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Climate Change and Health in
sub-Saharan Africa
DFG

Nutrition interventions in Kenya und Burkina Faso

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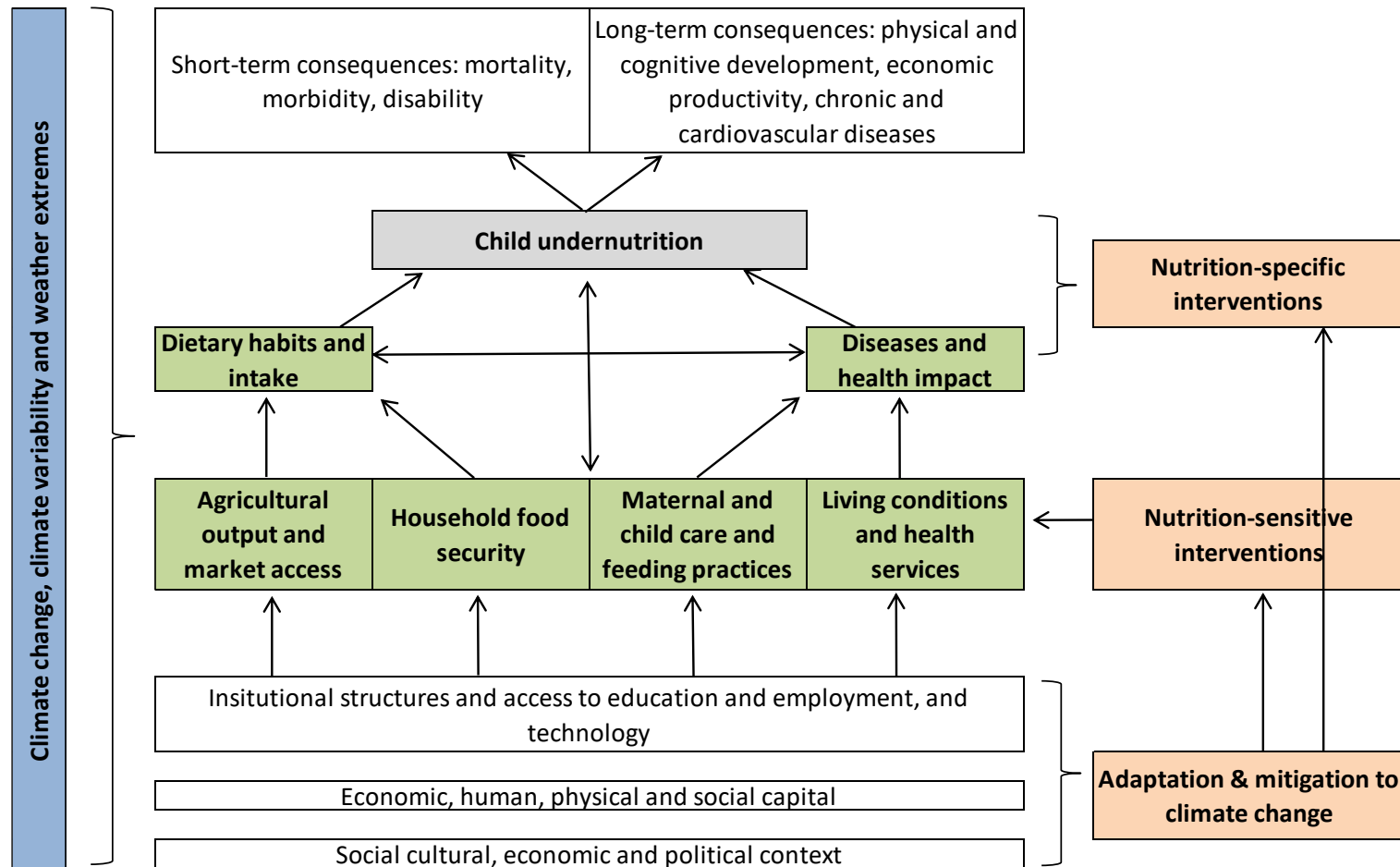
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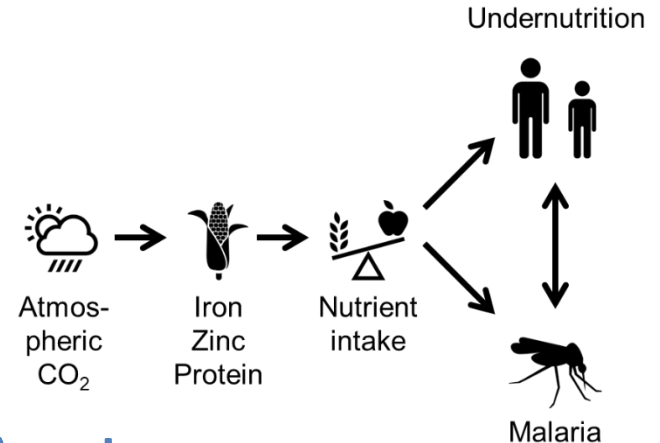
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UNICEF conceptual framework for child undernutrition (adapted)



Project objectives

- Establish the effects of
 - (1) an integrated agricultural bio-diversification (home gardens) and**
 - (2) nutrition program (nutrition counselling)**



on the status of climate-sensitive nutrients (protein, iron, zinc)
among children aged <5 years

and the risk of clinical malaria

in two agriculturally and endemically distinct areas of rural sub-Saharan Africa

Implementing a randomized-controlled trial (RCT)

Home gardens

Small-scale production systems, located close to the house, require low capital input and simple technology, provide for home and animal consumption



Example of a home garden in a Nouna HDSS village

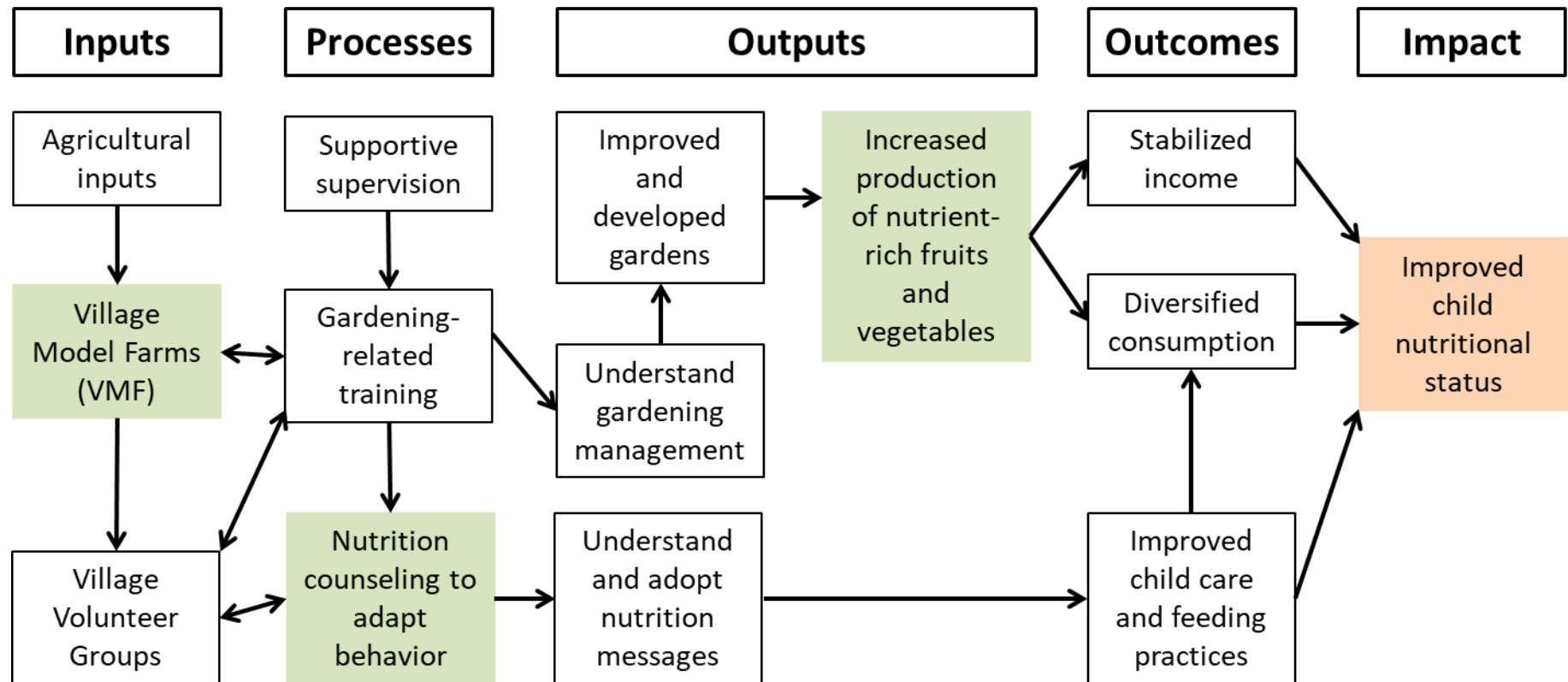


Behavior Change Communication (BCC)

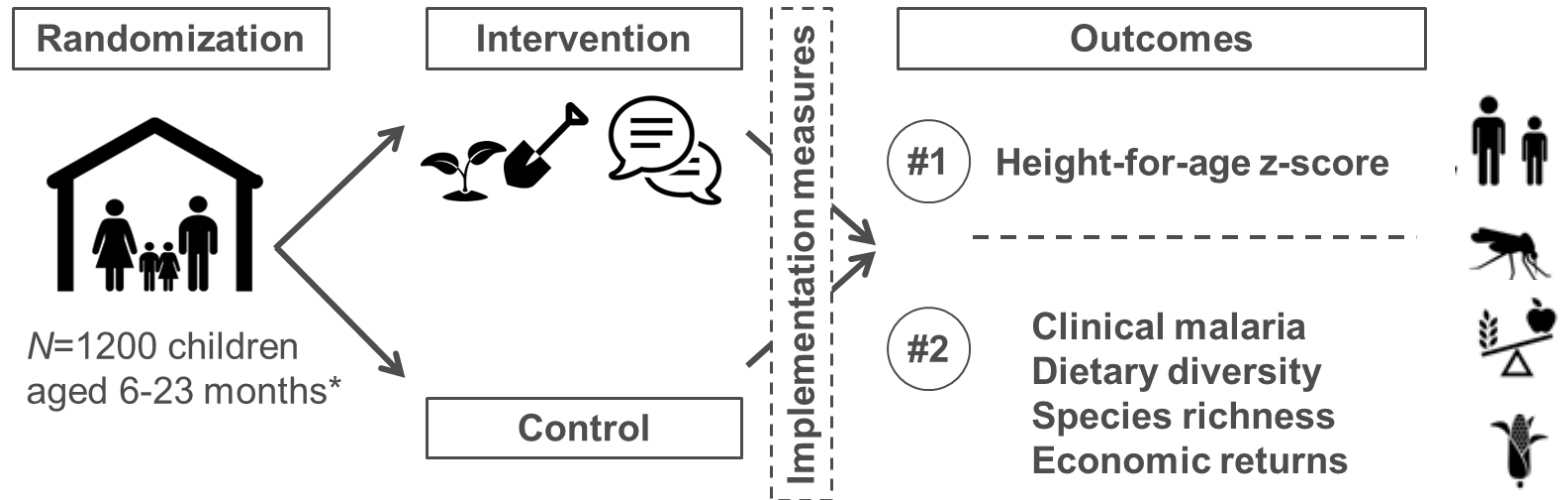
Through counselling on Essential Nutrition Actions (ENA) and Infant & Young Child Feeding Practices (IYCFP)



Impact pathways

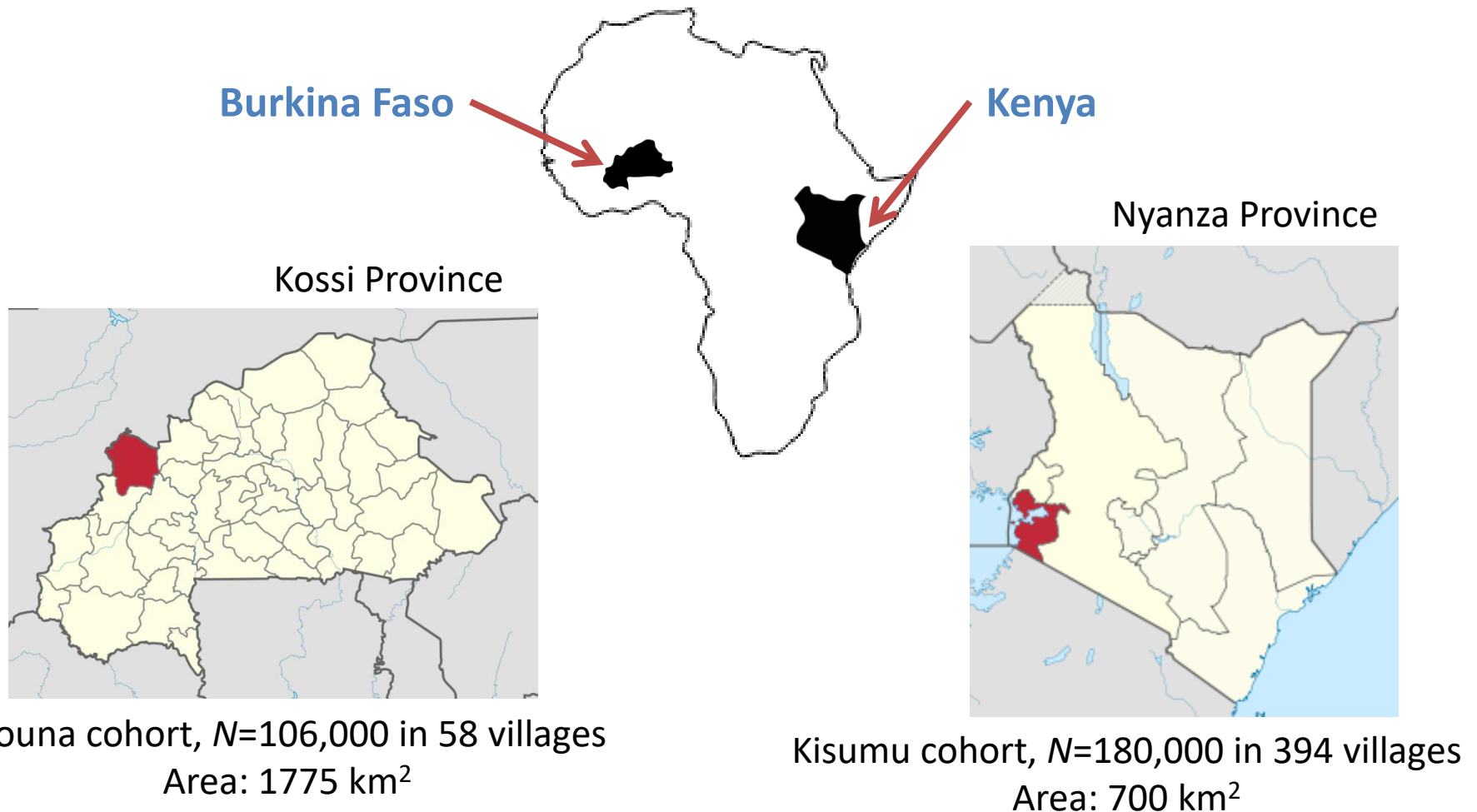


Randomized controlled trial (RCT)
















- 2 x 600 households: 2 x 300 intervention/ 2 x 300 control
- Families with children aged 6 to 23 months at baseline
- 12 to 24 months of intervention

Study location of two population cohorts



Characteristics of study locations

Nouna  HDSS	Domain	Kisumu  HDSS
 West Africa	Geography 	East Africa 
1 rainy season Dry and hot	Climate 	2 rainy seasons Humid and hot
Subsistence farming 	Agriculture 	Farming & fishing 
GDP 670 US\$/capita/y	Economics 	GDP 1508 US\$/capita/y
	Health 	

Formative research and co-design

What do children <5 years currently eat in Burkina Faso and Kenya?

How should a home garden look like?

What are the perceptions about nutrition counseling?

Study design	Scoping Review	Qualitative study	Validation study
Objectives	- To identify and analyse past home garden interventions in regards to agronomical aspects, management strategies	- To understand experiences and preferences of rural households in regards to home gardens and child nutrition counseling	- To validate the reliability of hand-held spectrometer versus blood samples to measure nutrient deficiency
Participants	- Peer-reviewed and grey literature	- 60+ indepth interviews with households and 30+ interviews with stakeholders	- 30 children <5 yrs in each study site
Outcome	- Meta-analysis on the expected effects of home gardens on child growth	- Lessons learned from past projects and population preferences	- Reliability of the use of a non-invasive alternative to blood sampling

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