Refrigerating Jar
Shea butter storage for Nyingali community, Karaga District, Ghana

Main authors
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Project data
Project group: Architecture, building and civil engineering
Client: Make Africa Better (now: groW: Group for Women)
Project background: Research project
Planned start: February 2018

Summary and appraisal of the project by the jury
The striking storage tower for the Nyingali community is designed to induce a chimney effect to keep shea nuts cool and fresh before processing. By storing the nuts and processing them incrementally, the community will be able to sell processed shea butter for skin moisturizing when it commands a higher price in the market cycle. The base of the tower is a storage space with a double-layer masonry construction designed to keep the interior cool. Its ceiling is made of glass foam, which is designed to act as a heat exchanger when damp. The volume above is cross-ventilated and draws hot air upwards. This project, which also includes a range of training programs, is part of a long-term engagement by the NGO Make Africa Better (MAB) to improve the production of shea butter in the village. The facilities are built in cooperation with volunteers from the village and the resulting structures are owned locally.

Statements on the sustainability of the project by the author
Innovation and transferability - Progress
This project is mainly driven by local needs and will be carried out with the community members. Through-out their participation during the construction, community members will get an opportunity to learn how to manage and use it. Voluntary participation from the community members and their ownership is the best way to keep the building sustainable. MAB has been implementing various projects in the Karaga district, particularly in Nyingali and its neighboring communities, since 2011. The local project manager is based in near the project site and MAB Korea and Ghana staffs are regularly visiting the site for their project four times per year. MAB organized the self-help groups for the training programs. Local government, local leaders have been actively working with MAB.

Resource and environmental performance – Planet
Construction materials are eco-friendly and locally accessible. And the way of building type will follow the local construction method in Northern Ghana. The locally-built structure with a local construction material would not harm the environment. Mud bricks and cement bricks can be made anywhere. Masonry is the basic construction method that can be done by local labor. Therefore, this storage will be built with basic local construction material and method. The storage functions itself without any further extension work. It can be highly appropriate for the area which has a dry and higher temperature such as Northern Ghana. It purposes to emit zero percent of CO2 by reducing the negative effect on the environment.

Contextual and aesthetic impact - Place
Existing buildings are weak at external environments such as temperature and moisture. The new building can overcome these limitations under the same conditions. The building does not require any further external support and it is eco-friendly, sustainable, and energy saving. The building will be the center of the community and it will be a place to work and rest for women and a playground for children. This place will function as a meeting point and festival place for the community. The building and its courtyard can be a plaza for different events. For short term, this is to store food and shea butter for its freshness which is crucial for quality. For the long-term purpose, it provides new residence types for African. A pleasant and improved quality of residence provides quality of life.

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