

Climate Change Adaptation Strategies and Nutrition Nexus

Towards Sustainable Food Systems

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International Technical Webinar

How to transition to nutrition-sensitive and sustainable food system?



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Presentation Outline

- **Background and Introduction**
- **Impact of climate change on nutrition outcomes**
- **The proposed conceptual framework**
- **Recommendations and conclusion**

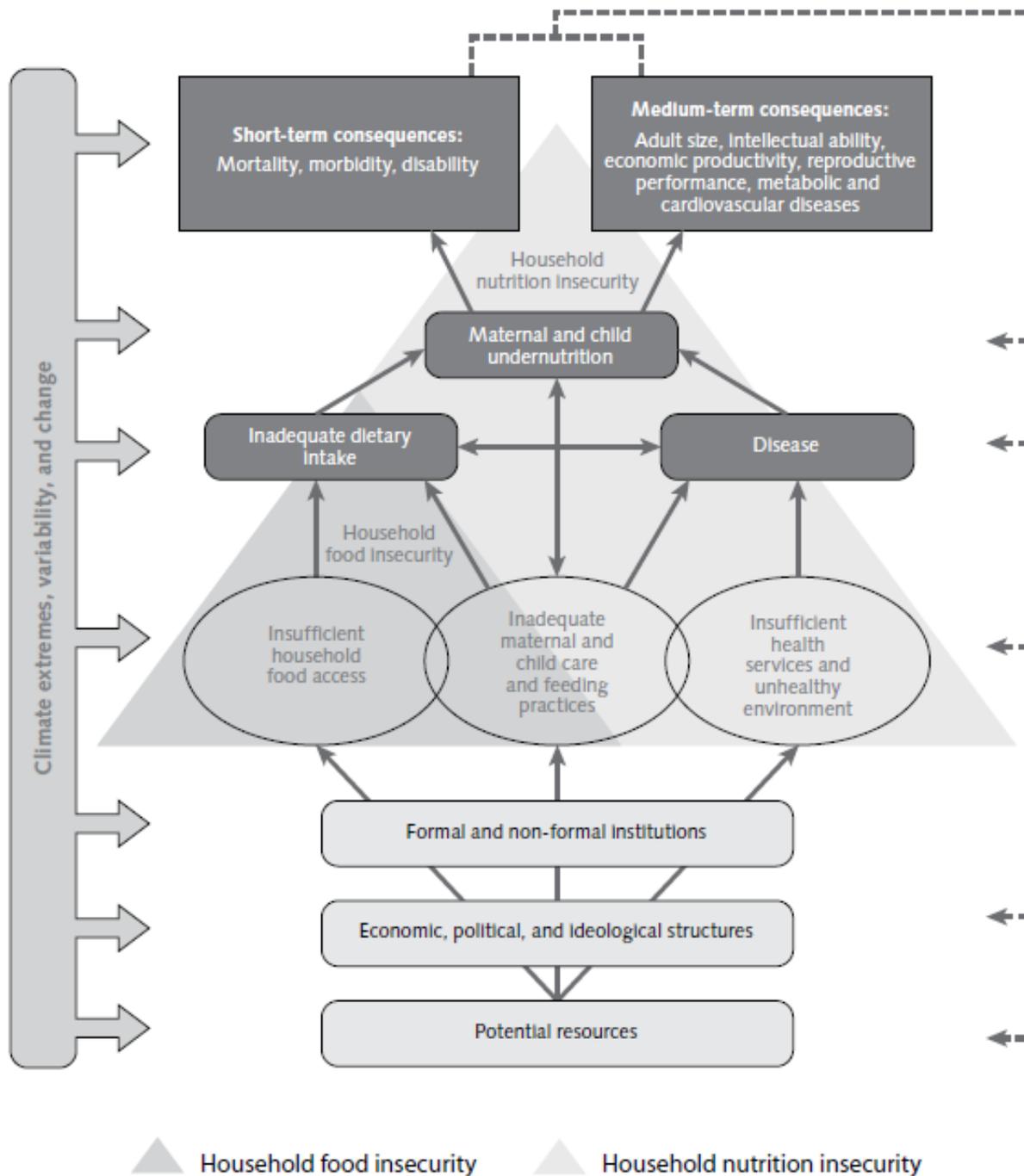
Background and Introduction

- Adaptation to climate variability and change is a requirement for future sustainability of food systems.
- Several adaptation strategies are employed by communities for them to survive the harsh climate change and variability.
- These adaptation strategies can have positive or negative impacts on nutrition outcomes.
- Therefore, it is important to ensure that selected climate change adaptation strategies are nutrition sensitive.

Climate Change and Nutrition Nexus

- Climate change exacerbates the existing malnutrition problem in Sub-Saharan Africa and will further undermine current efforts to reduce poverty and malnutrition.
- Climate change affects nutrition by influencing people's diet and consumption patterns disease levels, water and sanitation, and choices about how to allocate time to daily activities.
- Sustainable, climate-resilient, and nutrition-sensitive agricultural development is therefore fundamental and integral to improving nutrition outcomes in the face of climate change.

Framework illustrating the pathways through which climate change affects nutrition (Tirado, *et al.*, 2013)



- Comprehensive overview of how climate extremes, variability, and change influence nutrition outcomes.
- Three key determinants: household food access; maternal and child care and feeding practices; and access to health services and environmental health.
- However, there is a lack of emphasis on the impact on nutrition in most climate change adaptation strategies.
- For food systems to be sustainable, it is crucial that adaptation and mitigation strategies be nutrition sensitive.

Conceptual Framework: *Climate Change Adaptation Strategies & Nutrition Nexus*

- While several climate adaptation and mitigation strategies have been implemented to minimise the impact of climate change on food systems worldwide.
- There is need to consider the effect of these adaptation and or mitigation strategies on nutrition outcomes.
- We propose a **conceptual framework** that links climate change, adaptation strategies and nutrition and that also shows the indicators that can be used to assess the impact of climate adaptation strategies on nutrition outcomes.

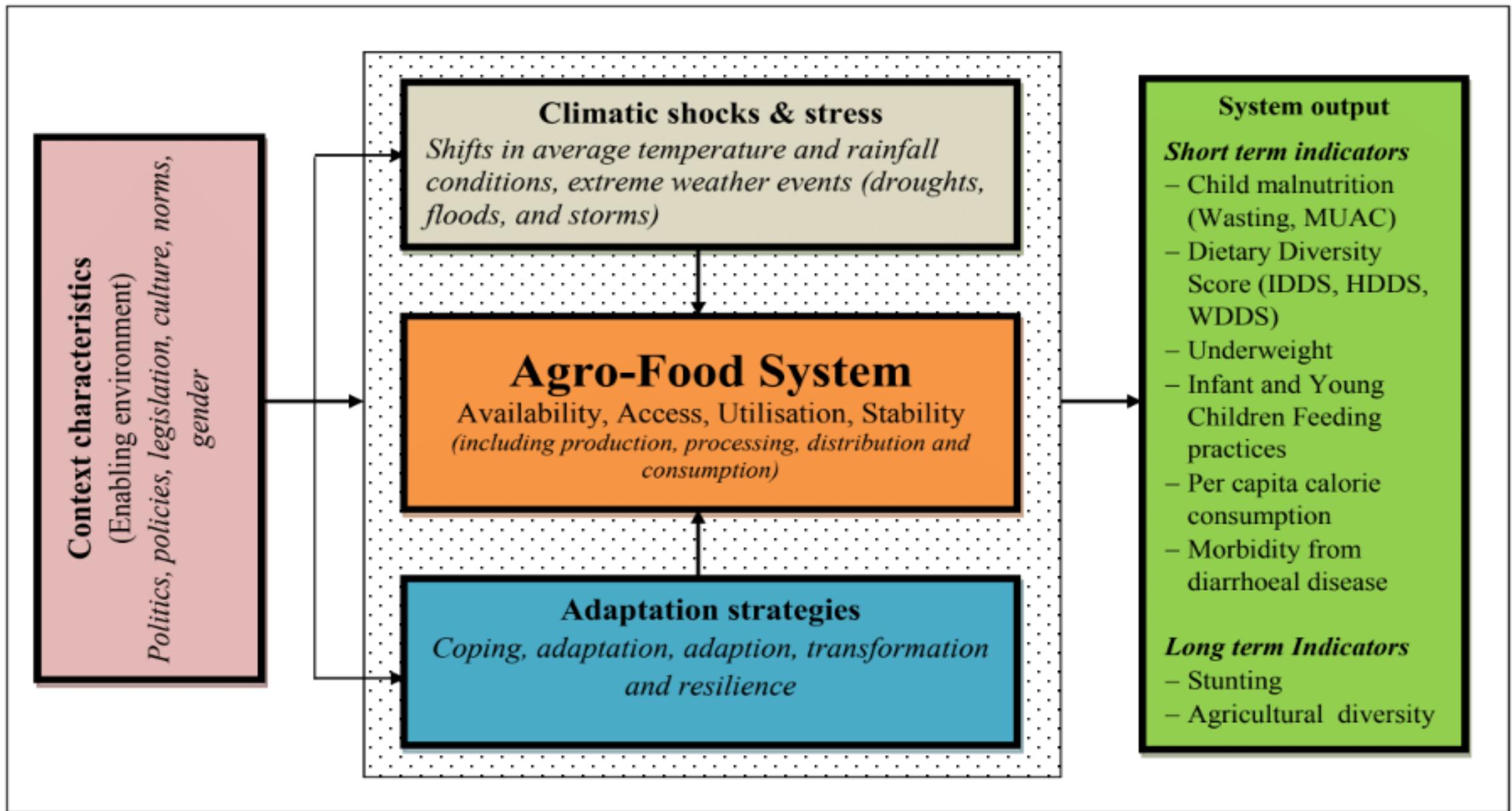


Figure 1. Conceptual framework to assess the impact of climate change adaptation strategies on nutrition (*Source: Authors*)

Design principles used in developing the conceptual framework

Principle 1. Systems Approach

- The system approach theory acknowledges the interconnected nature of problems and emphasizes the need to look at the whole system instead of specific aspects or elements when proposing solutions.
- It allows for the identification of cascading effects and interactions across different components of a system that otherwise would be difficult to identify and analyse independently.
- The proposed conceptual framework is composed of different components to form and functional system: (i) Climate change, (ii) Food system, (iii) Adaptation strategies, and (iv) System output (nutrition outcomes).

Principle 2. Contingency Theory

- An important aspect of studying systems is the interaction between a system and its environment.
- Effectiveness of a system depends on the appropriate matching of the internal operations of the system with its environment.
- This line of reasoning originates from the contingency theory - performance of a system is influenced by the context situation wherein it operates.
- Therefore, for efficiency, effectiveness and sustainability, climate change adaptation strategies should be adapted to the context wherein they are being implemented.
- Examples of the enabling environment (context characteristics) include: policies, markets, institutions, governance, culture and religion.

Principle 3. System Output

- The *third design principle* is that of a system output, which in this framework consists of the nutrition outcomes that should be measurable
- Specifying the system output will enable assessment or evaluation of the effectiveness of the system.
- In this case, targeted nutritional outputs include stunting and wasting in children under 5 years, child feeding practices, women dietary diversity, food consumption patterns and household dietary diversity
- The outcome, i.e., nutrition status, can be assessed based on anthropometry measurements, dietary intake and clinical signs of nutrition deficiency.

In conclusion

- The linkage between climate change, adaptation strategies and nutrition security is much complex.
- The proposed conceptual framework can be used as a guide in selecting and identifying more suitable climate adaptation strategies given specific contextual environments.
- Future work will also include operationalization of conceptual framework into an assessment tool.

Thank You



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