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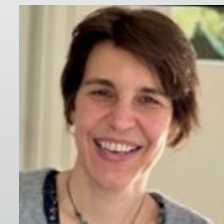
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# Project II

## BUILDING CAPACITY FOR TRANSFORMATIVE AGRI-FOOD SYSTEMS FOR RESILIENCE IN LAKE VICTORIA BASIN OF KENYA

### Team Leaders:

1. Dr. Calleb Olweny, PhD
2. Prof. Marijke D' Haese, PhD



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### Partners



# Local Project Members



**Dr. Calleb Olweny**  
Project Leader  
PhD Plant Breeding  
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PhD –  
Horticulture



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**Prof. Darius Andika**  
PhD Environmental Horticulture  
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# Belgium Team



**Dr. Jan Diels**  
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**Prof. Marijke D'Haese**  
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**Dr. Stijn Speelman**  
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# Understanding the local context

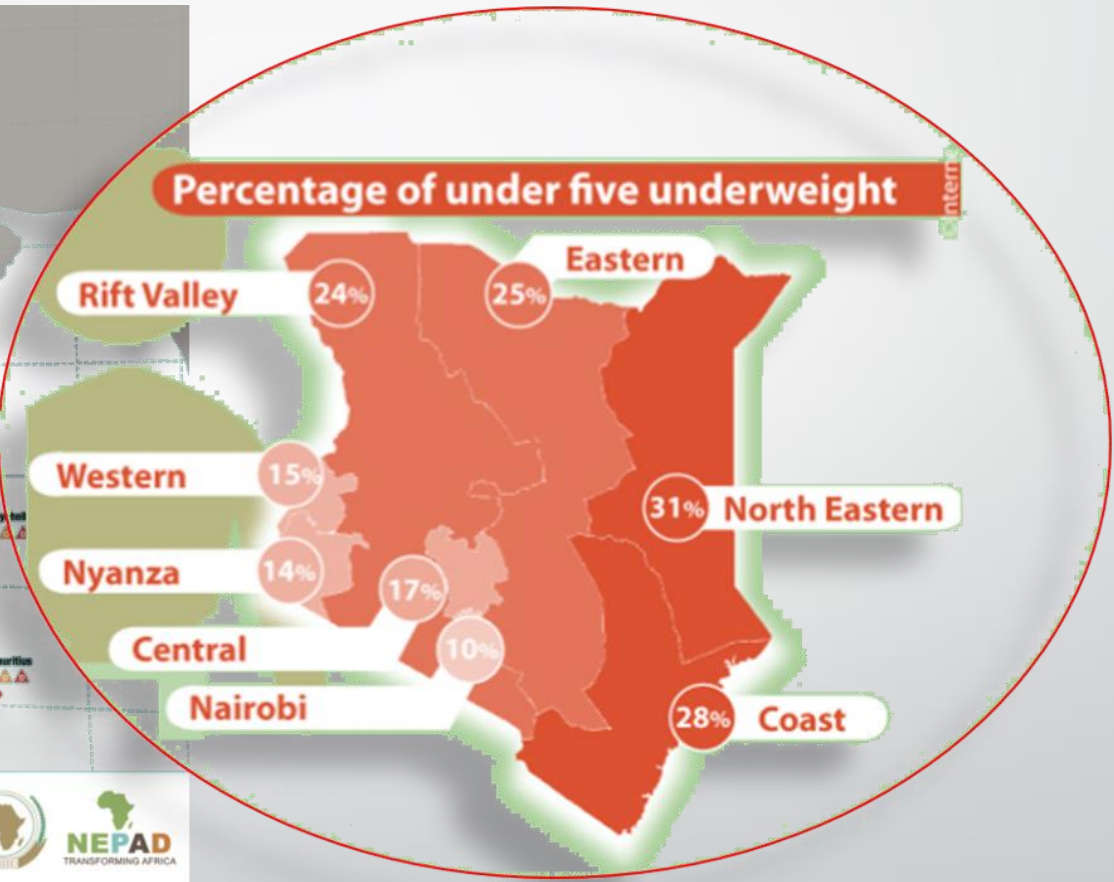
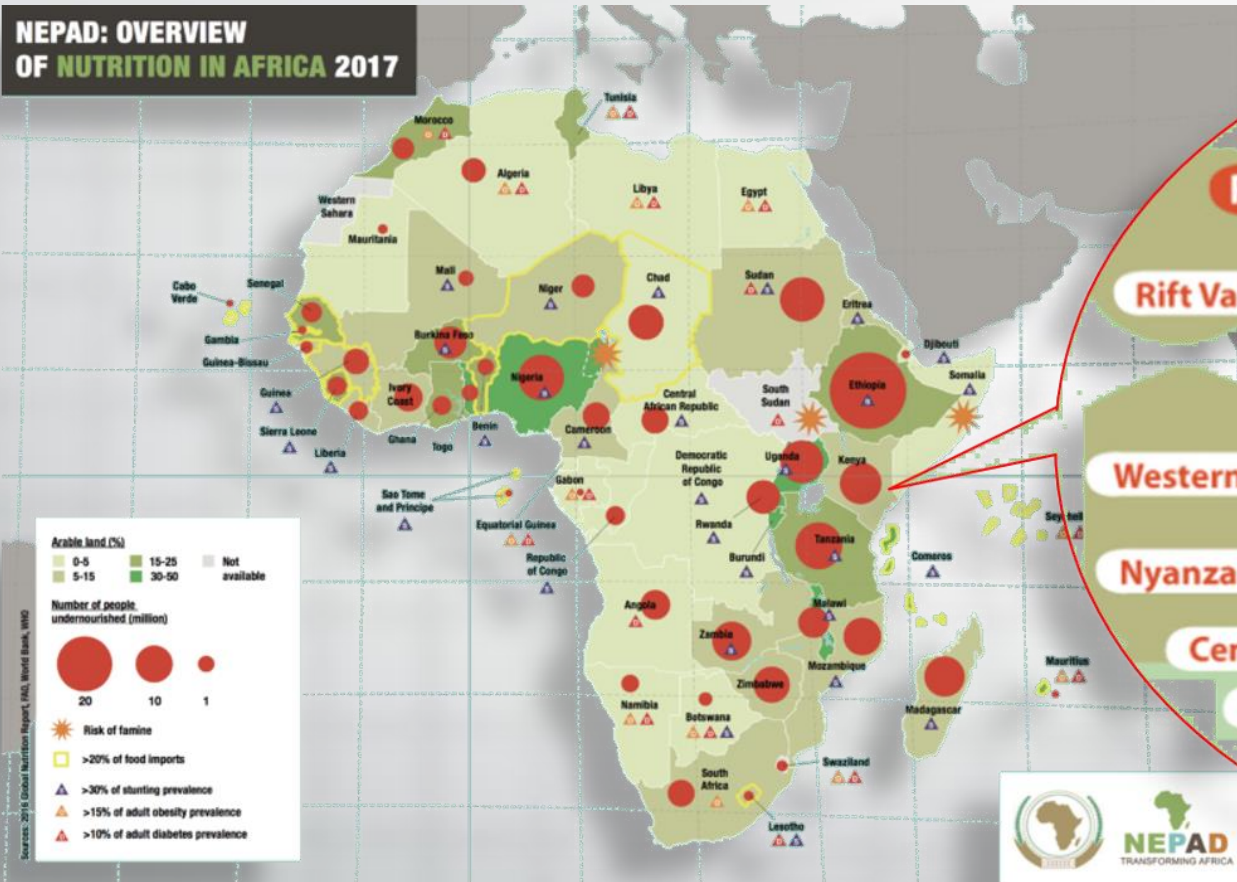
- Food systems **remain vulnerable** to **economic, climatic, and geopolitical shocks**.
- Globally, an estimated 811 million people still go hungry.
- In Kenya; an estimated 14 million children under the age of five suffer from severe acute malnutrition
- 45% of deaths in children are attributed to undernourishment
- Women, children and youth are the most vulnerable groups





# Understanding the local context

## NEPAD: OVERVIEW OF NUTRITION IN AFRICA 2017



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# Project Objectives

## Medium objectives (5 years)

- i. To develop and promote climate resilient agri-food systems
- ii. To strengthen collaborative learning, exchange programmes and outreach

## Long-term objectives (10 years)

- i. To promote gender sensitive resilient and diversified livelihoods
- ii. To establish a dynamic and responsive breeding programme



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# Project Strategies/Activities

## Mid-term objective 1. To develop and promote climate resilient Agri-food systems

- Develop and promote resilient crops (cereals) and micro-livestock
- Testing and characterization of crops
- Identify and promote transformative climate-smart approaches to maintain soil health, IPM and ICMP
- Identify and address socio-economic aspects of farming systems
- Address post-harvest losses and food wastage
- Diversify the current cropping and livestock systems with underutilized resources
- Strengthen local market system resilience through diversification of crop and livestock products and market intelligence



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# Mid-term objective 2: To strengthen collaborative learning, exchange programmes and outreach

- Develop student-faculty exchange programme framework
- Curriculum review and programme development (post-graduate)
- Postgraduate training in partnership with collaborating institutions
- Establish school of veterinary sciences
- Re-skilling the faculty/support staff on emerging issues
- Capacity building for local actors( farmers, CBOs, NGO, policy makers)
- Strengthen training/capacity building approaches
- Establish innovative/transformational extension framework involving integration of ICT
- Strengthen collaborations, inclusive partnerships and stakeholders linkages



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# Long-term objective I: To promote gender sensitive resilient and diversified livelihoods

- Gender involvement; women, youths (gender equitable participation in decision-making, access to and control over resources)
- Promote gender-sensitive livelihoods
- Establish satellite egg hatchery in Western Kenya
- Promote social farming
- Strengthen training and capacity building approaches around CSA
- Promote value addition
- Promotion of micro livestock ( chicken, rabbits and goats)



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# Long-term objective 2: To establish a dynamic and responsive breeding programme

- Promote sustainable collection, utilization, conservation and development of germplasm for resilient traits
- Develop a molecular laboratory for crop and livestock research( **Molecule to landscape**) for QTL and other genomic studies
- Establish seed production unit
- Develop a community driven seed distribution to small holder farmers
- Strengthen Intellectual property rights and patents



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# Link with the context analysis and the other projects

- **Project 1, 2 and 5** will form strong synergy with other institutions (KEMFRI, KALRO, LVBDA) to tackle the effects of climate and environment challenges.
- Synergies and experiences with Bahir Dar University, Ethiopia which is implementing projects on natural resource management and food security.
- **Project 2** will benefit from synergies with two ongoing research projects; i) Sustainable Use of Insects as Food and Feed and ii) Improving Maize productivity in Western Kenya through Breeding and Soil Carbon Augmentation.
- **Project 2 and 4** will form strong synergies in the areas of integration of ICT innovation and GIS
- **Project 2 and 3** will form strong synergies in the areas of building a resilient population through access to nutritious food and health services



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# Expertise/ Stakeholders needed for the successful Implementation

## Expertise already present in the project team

- Crop improvement
- Livestock breeding and production
- Horticultural crop production
- Soil fertility and conservation
- Agricultural economics and agribusiness management
- Extension services and rural innovation
- Food science and nutrition

## Expertise sought for at level of the Flemish HEIs

- Veterinary scientist
- Functional genomics
- Seed system specialist
- Systems modelling expert
- Crop health
- Entrepreneurship and value addition expert
- Sociologist



# Interested in this project?

Contact:-



Local Project Team Leader:-

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**THANK  
YOU**



**KU LEUVEN**



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