

# 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?



# Presentation Outline

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

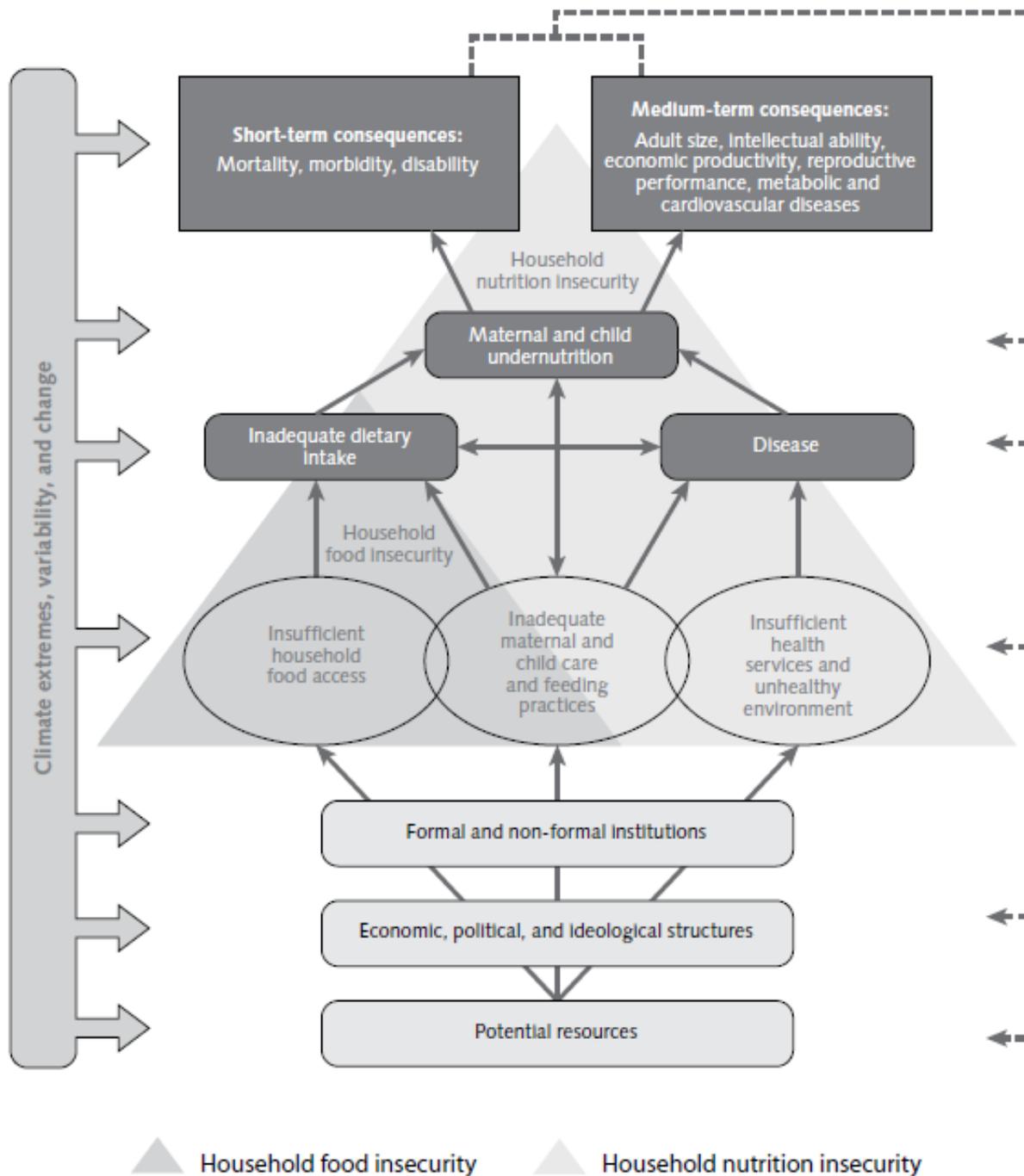
# Background and Introduction

- 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.

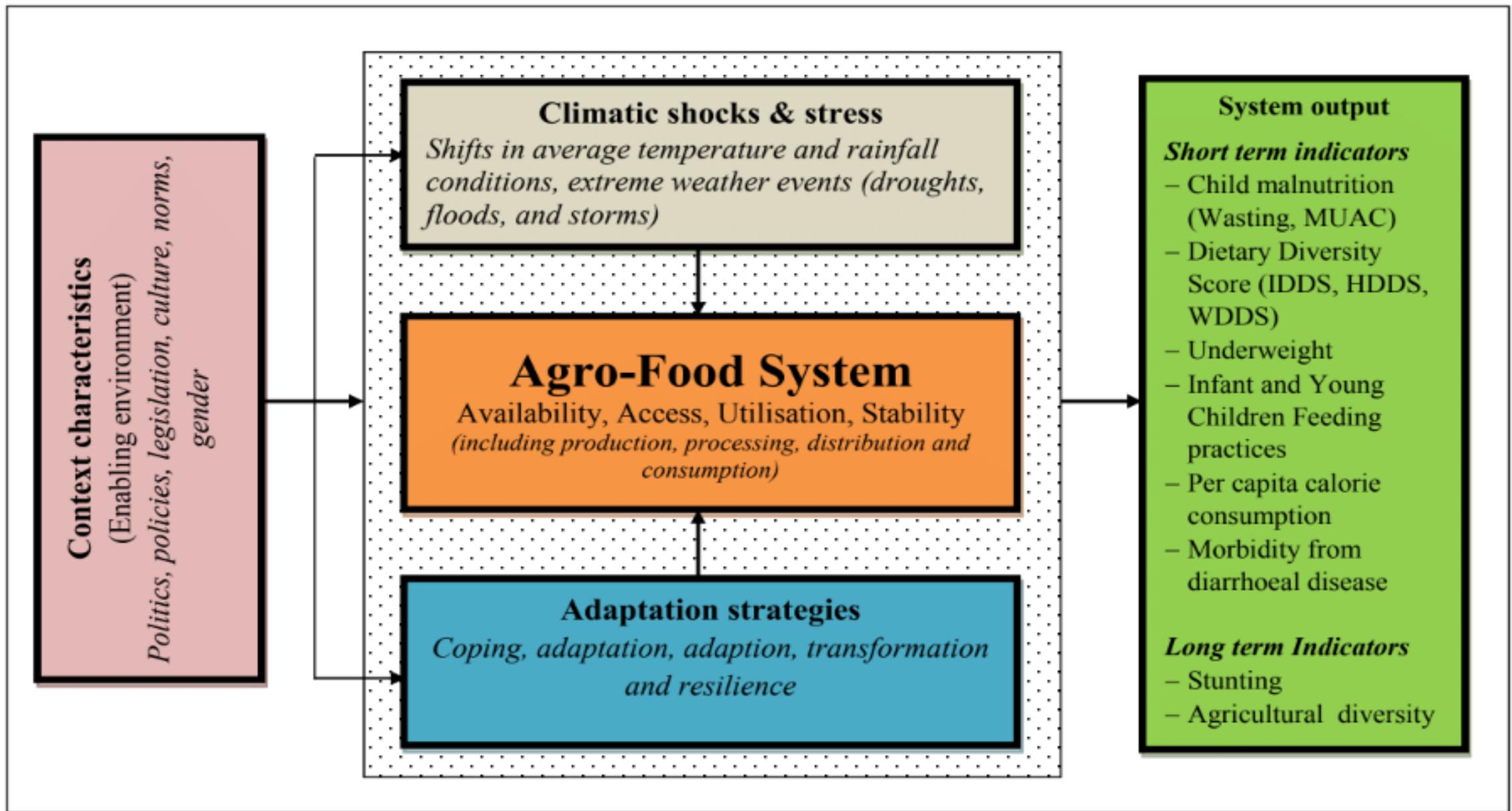
## Framework illustrating the pathways through which climate change affects nutrition (Tirado, et al., 2013)



- 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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