A food systems approach to understanding and to supporting the contributions of small pelagic fish to human diets in Salima, Malawi

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Introduction

Small pelagic fish are a rich source of iron, vitamin A and zinc and other micronutrients important for human health, growth and development. They are available all year round, are affordable because they can be bought in small portions.

Small pelagic fish are under-reported in national figures, underutilised and less studied compared to larger fish species and livestock. Consequently, their contributions to diets and nutrition are not well understood.

Aim

To investigate the effect of participation in the fish value chain influences fish consumption frequency and dietary adequacy of children 6-23 months of age and their mothers in Salima District, Malawi.

This poster presents selected findings from this study, using data collectd in March-April 2022. Here, we focus on outcomes for mothers.

Study area

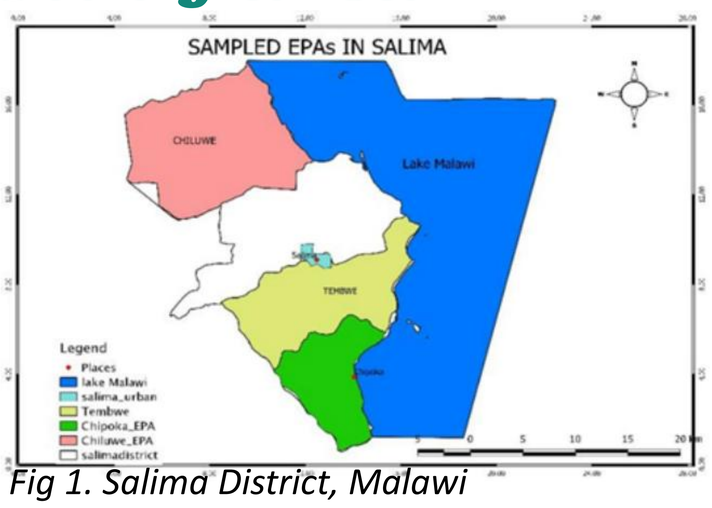

Fig 1. Salima District, Malawi

Study population

341 households from areas near Lake Malawi, inland rural and urban areas were randomly selected from a list of eligible households (including a child aged
6-23 months at baseline) identified through a multistage sampling process households in Salima.

Research conceptual framework

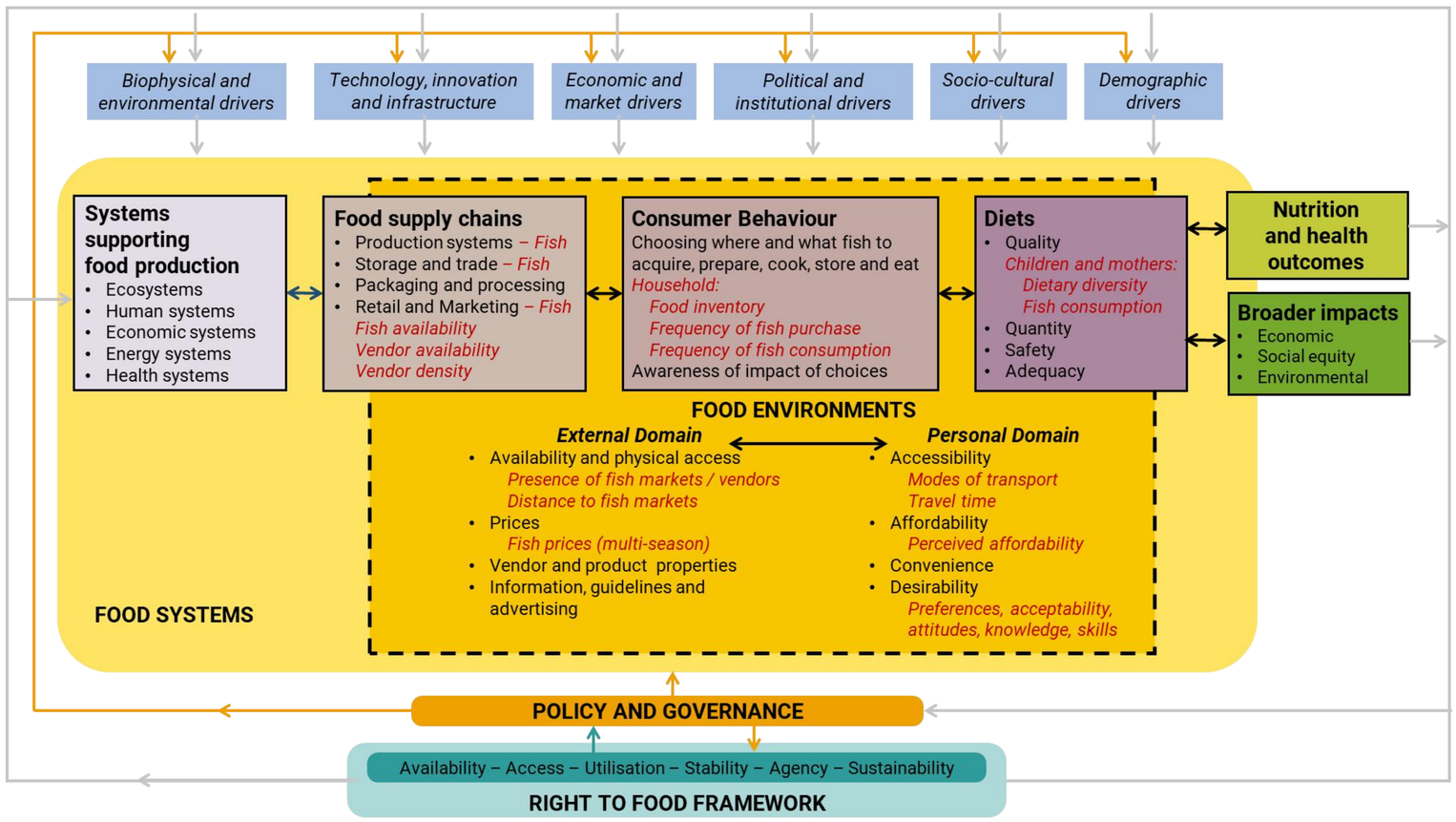

Fig 2. We used the adapted an adapted version of a food systems framework (HLPE, 2020), including external and personal domains of the food environment (Turner et al, 2018) in this study. Red text indicates variables under investigation.

Data collection methods

Fig 3. Survey-based data collection

Fig 4. Seven days fish consumption recall

Fig 5. Fish diversity

Findings

Table 1. Socio-demographic characteristics of study participants, according to participation in fish value chain (FVC)

	Participation in fish value chain			
	Participating in FVC n= (61)	% 19.4	Not participating in FVC n= (249)	% (74.3)
Maternal age (Yrs.)				
Mean (SD)	25.15(5.756)		25.40(6.468)	
Childs age(months)				
Mean (SD)	11.83(3.702)		4.86(1.973)	
Household size (Mean)				
Mean (SD)	4.75(1.812)		4.86(1.973)	
Household income (Mean)				
Mean (SD)	$48.19(76.54)*		$36.14(56.36)*	
Gender of HH Head				
Male	61	93.8*	199	80.6*
Female	4	6.2	48	19.4
Maternal Education%				
Never attended school	3	4.6	15	6.1
Primary	57	81.5	175	71.4
Secondary	9	13.8	50	20.4
Tertiary	0	0	5	2

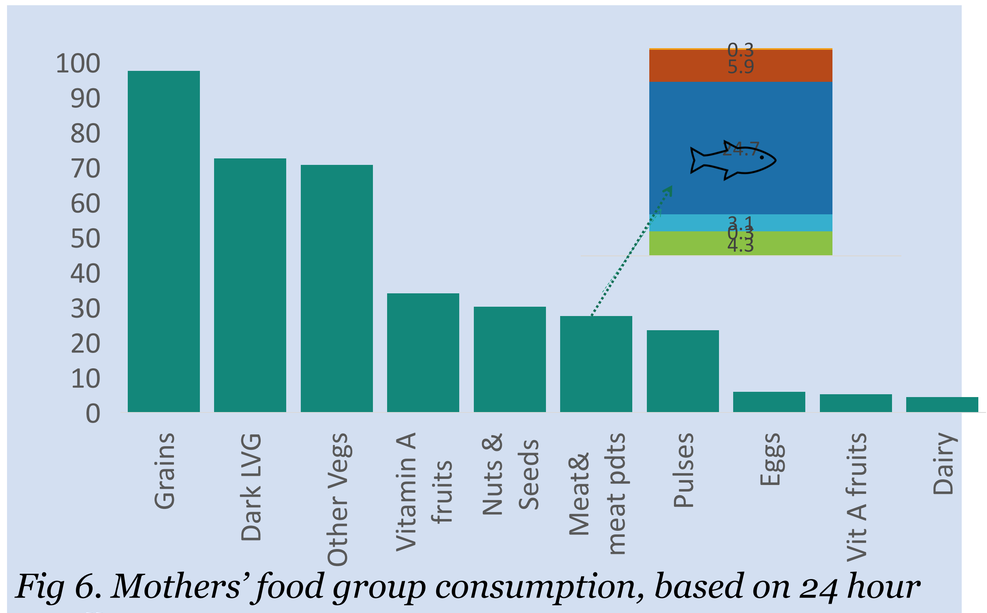

Fig 6. Mothers' food group consumption, based on 24 hour recall

Table 2. Mothers' dietary outcomes, overall and based on participation in fish value chains

	Household participation in fish value chain		Overall
	Participating	Not participating	
Met minimum dietary diversity (%)	40.0	28.5	30.9
Fish consumed in previous 7 days (%)	89.2	77.1	79.6

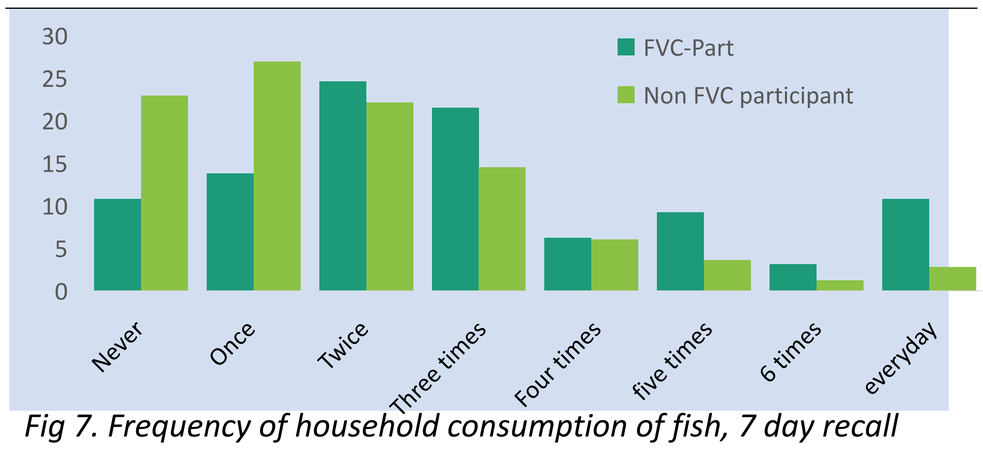

Fig 7. Frequency of household consumption of fish, 7 day recall

Key Findings;

- Low dietary diversity among mothers and children
- Usipa (Engraulicypris sadella) was the most important and highly consumed small pelagic fish among mothers.
- participation in the value chain increased a household's chances of consuming fish frequently by 76.2% among mothers p= 0.003) and 46.7% points among children p=0.041).

Conclusions

Does household participation in the fish value chain affect mothers' dietary diversity and fish consumption?

Participation shows a significant positive association with fish consumption and consumption frequency but shows a marginal effect on mothers' dietary diversity.

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