



## **TERMS OF REFERENCE FOR A DIRECTED PROJECT**

<b>KEY STRATEGIC AREA 4</b>	: Water Utilisation in Agriculture
<b>THRUST 3</b>	: Water Utilisation for Poverty Reduction and Wealth Creation in Agriculture
<b>PROGRAMME 1</b>	: Sustainable water-based agricultural activities in rural communities

**TITLE: A roll-out of homestead vegetable gardens as test beds for Agri-technologies to enhance food and nutrition security in five Provinces**

### **Rationale**

Studies show that there has been some progress in addressing food security driven by increased crop productivity, these gains however, are not linked to nutrition security. There is a disjoint between improving crop productivity, the choice of crops and addressing gaps in nutrition. As a result, most of the poor rural households still suffer high levels of nutrition insecurity and malnutrition. This is associated with, in part, a chronic lack of dietary diversity and access to nutrient dense foods. Such increasing malnutrition, if left unchecked, could reinforce a vicious cycle of poverty among poor rural communities. Previous WRC research confirmed that there was a need for a paradigm shift in how agriculture interventions were designed and implemented, such that the interventions were more closely linked to water, nutrition and human health outcomes. However, achieving this calls for more transdisciplinary type approaches which focus on the broader food system rather than just specific food value chains, which tend to be linear. Systematic analysis confirmed that the major constraints to achieving food and nutrition security as well as human health and well-being within poor rural households was a very limited availability and access to nutritious, diverse and balanced diets.

The recent events in KwaZulu-Natal (KZN) and Gauteng Provinces which resulted in the looting and vandalising of shopping malls and other important food supply chains have only compounded existing food and nutritional insecurity challenges, particularly in poor households. This has seen most people losing their jobs, further compounding household vulnerabilities through loss of income. All this has taken place at a time when the Covid-19 pandemic is still impacting on the economy and the national unemployment rate standing at over 31%. Therefore, there is an urgent need for informed short-term interventions that ensure food and nutritional security in poor communities in South Africa.

These results warrant the establishment of homestead food gardens to increase daily nutrient intake. Home gardening is a sustainable strategy for improving food, nutritional, and incomes security when gardens are well adapted to local agronomic and resource conditions, cultural traditions, and preferences. African leafy vegetables will also be grown in-order to re-introduce the crops to promote healthy and nutritional consumption.

### **Overall aim:**

Malnutrition, either over- or under-nutrition, is therefore becoming a significant problem in South Africa, especially in high-risk groups; Young, Old, Pregnant, and Immuno-compromised (YOPI). Homestead vegetable gardens were found to be an effective strategy that addresses hidden hunger and food insecurity in poor households. Based on these findings, the WRC seeks to roll-out homestead vegetable gardens as test beds for Agri-technologies in 5 000 households.

The overall objective of the project is to address food and nutrition security and malnutrition in high-risk groups, YOPI through the participation of communities and individual households in order to improve vegetable accessibility.

### **Specific aims**

- To establish vegetable gardens in 5000 homesteads in Mpumalanga, KwaZulu – Natal, Limpopo, Eastern Cape and Gauteng Provinces.
- To determinate the impact of established food gardens on the nutritional and livelihood status of beneficiaries.
- To contribute to human capacity development through co-creation and co-learning as well as on-site training for skills transfer to families and communities.
- Foster the adoption food systems approach, which links agriculture, the environment and health
- Promoting underutilised crops as nutrient dense alternatives, building education and awareness among consumers on healthy dietary habits.
- Apply transdisciplinary approaches that straddle the science-policy interface
- To implement simple irrigation and nutrient management tools/technologies in homestead gardens for enhanced irrigation management of selected vegetable crops.
- To improve efficiency in the protection of soil and water resources by rainwater harvesting and reduced nutrient leaching.

### **Deliverables:**

The deliverables should address all the stated objectives and may also include; the introduction of green technology, on-site climate-smart technologies, the establishment of household gardens, provide support in the form of infrastructure such as the provision of boreholes and water storage tanks. It is also important to explore the impact of vegetable gardens towards meeting dietary requirements.

As it is most unlikely that a single organization will have all the expertise required, it is strongly recommended that a consortium of experts and organizations with full appreciation of the food security challenges, nutritional deficiencies the YOPI and climate-smart agricultural innovations is formed in order to provide the highly specialised knowledge required.

**Impact Area:**

Empowerment of Communities and other related Knowledge tree impact areas

The estimated budget over a 60-month long study period is available from KSA 4.

<b>Time Frame</b>	<b>: 5 years</b>
<b>Budget for 1st year</b>	<b>: R 2 000 000.00</b>
<b>Retention payable on approval of final deliverable</b>	<b>: R 1 200 000.00</b>
<b>Total Funds Available</b>	<b>: R 6 000 000.00.</b>

**Budget breakdown:**

AVAILABLE BUDGET OVER THE PROJECT PERIOD OF FIVE YEARS: **R 6 000 000.00**

2021/2022:	R 2 000 000.00
2022/2023:	R 1 000 000.00
2023/2024:	R 1 000 000.00
2024/2025:	R 800 000.00
2025/2026	R 1 200 000.00
<b>Total</b>	<b>R 6 000 000.00</b>