

Action funds stimulate mutual learning towards improving child nutrition in Benin



Women from Banikoara showing the *wagaru* ingredients to their visitors.

Credit: Paul Jimmy

Introduction

Over the past three years, the German Institute of Tropical and Subtropical Agriculture (German acronym: DITSL) and partners in Benin (eg Faculty of Agronomy, University of Parakou, etc) and Kenya (eg Centre for Research and Development in Drylands) engaged in participatory action research in a project called NaviNut, which is known in full as 'Enhancing women's agency in NAVIgating changing food environments to improve child NUTrition in African drylands. This project was funded by the German Federal Ministry of Food and Agriculture and the objectives were to:

1. understand the complexity and dynamics of women's decision-making in feeding their young children;
2. improve child feeding by raising the status of locally available, highly nutritious traditional foods; and
3. improve community health services by designing appropriate ways to discuss child nutrition with mothers and thus enhance their learning.

During the first two years, the project team worked with two groups of women in the districts of Banikoara and Nikki in northern Benin. They were mothers of children under five years of age and women processing food products on a small scale. Together, the women and the researchers developed new products based on traditional foods. First, the researchers identified local innovations that some women had developed themselves, related to preparing foods for children. One of the cases identified was to make flour from fermented sorghum to improve the traditional porridge *kpankpannu*, while another was an improved way of making a local dish called *wagaru* from cooked maize and cowpeas. The women and the researchers gave priority to these local dishes because of their nutritional value for children and their economic value for women wanting to sell these foods.

Action funds for mothers' own projects

The NaviNut project included the use of "action funds" to support local women's

own ideas about how they could benefit from the outcomes of the action research. Groups of mothers could apply for funding to carry out activities of interest to themselves and their communities, either to allow wider learning or to develop small income-generating activities based on local foods improved during the project.

The research team invited the participating women's groups to apply for these action funds. The call for applications outlined the type of activities that could be funded, the selection criteria, the deadline and the amount available (a maximum of 500 Euros per group). The women were asked to fill in an application form in French, together with an audio- or video-recording in which group representatives explained in their own language what they wanted to do and why. They submitted these recordings to the NaviNut project via WhatsApp. The project team members in the field, including PhD students and their supervisors, informed the women about the action funds and helped them prepare and submit the applications. They also translated the audio- and video-recordings into French. The selection committee included members of the project coordination team based at DITSL and representatives of the project's local team members.

Use of the action funds to support an exchange visit

One of the proposals selected by the committee was an exchange visit between two women's groups. Several mothers in the village of Kparisserou in Nikki District wanted to visit women in Banikoara, around 275 km away, who were preparing the improved local foods *kpankpannu* and *wagaru*.

After the project team informed the women in Kparisserou that their application had been accepted, the team transferred the required funds to the group by Mobile Money. The group, supported by a facilitator from the team, selected 22 December 2023 as the date for the visit. They jointly planned the agenda for the visit: the women in Banikoara would present their improved foods for small children



Women tasting the improved wagaru dish.
Credit: Paul Jimmy



Children enjoying kpankpannu.
Credit: Nouratou Damagou



Women watching the process of cooking wagaru.
Credit: Nouratou Damagou

and give a cooking demonstration, and then all involved would reflect on what had been learned and would evaluate the visit. The facilitator and three women selected by the group to make this visit travelled by public transport to Banikoara on 21 December. The visiting women stayed with relatives living in Banikoara whom they had contacted ahead of the exchange visit. They preferred to stay with relatives because one of the women had a baby and was not comfortable staying at the hotel.

The meeting started in the morning with welcome greetings and self-introductions by all the participants. The Banikoara women showed the various ingredients and recipes they use to prepare *kpankpannu* and *wagaru*, as well as the final products. This presentation allowed the visiting women to observe and ask questions, which the hosting women answered with great enthusiasm. The visitors were keen to understand how the new dishes differed from their traditional dishes and were especially interested in the higher nutritional value of the improved foods. During the action research project, the *kpankpannu* flour has been improved by adding soybean, sorghum malt and baobab flour to produce an enriched, fermented flour for the porridge. The *wagaru* dish, which is traditionally made from maize and cowpea, had been

enriched by adding dried moringa leaves.

After showing the visitors the various ingredients, the women showed them how they cook the foods. The visitors were given specific roles to play by the women that were hosting them. These roles included making the fire, drawing the water and washing the ingredients and pots. All the women worked together to prepare the *kpankpannu* and the *wagaru*. They ate the foods together and discussed the taste and texture.

Women's reflections on the visit

The women from Nikki District that were visiting Banikoara reflected on what they had learnt about preparing these foods for small children:

- Baobab powder can be added when preparing *kpankpannu* porridge.
- Sorghum that sprouts after a few hours of fermentation can still be eaten. The women used to think that sprouted grain was spoiled, but now they see that it can be included in the porridge.
- Both baobab powder and sprouted sorghum make the porridge more nutritious, as do moringa leaves in the *wagaru*.

The women from Nikki had access to both baobab and moringa in their home village but had not used it when

making their traditional *kpankpannu* or *wagaru*. In the case of sprouted sorghum grains, the women saw this as a solution to family quarrels. One woman said: "It's important to see that fermented sorghum can be used. It will help our marriage. Before, we used to throw the grains away if they germinated because the children had thrown water on them by mistake". The woman explained that this led to quarrels because her husband thought she was careless and let the grains spoil because she was not the head of the household, responsible for the farming and bringing the staple foods home. She said that she had seen the value of these sprouted grains to use in preparing the improved porridge.

Both the visiting and the hosting women regarded the exchange visit as very useful not only for learning but also for networking among the members of the two groups. At the end of the visit, the women from Nikki travelled back to their village, Kparisserou, with the commitment to make the two improved food products for their families and to share the recipes with other women in their village.

Feedback to other mothers in Kparisserou

Two weeks after their return, the women who had visited Banikoara took the initiative to organise a

feedback session for other mothers in Kparisserou. They felt that the knowledge they had gained during the visit would be invaluable for the other women wanting to improve the nutrition of their small children.

The women asked the facilitator from the NaviNut project team to take photos of the village feedback session, which were greatly appreciated by the community members. They also reported how the community members, including the children, enjoyed the improved *kpankpannu* porridge and *wagaru*.

Thus, the opportunity offered by the NaviNut project's action funds for village women to decide on and plan their exchange visit proved valuable. It generated great enthusiasm among both the visiting and the hosting women and led to a spontaneous sharing of knowledge among still more women. This shows the positive effects of the action funds in stimulating learning between women even beyond the activity that was initially funded, which in this case was the development of the improved food products.

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Ghanaian experience in helping women farmers improve sales of a local innovation



Mrs Nmaah shares information about her dawadawa product at the National Farmer Day.

Credit: Albert Avoka

ELI-FaNS (Expanding the promotion of local innovation for Food Security and Healthy Nutrition to Strengthen resilience with a focus on women) is the third in a series of projects funded by the German development support agency Misereor under the umbrella of the international ProInnova network since 2016. This project phase is being implemented by multistakeholder ProInnova platforms in five African countries: Benin, Burkina Faso, Ghana, Kenya, and South Africa. The case presented here is from northern Ghana.

The innovator and her innovation

Ms Akunetiah Nmaah is a 56-year-old woman living in Feo community in Bongo District of Ghana who processes and sells *dawadawa* as a major source of income. *Dawadawa* is a traditional condiment made from the seeds of the African locust bean tree (*Parkia biglobosa*), also known as *dawadawa* in the Hausa language in several West African countries and as *néré* in French-speaking West Africa. The seeds are cooked and fermented to make *dawadawa*, which is used as a seasoning in many cooked dishes, much like the way industrially manufactured stock cubes are used.

Processing of *dawadawa* traditionally involves trampling the boiled *dawadawa* beans with bare feet to separate the boiled beans from their skins. This method can give the final

product an unpleasant odour and may pose health risks to consumers. Ms Nmaah improved the traditional method by pounding the raw *dawadawa* beans in a clean mortar to remove the skins before boiling the beans and heaping them in a clean basket and covering them with a lid for 2 days for fermentation to occur, then leaving it uncovered to sun-dry before she packages it for sale. This change in the *dawadawa* seed processing method makes the condiment appear to be more hygienic and thus more appealing to her clients. The method also reduces time and effort spent and avoids cracks forming on the feet of the people trampling the beans.

ProInnova support to develop her enterprise

During the previous project phase, the ELI-FaNS team had identified this different way that Ms Nmaah had developed to make *dawadawa*. Because the *dawadawa* seeds contain proteins, lipids, vitamin B2, lysine, calcium, sodium, and potassium, it can make a substantial contribution to human nutrition. It is widely sold at local markets in northern Ghana and in neighbouring countries. The innovation has the potential to enhance the incomes of rural women and thus empower them economically within the family and the broader community. For these reasons, the project team – together with local women in the

project's action-learning site in Bongo District – selected it for a process of farmer-led experimentation and further development of the innovation.

Two nutritionists from the Women in Agricultural Development (WIAD) Unit of the Bongo District Department of Agriculture, both of whom were women, provided training for Ms Nmaah and four other women in her household who were helping her process the *dawadawa* for the market. The training gave the local women some ideas and skills on how to prepare the nutritious products more hygienically, for example using clean water, keeping the environment clean to avoid contamination during processing and keeping the product covered at the market. The training also addressed packaging of the product since Mrs Nmaah previously sold it in open baskets at the market. Through the project, she started to use transparent plastic containers that were labelled to indicate the type of product, contact details and partner logos.

Staff members of a local non-governmental organisation (NGO) that is collaborating in the ELI-FaNS project, Navrongo-Bolgatanga Catholic Diocese Development Organization (NABOCADO), also gave Ms Nmaah and her assistants some training in entrepreneurship and business skills, specifically focusing on commercialising her innovation.

The ELI-FaNS project has a component that is supporting the establishment of Local Innovation Support Facilities (LISF), to which farmers can directly apply for funding and other forms of support to conduct farmer-led research and to further develop their innovations. Ms Nmaah was successful in applying for a grant to purchase some large processing containers and plastic containers for holding the finished product. This allowed her to upgrade her innovation as well as to expand her processing activities, thereby increasing her income from sales. Through her involvement in farmer innovation fairs, radio programmes and farmers' days co-organised by the ELI-FaNS project, she has also built links with new buyers in the urban cities of Kumasi and Accra.



Ms Nmaah with the certificate and prizes she received in recognition of her innovativeness.

Credit: Albert Avoka

Recognition and benefits for the local innovator and the broader community

Ms Nmaah showcased her product at a district-level farmer innovation fair organised by the Prolinnova multistakeholder platform in Ghana in 2020 and also at the National Farmer Day in 2021 in Bongo District, where she was awarded a certificate and received more equipment as a prize. She was also featured on local radio programmes, in which she shared information about her innovation and her product.

She now sells her product in many more communities and in neighbouring districts and her income has almost doubled. This excludes the wholesales to traders who buy per product to resell, which earns her additional income.

Mrs Nmaah uses the income from the sale of *dawadawa* to buy foodstuffs such as millet, maize and soup ingredients, thus making her family more food secure. She also uses the income to pay school fees for her grandchildren. Through her business she was also able to invest in livestock. This includes a cow that she bought two years ago, which has since calved, as well as five sheep and four goats, all of which have had offspring, so that she now has a total of 15 small stock. Because her scale of production has increased by about 60%, she has employed five more women from the community to help her in *dawadawa* processing, and another four women are buying from her to resell at the Yelewongo Market in Burkina Faso. Mrs Nmaah has identified two more

wholesale buyers, from Accra and Kumasi, which will allow her to expand her business and contribute to her commercialisation goal.

In addition to creating a number of jobs as well as opportunities for other women to establish small businesses, Mrs Nmaah has provided skills training to two more groups in the Feo catchment area, comprising 15 and 17 women, respectively. This has increased the number of women processors that have acquired and are using new knowledge and skills in the *dawadawa* trade.

The impact of supporting local innovation

It is important to recognise that Mrs Nmaah's innovation and the related support in entrepreneurship are having an impact beyond her immediate household. During an interaction with the National Steering Committee of Prolinnova in 2022, she remarked: *"I am extremely grateful to the project partners (Misereor, ACDEP, NABOCADO and Department of Agriculture) for their support to alleviate my situation of poverty and that of other vulnerable women in the Bongo project area."*

Joseph Nchor and Albert Avoka

Joseph Nchor coordinates the ELI-FaNS project under the Prolinnova (Promoting local innovation in agroecology) umbrella; Albert Avoka is field officer with the Navrongo-Bolgatanga Catholic Diocese Development Organization (NABOCADO) in Ghana.