

# EMSAS-Hydroponics TA in Nigeria

**Session 5: Realizing co-benefits and reducing trade-offs in urban and rural success cases and for advancing gender equality.**

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# WEFE approach and trade-offs:

1. Water:
  - a. 80-90% less water than soil-based farming.
  - b. close loop system: 95% water efficiency.
  - c. Zero reliance on rainwater cycle.
  
2. Energy:
  - a. 100% powered by solar energy.
  - b. Completely off-grid.
  
3. Food:
  - a. year-round high value vegetable productions.
  - b. Projected annual income to increase by 300% (harvesting cycles: at least 3 times).



# Systems and holistic thinking:

1. Tackling more than a single issue:
  - a. Land, water, and food security challenges.
  - b. Physical security challenges.
2. Two types of end users empowered:
  - a. Semi-skilled workers in plumbing, carpentry, and welding.
  - b. Engaged farmers, both young and elderly, women and youth.
3. Gender advancement:
  - a. Reduces physical labour.
  - b. Income generation & entrepreneurship.
  - c. Resilience.



# Systems thinking and tradeoffs:

- 4. Building resilience and adaptability:
  - a. Integrated capacity building: for usage, maintenance, and scaling.
  - b. Low cost set up using locally available materials.
- 5. Stakeholder Ecosystem Approach
  - a. Constituted a multilevel stakeholder group.
- 6. Co-implementation with the beneficiary local government (Kubau LGA).



# Exit Strategy of EMSAS



## 1. Short term (0-12 months)

- a. Supporting post-harvest handling (cold storage, local processing facilities, etc.)
- b. Market linkages & distribution networks
- c. Capacity building in quality production and business training

## 2. Medium term (12 – 36 months)

- a. Scaling up production & value chain expansion
- b. More market linkages & distribution networks
- c. Partnership for training with academia

## 3. Long term (from 36 months)

- a. Industrial scaling
- b. Policies for climate smart agric /WEFE
- c. Investment in tech and innovation
- d. Exports

# Actionable take aways:

## Systems thinking:

- Holistic appreciation of the challenges (both as to how it affects the individuals and the environment), in design and implementation.

## Localising solutions and innovations through:

- Engaging with target end users and local stakeholders.

## Full technical empowerment of the local ecosystem:

- In a way that the local ecosystem and end users can fully support themselves after the withdrawal of experts.

## Gender focus:

- Women and girls can easily do this at home and within the communities.



