Research on Food systems

Based on research conducted during the (1) Masters portfolio and (2) Living Lab project

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1. **Impacts of droughts on food security and food systems in Matebeleland region Zimbabwe** *(Masters portfolio desktop research)*

Goal:

- To assess the impacts of climate driven droughts on food security and livelihoods in Matebeleland region
- To assess the adaptation efforts that are being implemented to improve food access and production

Methodology and activities:

Reviewing 6 drought and food system case studies → Interviews & discussions with researchers in Matebeleland → Follow-up on Malnutrition research in Matebeleland → Findings

Findings:

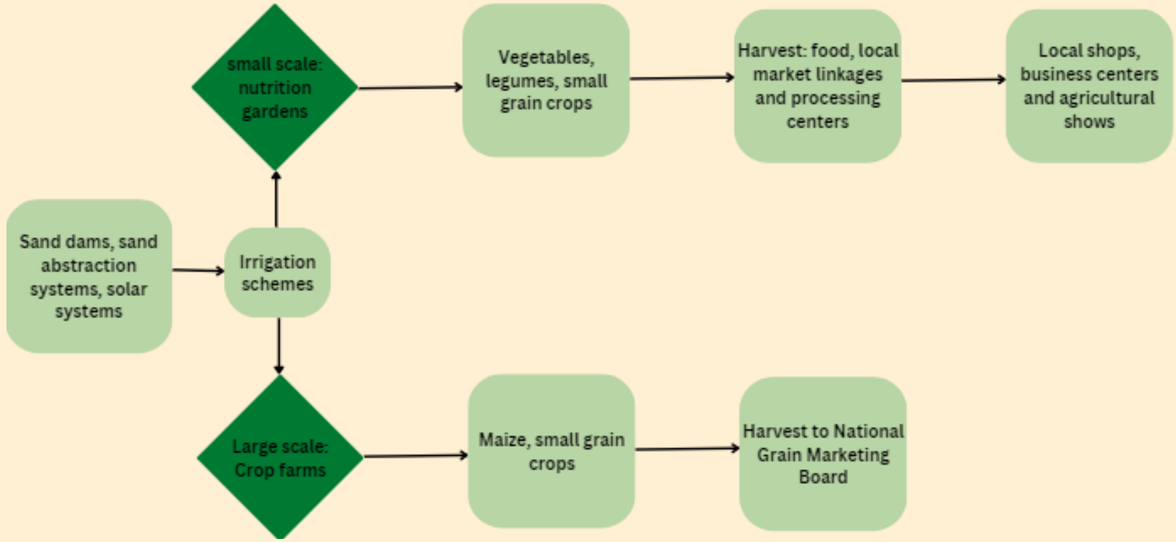
- Increased cases of malnutrition among children below 5 years
- High dependence on rainfed agriculture - low production due to droughts
- Monoculture food production systems - prone to pest attacks
- Water shortages, crop losses and death of livestock
- Poor access to food markets

https://www.herald.co.zw/irrigation-scheme-stirs-tuli-farmers-hope/

Implemented improvements:

- Community based malnutrition management
- Established sand dams, sand abstraction systems, rainwater harvesting & solar pumps for irrigation schemes
- Farming of small grain crops that are drought resistant e.g. sorghum and millet
- Implementation of horticulture food production e.g. community nutrition gardens
- Community small scale food production (women & youth empowerment) and local market linkages
- Capacity building and trainings on climate-smart agricultural practices e.g in Gwanda and Beitbridge

Generalized food production system in Matebeleland South



Project Outcome: Podcast

Link - https://drive.google.com/drive/u/0/folders/1NVjNjF3Eb_WTYacgYTsTqo3u9aiIfsc6

2. Living Lab Leuven Edition 2022: Understanding agricultural production and conservation in the region of Flanders, Belgium *(Living lab field-based research)*

Goal:

- To assess the conservation strategies in agricultural production and
- the challenges faced by farmers regarding conservation in Flanders

Methodology and activities:

- Interviews with farmers
- Surveys
- Analysis of policy documents and literature

Findings:

- Lack of knowledge on conservation strategies need for awareness and dialogue with farmers on conservation agriculture strategies
- Most farmers still practice conventional agriculture with minimum conservation of nature
- Intensification of agricultural systems in Flanders led to biodiversity loss, increased nitrogen
- Conflict between conservationists and farmers as more land is used for planting forests, there is no room for production expansion in agriculture and that may affect future production

Conclusion:

- In general farmers are interested in learning and adopting conservation strategies as some are already practicing organic farming and agroforestry
- An integrated conservation approach could help but the strategy must support food production as well