organizations and women's organizations in the implementation of project activities.
- Develop mechanisms to ensure full participation of women and youth in the project.

On women's empowerment:

- Ensure that women's groups are supported with income generating activities that are profitable and with appropriate equipment, and training on equipment maintenance.
- Increase the support given to women's organizations to strengthen their institutions and develop income generating activities.
- Reach out to women's rights organizations for help changing views within the community on women's empowerment and develop gender mainstreaming in the project implementation and gender sensitivity trainings at the level of the producer partners and project staff.

On climate resilience:

- Check agriculture support activities against a climate risk and vulnerability mapping to ensure that the farmers that are the most vulnerable to climate risks are the ones supported in priority by the PMERSA-MTZ.

On food security enhancement:

- Focus on increasing rain-fed cereal production and yields.
- Encourage the adoption of new production techniques and technologies (improved seeds, fertilizers, compost, integrated pest management etc) through farmer field schools.
- Support post-harvest activities in order to minimize food waste.
- Support moringa production and processing activities.

On income generation:

- Continue cash for work activities on the building or rehabilitation of water management systems that benefit many producer partners and have long-term effects on food production.
- Get back to the women's groups to discuss present needs and identify ways to improve the activities already in place, or create new ones, to truly generate additional income for women.

Acknowledgements

This report was written by Jean-Cyril Dagorn based on research conducted by Dr. Abdou Sani Boukari with input from Katie Campbell and Chris Coxon.

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