**Summary**

The eradication of extreme poverty and hunger is the first Millennium Development Goals (MDGs), as set by 179 United Nations Member States in 2000, while in the 2030 agenda for Sustainable Development goals women’s role and wellbeing have direct implications across several SDGs. Most of them have women at their core, most notably SDG1 (no poverty), SDG2 (no hunger), SDG3 (good health and wellbeing) and SDG15 (life on land). Emphasizing the importance of income generating activities in contribution to poverty reduction and women empowerment, this project is an attempt to contribute to the fulfilment of the MDGs and SDGs agenda. The focus of the proposed project: (1) to improve the household income and nutritional status in north eastern regions, Gezira state in Sudan, (2) to strengthening the capacities of women and youth to valorize small scale gardens production 3) to facilitate university staff, target group and private sector engagement for adoption of the processing and market driven technological packages and their impact on household welfare and (4) to develop knowledge and communication products for effective dissemination of technologies, innovations and management practices in small scale gardens. The methodology will adopt in this project is to use rainfall water during and after the rainy season by applying appropriate water harvesting techniques and soil conservation measures. In particular the project aims at generating income for the household and improves of the nutritional status and awareness through the transfer of the technology of the small scale gardening to produce vegetables, rearing goats by using different rations formulation to increase milk production and chickens in the available area around their houses (making efficient use of rainfall water and domestics water). Food processing and marketing can help to manage the surplus product and earn better income, add value, enhance shelf life and encourage food diversification. From this prospective rural women in Sudan can play a crucial role in generating income from off-farm activities if they exposed to training programs on many on these off-farm activities such as needlework, sewing and food processing. Furthermore, the project will be an opportunity for the staff to upgrade their teaching capabilities and interacting with rural communities.

**Target groups**

The target groups in this action are young, women, farmers, students and Staff University and ARC researchers. The project has directly impact 35 women in backyard garden and local breed chickens rearing and 10 farmers for applying water harvesting techniques and drip and 14 women they well be benefits from goat rearing. 10 farmers in water harvesting techniques.

**Results area**

Eight main outputs will be delivered from the action:

**Result Area 1:** household income increased by 60% by 2021 in study area

**Result Area 2:**
1. One technical manual for rations formulation for goat milk available by year two
2. One technical manual for chickens rearing (local breed)
3. One technical manual for compost production

**Result Area 3:** 1-5 newly vegetable types in small scale garden introduced
Result Area 4: 2- New rations formulation for increase goat milk production introduced
3- Number of chickens (local breed) increased by 50% by the end of year project

Result Area 5: 10 small scale gardens established and managed by target group

Result Area 6: Platform created to linked the target group and university staff and NGOs

Result Area 7: Cooperative unit for eggs, chickens, milk and milk products are developed by the end of year 2 of the project established

Result Area 8: 12 M.Sc. students are trained

General Activities:
Activities of the project are organized in six work packages
1. Assessment of the economic and environment potential of the small scale farms
2. Selection of vegetables suitable for the area and identify available areas for vegetables production and select beneficiaries
3. Identify types and number of livestock available in the study area
4. Capacity building on backyard gardens, rations formulation, and chickens rearing management.
5. Assessment of farmers’ perceptions and adoption of the newly introduced technical packages and the impact on household income and food security
6. Establishment of cooperative unit