

24-25 Oct 2013: KAS – NWU  
Conference  
*Risks posed to protecting the right to  
food and food security*

Nicole Claasen

# Scoping Sustainable Diets in Rural South Africa

Linking nutrition, food  
systems and environment at  
local level

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# World Food Day Theme



Friederich Hundertwasser (78) Grass for those who cry, 1995, © 2013 HAMIDA AG, Glaus/Switzerland

## HEALTHY PEOPLE DEPEND ON HEALTHY FOOD SYSTEMS

Sustainable Food Systems for Food Security and Nutrition  
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# Jungle of terms



## Food Security

(1974/1996)

→ Access, availability and adequacy of food



## Nutrition Security

(1995/1999)

→ Nutritional wellbeing, social and non-food components



## Right to food

(1948, UDHR)

→ Availability, accessibility and adequacy of food



## Food Sovereignty

(1996)

→ Right of people to define their own food systems



## Sustainable Diets

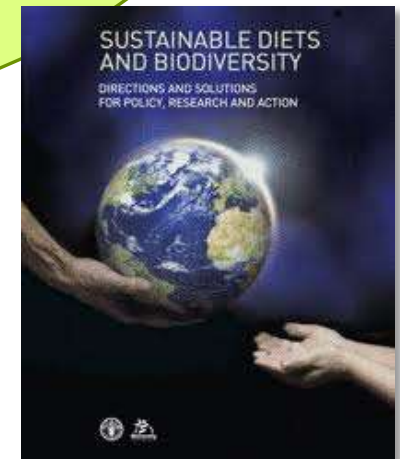
(2012)



# Jungle of terms

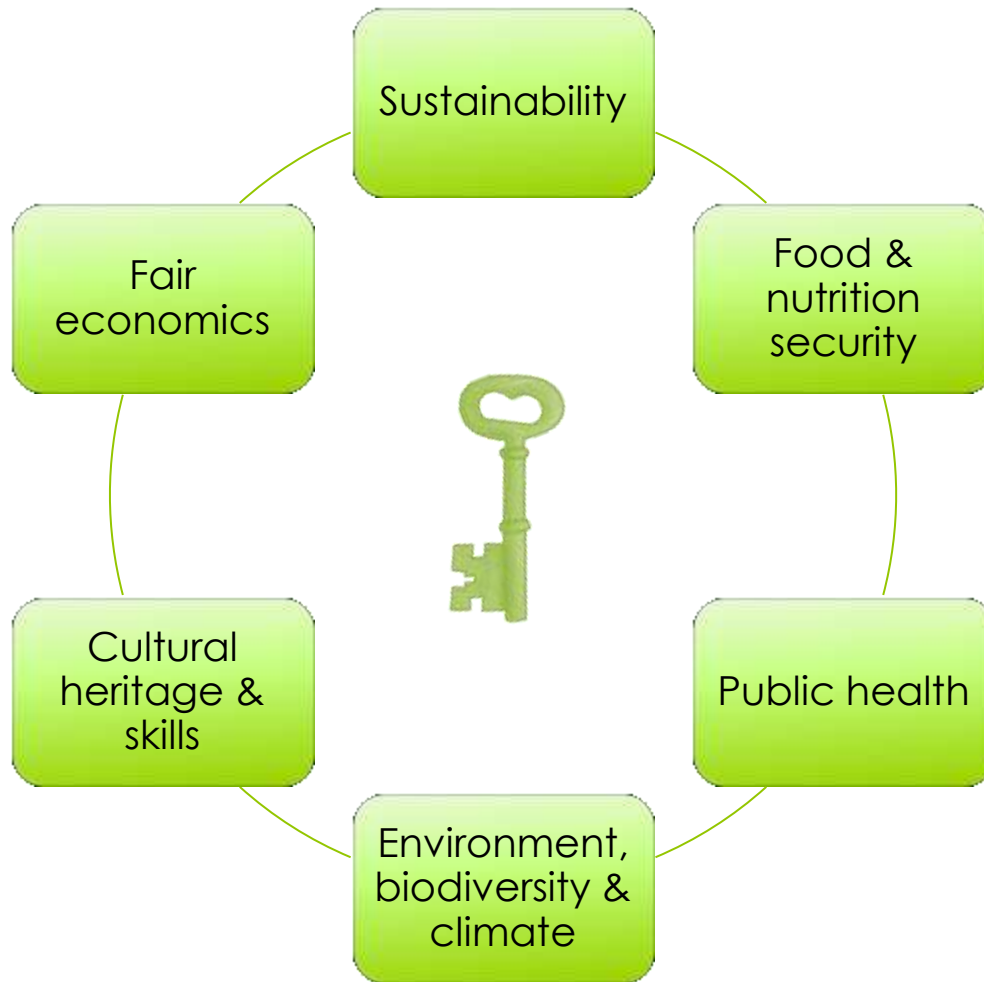
## Sustainable Diets are:

*“diets with low environmental impact which contribute to food and nutrition security and to healthy life for present and future generations. Sustainable diets are protective and respectful of biodiversity and ecosystem, culturally acceptable, accessible, economically fair and affordable, nutritionally adequate, safe and healthy; while optimizing natural and rural resources”*



(FAO/Bioversity International, 2012:2)

# Jungle of terms



**Sustainable diets  
- key components**

*(adopted from Lairon, 2012)*

# Motivation



## Imbalances of the global food system:

- Increasing concentration of global corporations in agri-input and agro-food industries → Large-scale industrialised corporate farming
- Ongoing dispossession of the world's small-scale farmers
- GMO's + specialised monocultures → biodiversity loss
- Agro-fuel production → competing with grain supplies for human consumption
- Rising levels of toxic chemicals in 'industrially' grown and processed foods → health consequences
- Nutrition transition – 'Junk food culture' → rising rates of overweight and obesity and related non-communicable diseases
- Large greenhouse gas emissions, deforestation, soil erosion, chemical contamination and water shortage → environmental impact

# Motivation



Consequence:

**842 million** people suffer from hunger and over **1.4 billion** people are overweight and obese  
(FAO 2013, WHO 2008)



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# Motivation



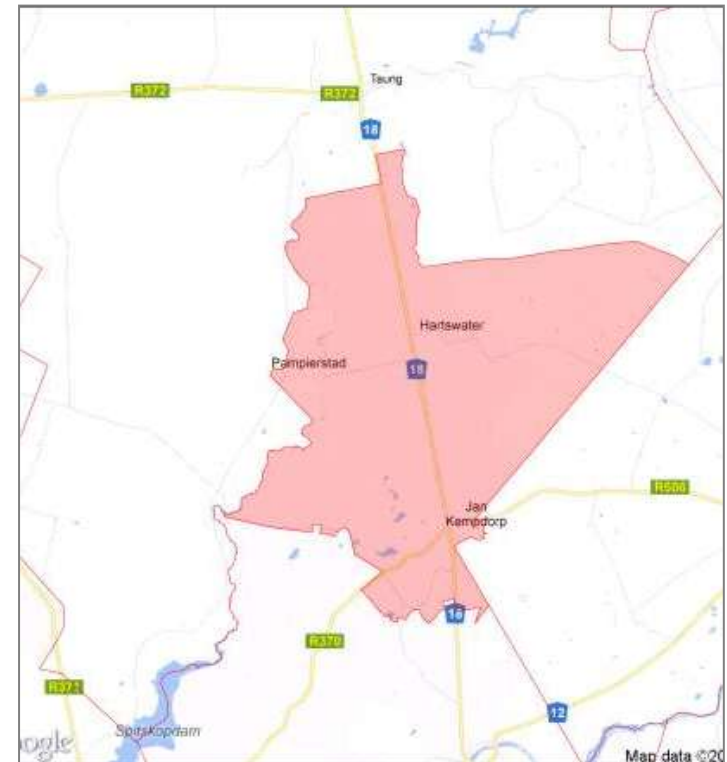
## South Africa:

- Mainly large scale commercial farmers – produce 95 % of market outputs → national food security
  - 26% of the population experienced hunger, 29% are living at risk of being hungry
  - Increased obesity levels (39% and 11% among female and male population) and increased prevalence of nutrition related diseases
  - High percentage of people living in poverty, esp. in rural areas
- ? What are the challenges and opportunities for sustainable diets in rural resource-poor communities ?**



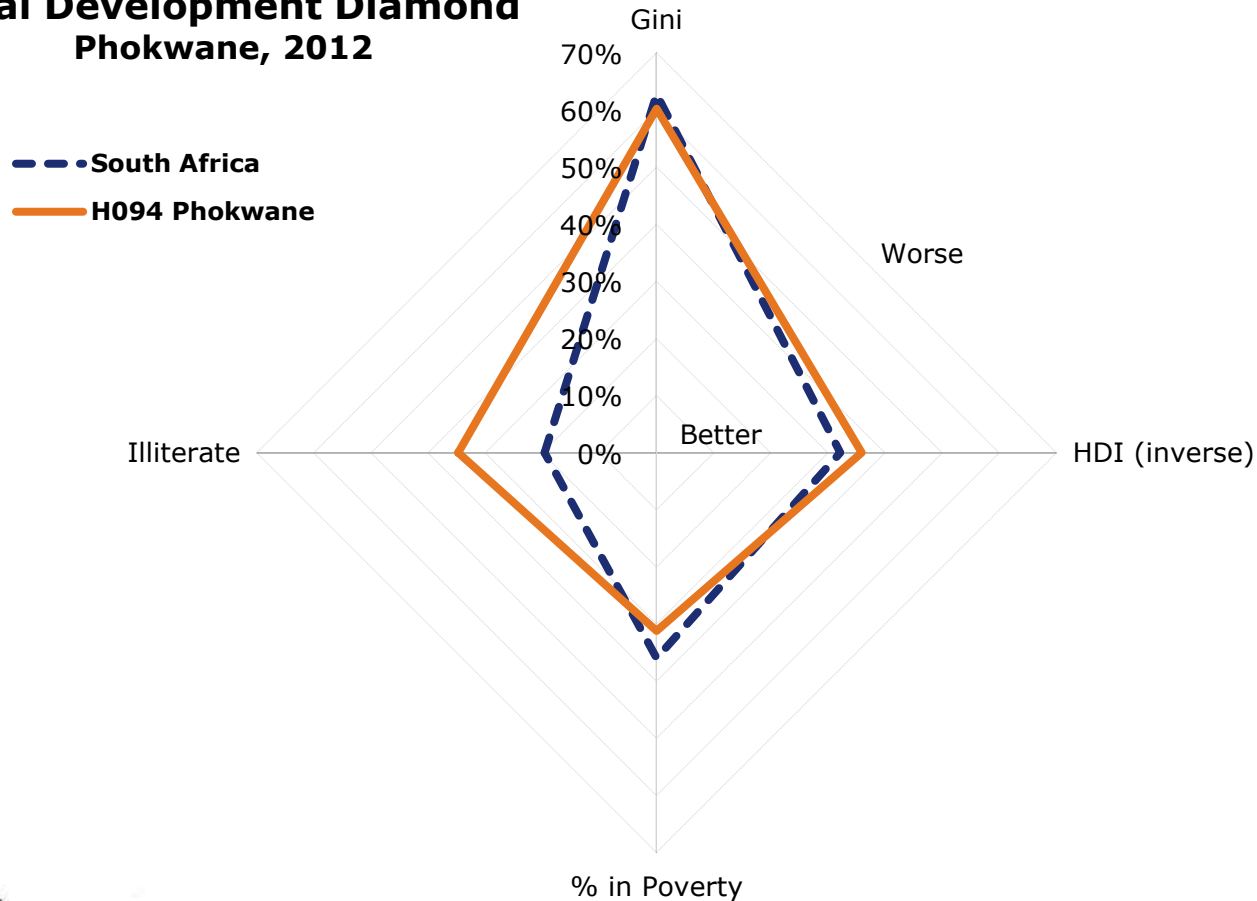
# Project area - Vaalharts

- Vaalharts Irrigation Scheme is the largest in the South Africa covering 32,000ha
- Focus area: Phokwane municipality (Jan Kempdorp, Hartswater, Pampierstad): 60 505 people (2012) → 5 percent of NC population
- + broader area around (Taung, Christiana, Barkly West)

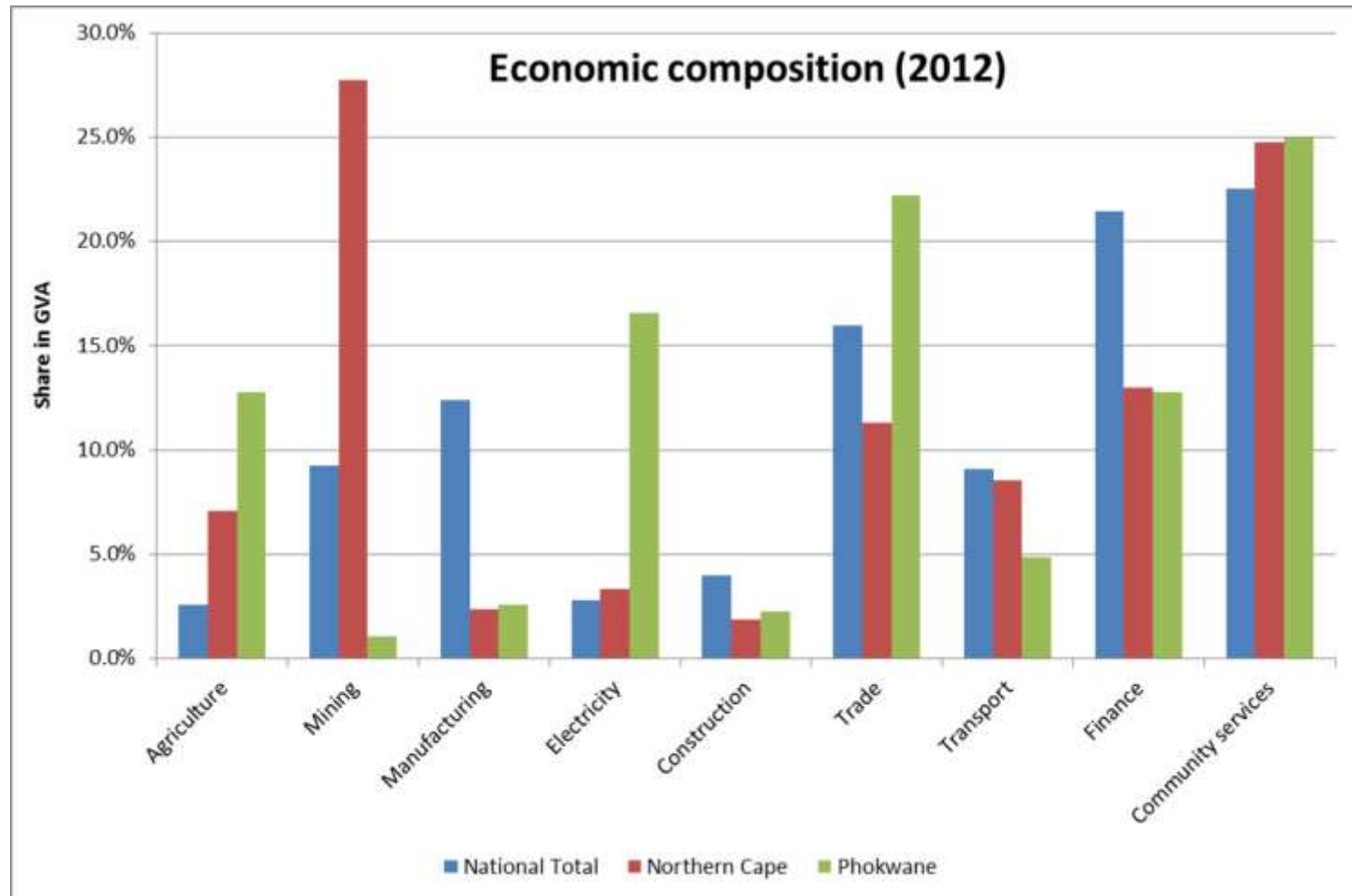


# Project area - Vaalharts

## Total Development Diamond Phokwane, 2012



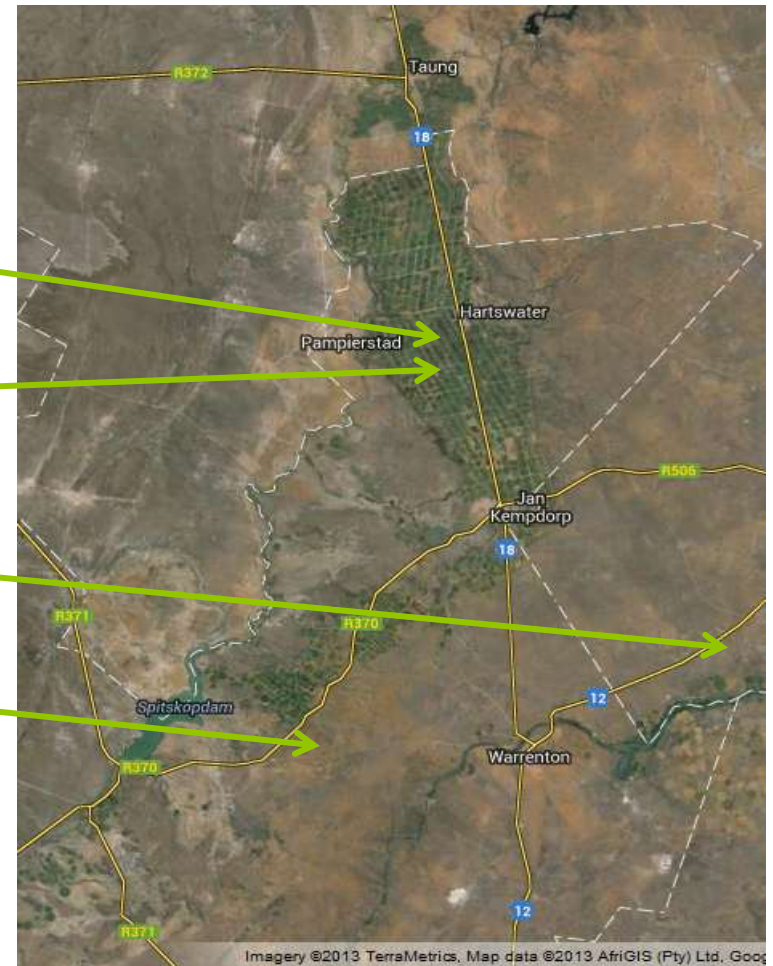
# Project area - Vaalharts



# Project area - Vaalharts

Main agricultural production:

- Grains and nuts
- Oranges, grapes, watermelons
- Potatoes
- Vegetables
- Cattle & chicken



# Project area - Vaalharts

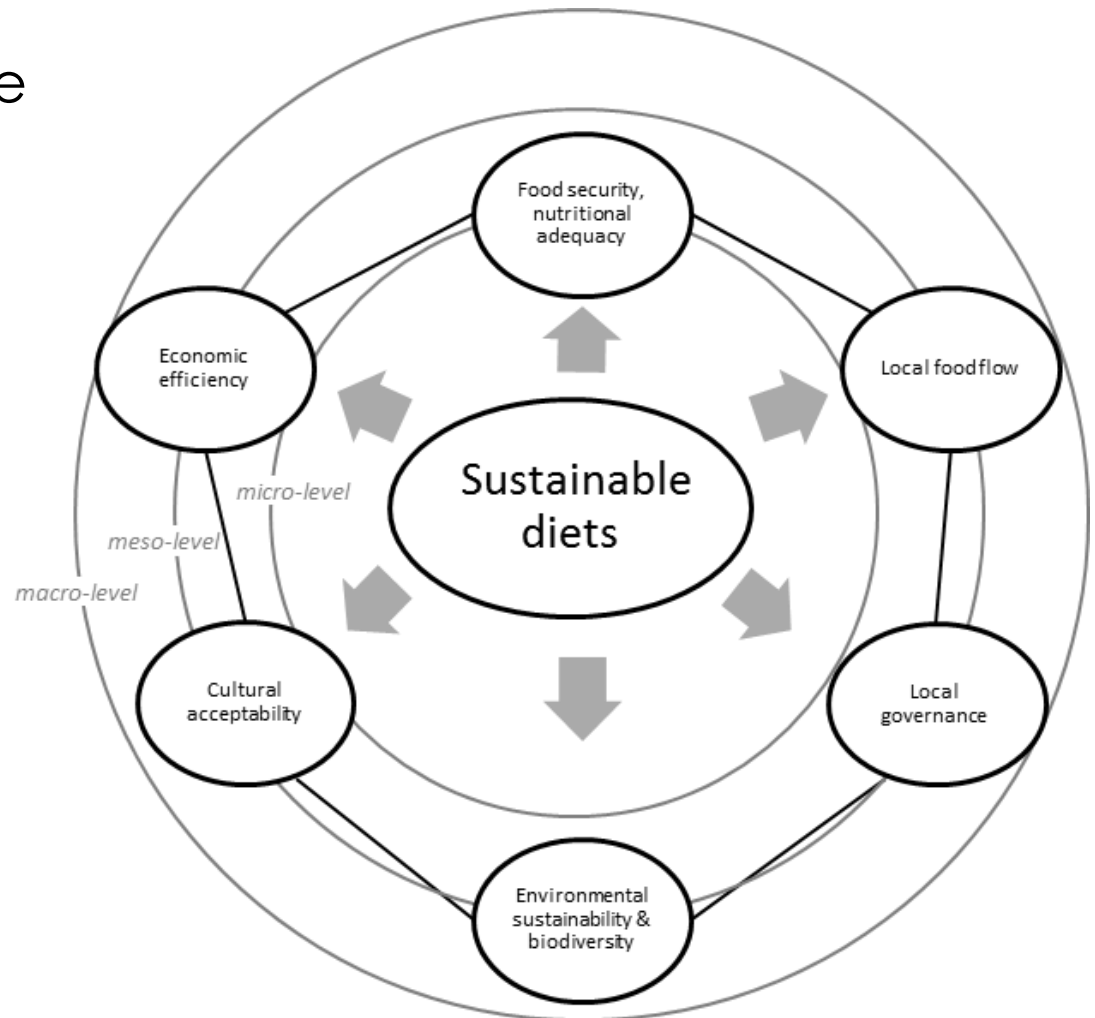
## Needs assessment (2011):

- access to basic government services (i.e. to register births, apply for an identification document/passport);
- basic municipal services (i.e. electricity, water);
- education or training-related services (i.e. tertiary education scholarships, school supplies, early childhood and elderly stimulation);
- employment (i.e. job opportunities, career guidance);
- agriculture (knowledge, seeds, irrigation systems);
- infrastructure/additional facilities (i.e. housing, roads, sports grounds, recreational/youth centres);
- health/welfare (shelters, coping skills, medicine, food);
- safety and security;
- emergency services;
- awareness campaigns.

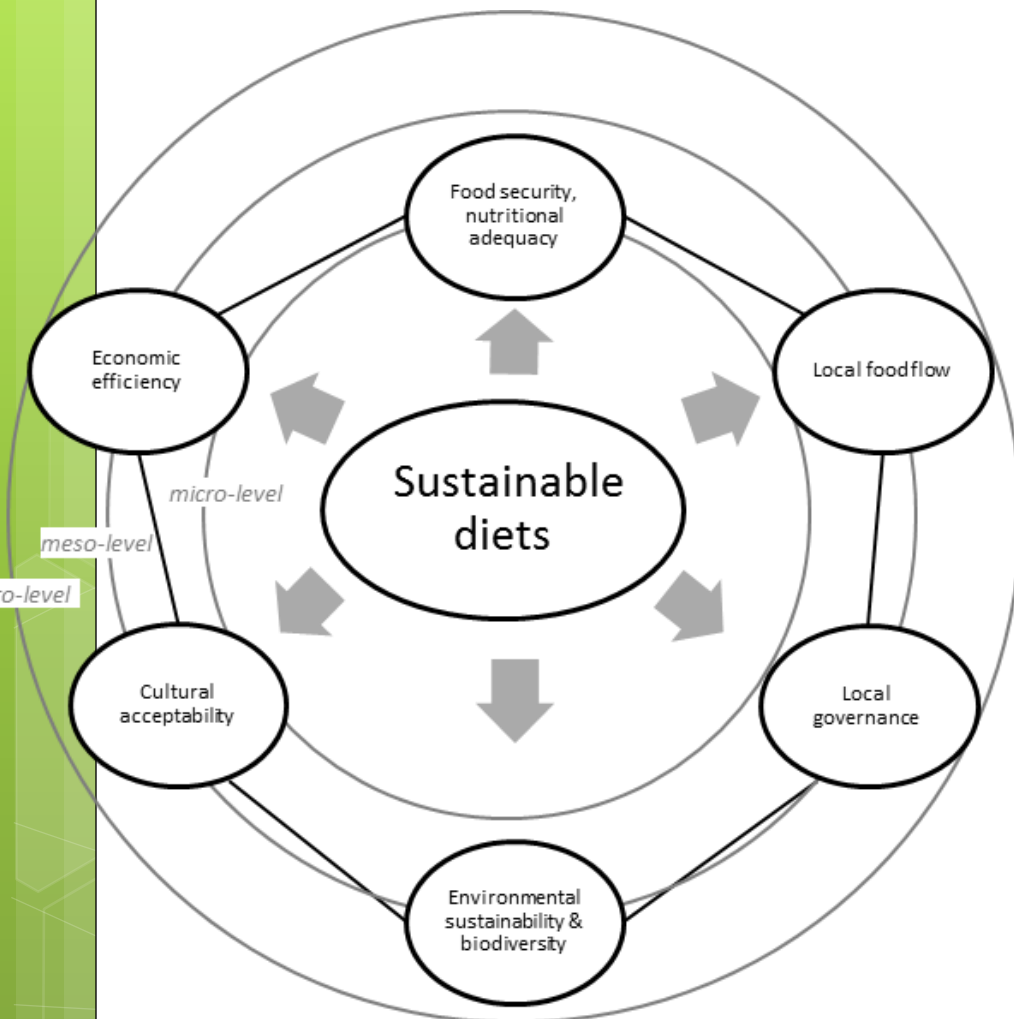


# Research framework

The study explores the food security and nutrition situation of rural households and in which ways it is framed by the local food system, considering the biodiversity, environmental sustainability, economic efficiency as well as socio-cultural perceptions.



# Research framework



## Multi-disciplinary team



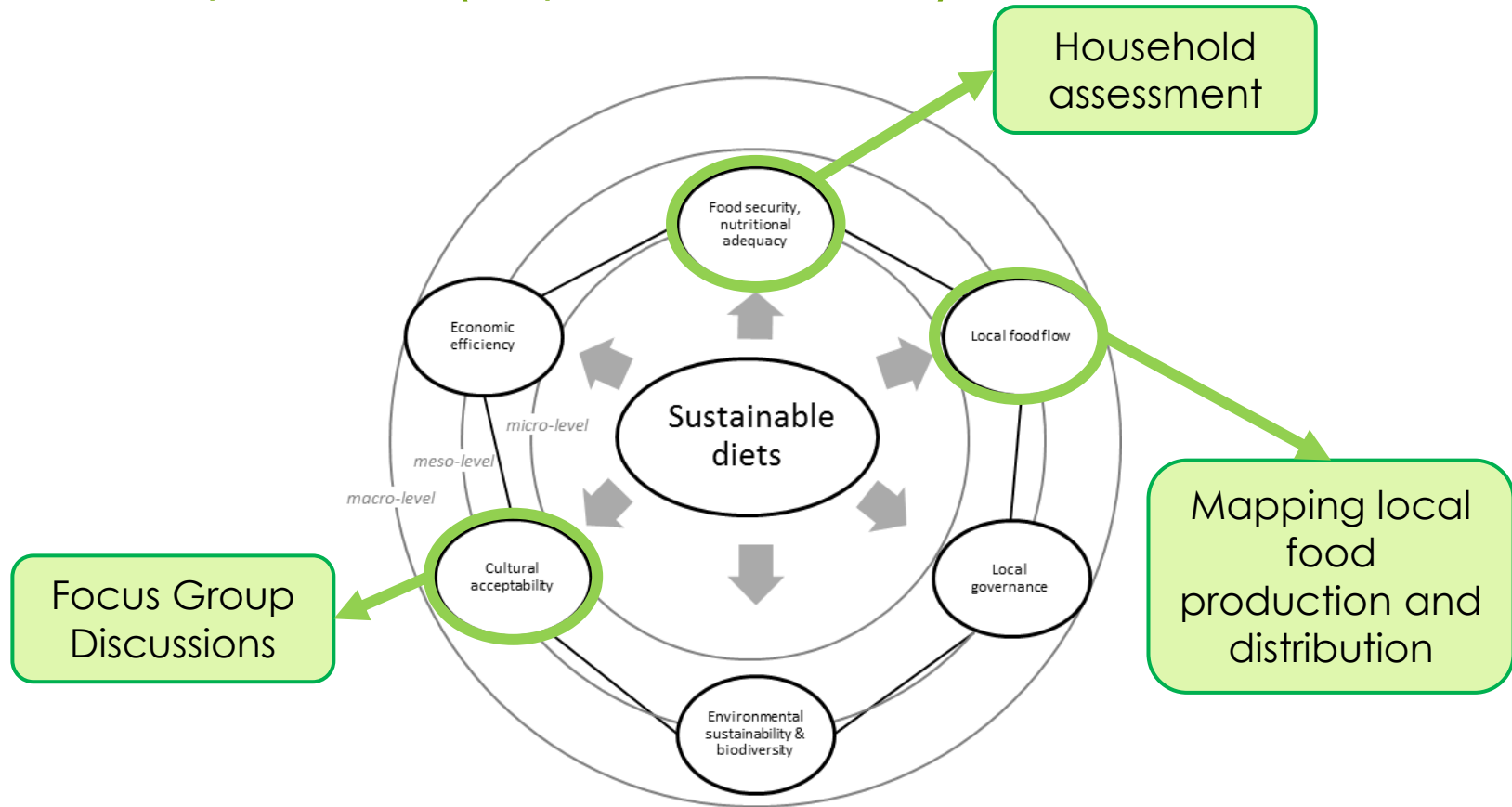
- **Nutrition**  
Dr Nicole Claasen (AUTHeR)  
Dr Namukolo Covic (CEN)
- **Agricultural economics**  
Ernst Idsardi  
Dr Flippie Cloete
- **Environmental Science and Management**  
Prof Francois Retief
- **Botany**  
Prof Sarel Cilliers

**Department Gender and Nutrition**  
Dr Stefanie Lemke



# State of the art






Field phase 1 (Sept – Dec 2013)





# State of the art

## Household food security and nutrition assessment

	Research activity	Aim	Method	Times per month	Household members				
1.	Household food inventory	What food is in the kitchen and from where acquired?	Inventory list	<table border="1"> <tr> <td>X</td> <td>X</td> </tr> <tr> <td>X</td> <td>X</td> </tr> </table>	X	X	X	X	
X	X								
X	X								
2.	Dietary diversity	What food is eaten?	Individual Dietary Diversity Score	<table border="1"> <tr> <td>X</td> <td></td> </tr> <tr> <td></td> <td></td> </tr> </table>	X				
X									
3.	Nutritional Status	What is the BMI of different household members?	BMI measures	<table border="1"> <tr> <td></td> <td>X</td> </tr> <tr> <td></td> <td></td> </tr> </table>		X			
	X								
4.	Household food security	Is there enough food?	Household food insecurity access scale	<table border="1"> <tr> <td></td> <td></td> </tr> <tr> <td>X</td> <td></td> </tr> </table>			X		
X									
5.	Food and nutrition perceptions	What are the practices and attitudes about food and nutrition?	Questionnaire	<table border="1"> <tr> <td></td> <td></td> </tr> <tr> <td></td> <td>X</td> </tr> </table>				X	
	X								

Sample size: 100 households

# State of the art

## Focus group discussions with community members



*Tell us about the foods you use in your household and where do you get them from?*

- Knowledge of local food production
- Perceptions on locally produced foods (quality, taste, health, price, access, seasonal availability)
- Perceived benefits of local food production
- Support needed for better access to food



# State of the art

## Mapping local food production and distribution

- Key-informant interviews with different stakeholders in the food supply chain (small & large scale farmers, shop owners, supermarket managers, local bakeries, schools, hawkers, etc.)
- Mapping of food flows for commonly consumed food items



# Outlook

## Field phase 2 (April – July 2014)

- Environmental impact assessment of agricultural production and household food consumption
- Local governance and other regulatory institutions
- Economic efficiency of local food systems for producers and consumers

Connected project proposal: *“Innovating sustainable diets – Transdisciplinary networks linking nutrition, agriculture and environment “*

- to innovate, integrate and promote Sustainable Diets in existing agro-food systems in the global North and South through the establishment of transdisciplinary knowledge exchange networks. (South Africa, Kenya, Egypt, Portugal, Austria and Germany)

# Conclusions

- Food security is a complex concept and cannot stand alone any more
- Food security cannot only be defined by the number of hungry people, neglecting the rising rates of obesity and related diseases
- Interlinked dimension defined in sustainable diets: nutrition, public health, environment, social & cultural acceptability, economical fairness and sustainability
- Food systems are crucial in addressing food security and sustainable diets
- More research needed on underlying social and structural issues concerning the link between food systems, food security and sustainable diets

# Conclusion



Friedensreich Hundertwasser (7/25) Grass for those who cry, 1975. © 2013 NAMIDA AG, Olten/Switzerland

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*Thank you!*