

Zanguga community in Ghana innovates to restore “Kundunvori” biodiversity



Woman boiling sheanuts: Madam Memunatu Adam, 35 years, processes sheanuts into sheabutter for a livelihood. She is seen here parboiling the raw sheanuts collected from the resource area. They are then dried and turned into kernels by removing their outer shells. The kernels are then processed into shea butter.

Credit: Prolinnova

Zanguga is a small community in West Mamprusi Municipality in the North-East Region of Ghana. It has a population of 683 (345 male, 338 female) according to the 2020 Ghana census. The vegetation is grassland with scattered trees and shrubs, mainly shea, locust bean, mango, neem and tamarind. The main occupation of the local people is farming: mixed cropping in plots intensively cultivated near their homes and in extensively cultivated “bush farms” further away, using slash-and-burn techniques. They grow mainly maize, millet, beans, cowpea, soybean and diverse vegetables. The men raise some cattle while the women raise mainly goats, sheep, guinea fowls and local chickens. Aside from farming, men also engage in fishing in the

perennial river running through the area, beekeeping and hunting, while women produce sheabutter, *dawadawa* (a local condiment made from locust bean), oil extracted from groundnuts, soap and charcoal to generate additional income.

Kundunvori biodiversity vital for local livelihoods

Zanguga and the surrounding communities are endowed with a natural resource area locally known as the *Kundunvori*, which is of cultural, spiritual and economic significance to all the communities. Dispersed within cropping and grazing land, the *Kundunvori* has sacred rocks, caves and groves where the community chiefs perform traditional rituals and sacrifices to their ancestral gods for spiritual

wellbeing and development. During the *Kundunvori* ritual performances, the people of Zanguga and the neighbouring communities pray for long lives, prosperity, good harvests, community protection and good behaviour to maintain communal harmony and peace.

The *Kundunvori*, covering about 3 km², also provides physical natural resources that support local livelihoods in all the surrounding communities and are used in common. Wild bees and various reptiles and small wildlife species inhabit the area, which also hosts many medicinal plants. The perennial river provides water for livestock and dry-season vegetable growing. The inhabitants of the communities located around the *Kundunvori* can fish, hunt and harvest honey, herbs and wild fruits to meet their food, economic and social needs.

Even though the *Kundunvori* brings many cultural, social and economic benefits to the local people, the natural resources in the area have degraded in the past decade. The main causal factor is the rapid increase in human population, which has put intense pressure on the natural resources and threatens the entire existence of the *Kundunvori*. The people of Zanguga and the neighbouring communities have started to cut trees and shrubs indiscriminately for fuelwood and roofing materials. They have expanded cropping in the area, also using chemical inputs that have a negative impact on the local biodiversity. The cultivation now being practised on the banks of the river, using water from the river, has caused siltation. Each year, wild bushfires destroy both fauna and flora in the sacred area. Some younger people or recent immigrants do not always follow the old unwritten “social rules” for this area because the traditional sociocultural institutions that regulated resource use have become weaker.

Social innovation to restore and manage the Kundunvori

Given the importance of the *Kundunvori* to local livelihoods, the Zanguga Community – led by the Community Chief (traditional authority) and his council of elders, supported by some

interested youths in the community – formed a Zanguga *Kundunvori* Development Group to protect and regulate use of the resources to ensure their sustainability. The group comprises three types of local stakeholders who play three major and complementary roles, supervised by the Community Chief:

***Kundunvori* spiritual protection:** The Community Chief performs the necessary rituals and libations that keep the area sacred so that it provides spiritual protection to the community and maintains its aesthetic and cultural functions. This enables community members to continue bonding with their ancestors while protecting the valuable *Kundunvori* natural resources for the current and future generations. The power to control the area emanates from the Chief because he is regarded as the embodiment of traditional culture and the link between the local people and their ancestors. He can apply sanctions and punish offenders who misuse the *Kundunvori* natural resources, and he promotes good practices that enhance their value and benefits.

***Kundunvori* regulation:** The Chief assigned this role to a caretaker, who is responsible for day-to-day maintenance of the resource and reports back to the Chief. The caretaker is a local trustworthy person who knows the community's history and customs and applies these in his functions. He takes instructions, carries messages and performs daily duties including monitoring and supervision of all activities in the *Kundunvori* on behalf of the Chief.

Zanguga beekeeping: The beekeeping group is made up of about 30 Zanguga men – young to middle-aged (about 18–50 years of age) – who harvest honey from wild bees. Their prime interest is to protect the natural resources and thus the bees from unsustainable farming and other livelihood activities. This loose alliance seeks to maintain the *Kundunvori* so that the men can continue to harvest natural honey and further develop beekeeping as a source of livelihood intimately connected to the biodiversity of the *Kundunvori* and the surrounding areas. They want to prevent anything that endangers the bee population, such as

indiscriminate tree cutting, bush fires and agrochemicals.

Participatory innovation to improve the *Kundunvori*

For six years, the Zanguga *Kundunvori* Development Group tried to restore and maintain the natural resources in the *Kundunvori* in order to sustain the livelihoods of the local people. However, because it was difficult to achieve this goal on its own, the group sought a development partnership. In 2021 during a Prolinnova project funded by the German NGO Misereor, the local non-governmental organisation (NGO) Center for Ecological Agriculture and Livelihood (CEAL), which coordinates

Prolinnova–Ghana activities in the area, learned about this local socio-institutional innovation. It agreed to use resources in the follow-on Misereor-funded project – ELI-FaNS (Expanding the promotion of Local Innovation for Food security and healthy Nutrition to Strengthen resilience) – to work together with the Zanguga Community and its Chief and with other local institutional stakeholders to develop this innovation further through a process of community-led participatory innovation development (PID).

This process started in April 2023, when CEAL and the various institutional stakeholders – the Department of Agriculture (DoA), the Forestry



Sheanuts and sheabutter: Madam Paulina Gumah is a member of Boayini women self-support livelihood group. She processes and sells shea butter for extra income. She does not discard the bad shea nuts (being held) as is the usual practice, but processes them into clean and pure shea butter using an innovative processing method.

Credit: Prolinnova

Commission (FC) and the Faculty of Natural Resources and Environment of the University for Development Studies (FNRE/UDS) – organised a session with the Zanguga Community and the Local Government Authority to share the concepts of local innovation and PID and to identify the community’s priority local innovations in agriculture and natural resource management that could be promoted to improve food security and livelihoods. The local multistakeholder platform of Prolinnova–Ghana and the community members, using jointly developed criteria, selected the Zanguga *Kundunvori* Development Group as an important innovation to jointly develop further through PID.

The aims are to achieve restoration, sustainable management and use of the *Kundunvori*. CEAL and other institutional partners documented the innovation in June 2023. They then met with community representatives and the Community Chief, first at community level and then in the CEAL office, and jointly developed a plan of PID activities to improve the natural resources in the *Kundunvori*.

The partners in this PID process are the Zanguga *Kundunvori* Development Group, CEAL, another NGO EcoRestore, the Zanguga beekeeping group (including young farmers), DoA, FC and FNRE/UDS. They consult with other community

members, such as women who collect fuelwood and herbs in the area and farmers who sometimes graze their livestock there. The Prolinnova–Ghana technical team based in Tamale provides advisory and facilitation support to the PID process.

The PID plan outlines the main issues and objectives of the collaboration, the roles of the key stakeholders in the process and the activities to be carried out, including formulation of local bylaws to regulate use of the natural resources. Bylaws being considered include restricting grazing and prohibiting use of agrochemicals in and around the *Kundunvori*. Other activities in the plan include planting economic and indigenous trees to restore the vegetative cover, training the resource-dependent livelihood groups in natural resource conservation practices, and cross-learning with neighbouring communities on the process and results, with a view to inspiring them to take similar steps. The plan also outlines the materials and inputs required to implement the PID process (including who provides which resource), as well a timeframe for completing the process.

This PID process will help address issues of over-dependence on the resources through promoting alternative livelihoods and restoring and preserving the biodiversity in the *Kundunvori*. It will also strengthen capacities of community members and other stakeholders in sustainable management practices in the *Kundunvori* to reduce deforestation and land degradation. Furthermore, the PID process is designed to increase social benefits and enhance community cohesion and empowerment by focusing on the people who depend on the natural resources and ensuring that these people have a strong role in decision-making about natural resource management and use.

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Herbs collected in Kundunvori: Adam Abdulai is a 50yr old farmer who prepares and uses organic pesticides from herbs that are becoming extinct elsewhere due to bush burning, but are harvested from the protected Kundunvori biodiversity resource.

Credit: Prolinnova