



Shuvosri Dewan

Presented by: Shuvosri  
Dewan  
Faculty Mentor: Dr. Terezie  
Tolar-Peterson

# SCALING UP COMFA+FISH FOR ADOPTION IN RURAL ZAMBIA

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# INTRODUCTION

Zambia and other low and middle-income countries (LMIC) in sub-Saharan Africa are expected to face increased chronic malnutrition due to climate change, food insecurity, and persistent poverty. This will likely worsen the already precarious nutritional status of infants and young children (IYC) living in extreme poverty.

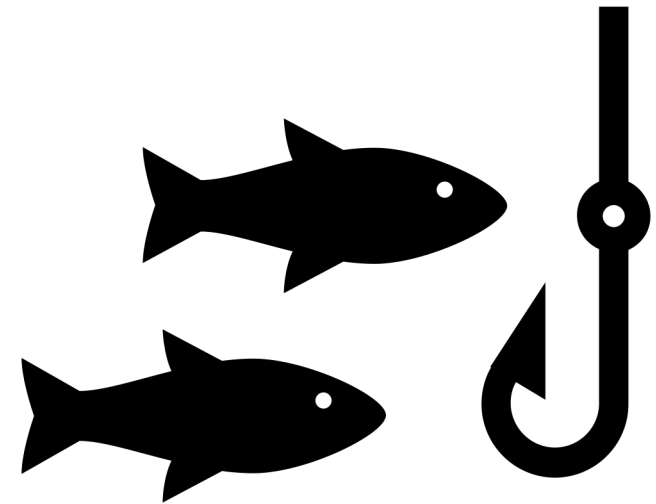
Chronic malnutrition in childhood, seen as stunting and cognitive delay, can have long-term impacts on cognition, education, health, and economic productivity, affecting national development and the achievement of Sustainable Development Goals (SDGs).

The first 1,000 days of life is crucial for interventions to improve IYC nutrition. However, most interventions have been cereal-based rather than animal source foods (ASF), and their effectiveness is uncertain.

Dried fish powder (DFP), high in protein and micronutrients, is underutilized despite being widely consumed in Zambia and sub-Saharan Africa.

# INTRODUCTION

- A nutrient analysis of DFP from Kapenta was conducted, leading to the development of ComFA+Fish, a protein/micronutrient blend.
- Kapenta DFP provides high percentages of the Dietary Reference Intake (DRI) which fulfills nutritional gaps among at-risk IYC and other household members.
- In addition, four FishFirst! Zambia activities inform the proposal for scaling up ComFA+Fish. These activities focused on developing and taste-testing six ComFA+Fish dishes and exploring the scaling potential of DFP and ComFA+Fish. They include three sensory panels (I, II, and III) and a scaling readiness exercise.



## CAUSES

Chronic malnutrition due to climate change, food insecurity, and persistent poverty



Source: UNICEF

## PREVENTION

May be prevented  
by incorporating  
Dried Fish Powder  
for nutrients



Source: Lusaka Times



## METHODOLOGY

- 26 Mothers and child pairs were invited to participate in sensory panels that evaluated the porridge on various attributes, including aroma, appearance, texture, taste, and overall acceptability.
- Sensory Panel I focused on caregivers' evaluations, while Sensory Panel II engaged older youth and adults.
- The food is ComFA+Fish Instant Plain Porridge and ComFA+Fish Instant Vanilla Porridge.
- The ingredients of each porridge include dried fish powder, orange maize flour, sorghum/millet flour, and soybean flour.



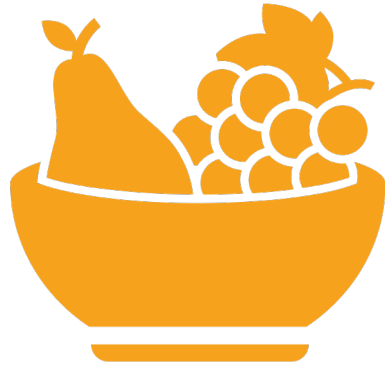
## METHODOLOGY

The Dried Fish Powder in the porridge can provide essential micronutrients such as:

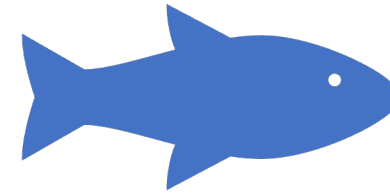
- calcium
- phosphorous
- magnesium
- iron
- potassium
- sodium
- zinc
- copper
- manganese
- selenium
- folate
- choline
- vitamins A, B12, C, D, and E



## RESULTS



The results indicated high acceptability of both porridge variants. With Vanilla Instant Porridge being slightly more favored due to its aroma and taste.



Additionally, nutritional analyses confirmed that the porridge significantly enhances dietary intake of essential nutrients, and high-quality animal-sourced proteins.

## PROJECT OUTCOMES

Ground-proof the viability of scaling DFP/ComFA+Fish – including ComFA+Fish Instant Plain Porridge and ComFA+Fish Instant Vanilla Porridge among community members of rural fishing communities in Zambia.

Provide evidence that DFP/ComFA+Fish are strategically well-placed to address protein and micronutrient gaps among at-risk households in rural Zambia.

Pin-point strategic community-level entry points important for scaling DFP/ComFA+Fish in rural Zambia that can be applied to other low-income communities across sub-Saharan Africa.

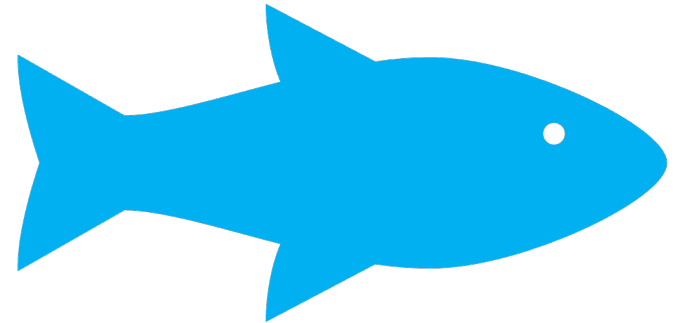
## PROJECT OUTCOMES

Results will inform the Fish Innovation Lab's value chain and scaling activities, USAID, the USAID Zambia Mission's, and the Government of Zambia's investments in fisheries/aquaculture, food security, and nutrition.

The project contributes to Feed the Future's objectives to address persistent food insecurity and malnutrition among at-risk IYC/households in rural Zambia.

## DISCUSSION

- COMFA+Fish can reduce malnutrition by incorporating locally sourced DFP into complementary food products. Therefore, this initiative supports the broader goal of sustainable nutrition improvement in resource-limited settings by utilizing locally available resources and engaging community members.





## CONCLUSION

- The successful development and positive response to COMFA+Fish Plain and Vanilla Instant Porridges demonstrate a possible strategy to improve the nutritional status of infants and young children in Sub-Saharan Africa, especially Zambia. Future efforts will focus on scaling up production and distribution, with continued emphasis on community involvement and local resource utilization. This initiative marks a significant step toward reducing malnutrition in sub-Saharan Africa, contributing to the broader goal of improved public health outcomes in resource-constrained countries.

## REFERENCES

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