Challenges and Opportunities for Small-Scale Aquaculture Development in Malawi

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Overview of fisheries sector in Malawi

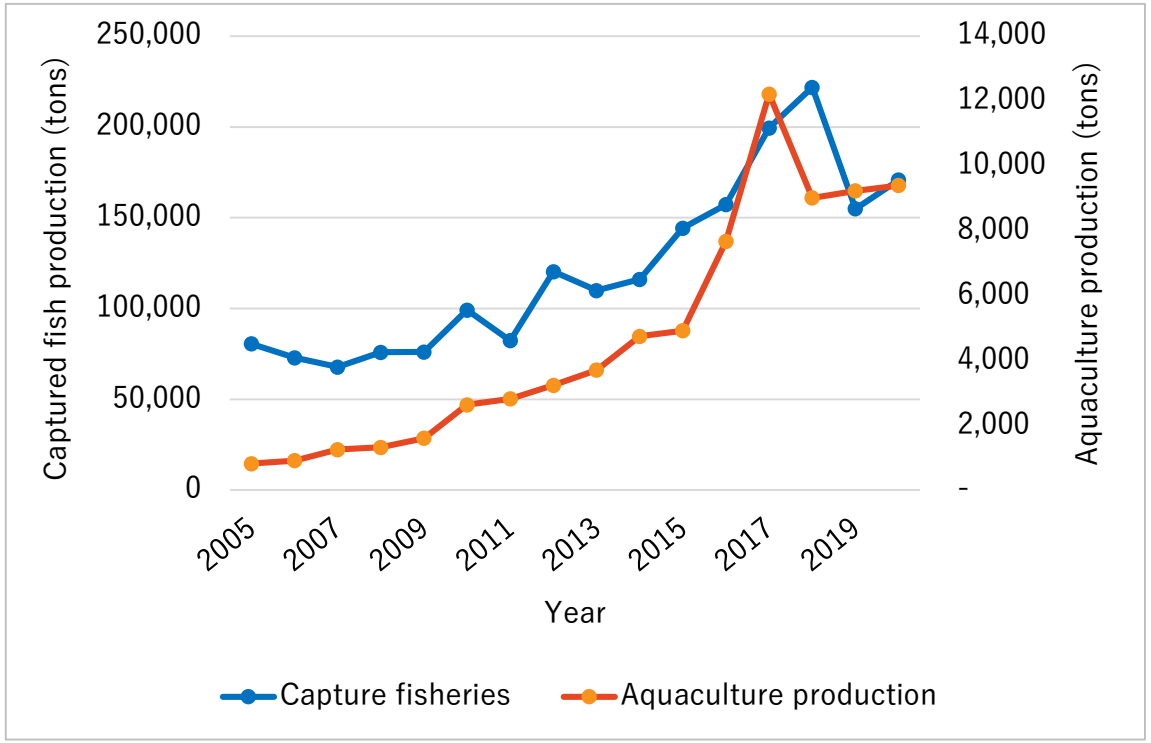
- **Fisheries contribute 4% to Gross Domestic Product**

- **Fish supply in Malawi largely dependent on:**
  - ✓Capture fisheries (wild stocks are declining)
  - ✓Imports

- **Aquaculture has potential to contribute:**
  - ✓Source of income for rural households
  - ✓Food and nutrition security
  - ✓Employment opportunities for women and youths

- **Aquaculture has contributed around 1–5% to the total fish production in Malawi**

Fish production in Malawi (2005-2020)

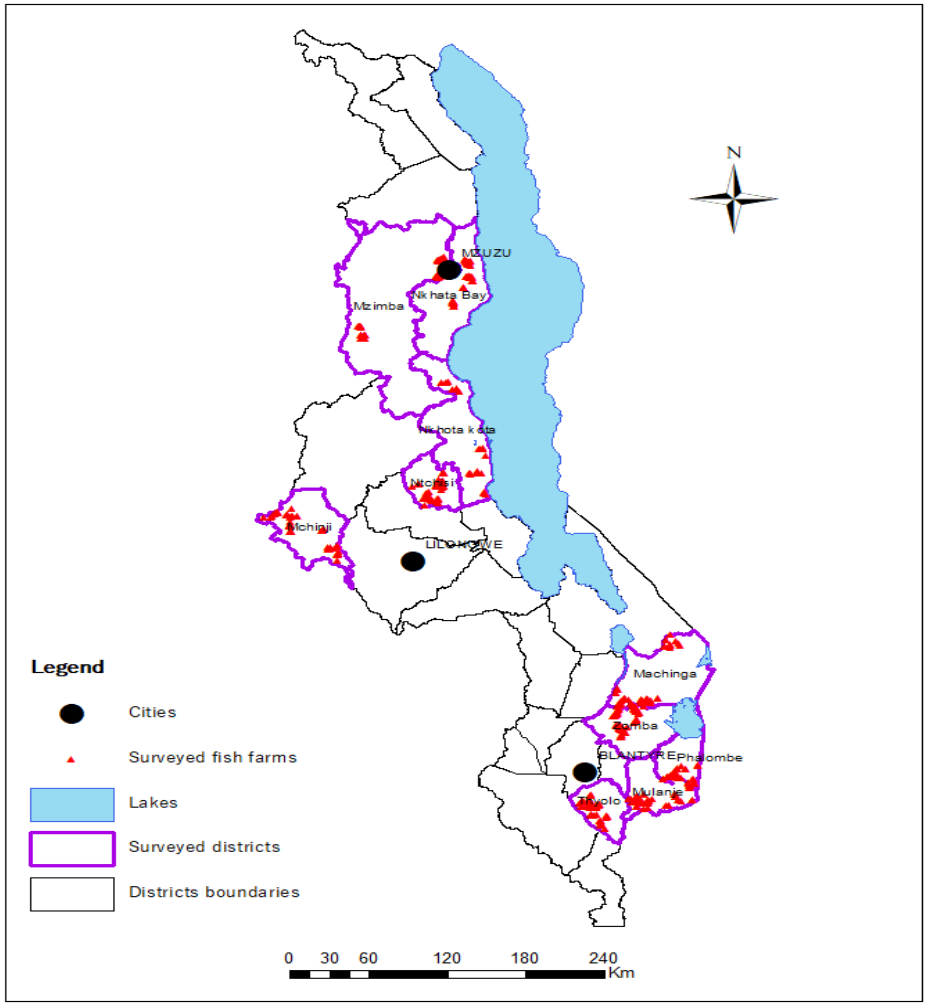


Source: 2021 National Economic Report

MwAPATA Aquaculture Survey

- Aimed at examining the **constraints** and **opportunities** for increased production among small-scale fish farmers
- Survey conducted between **June and July 2021**
- Collected data from **732 fish farms** from **10 districts** across all 3 regions
- Interviewed **606 individually owned** and **126 community owned** fish farms

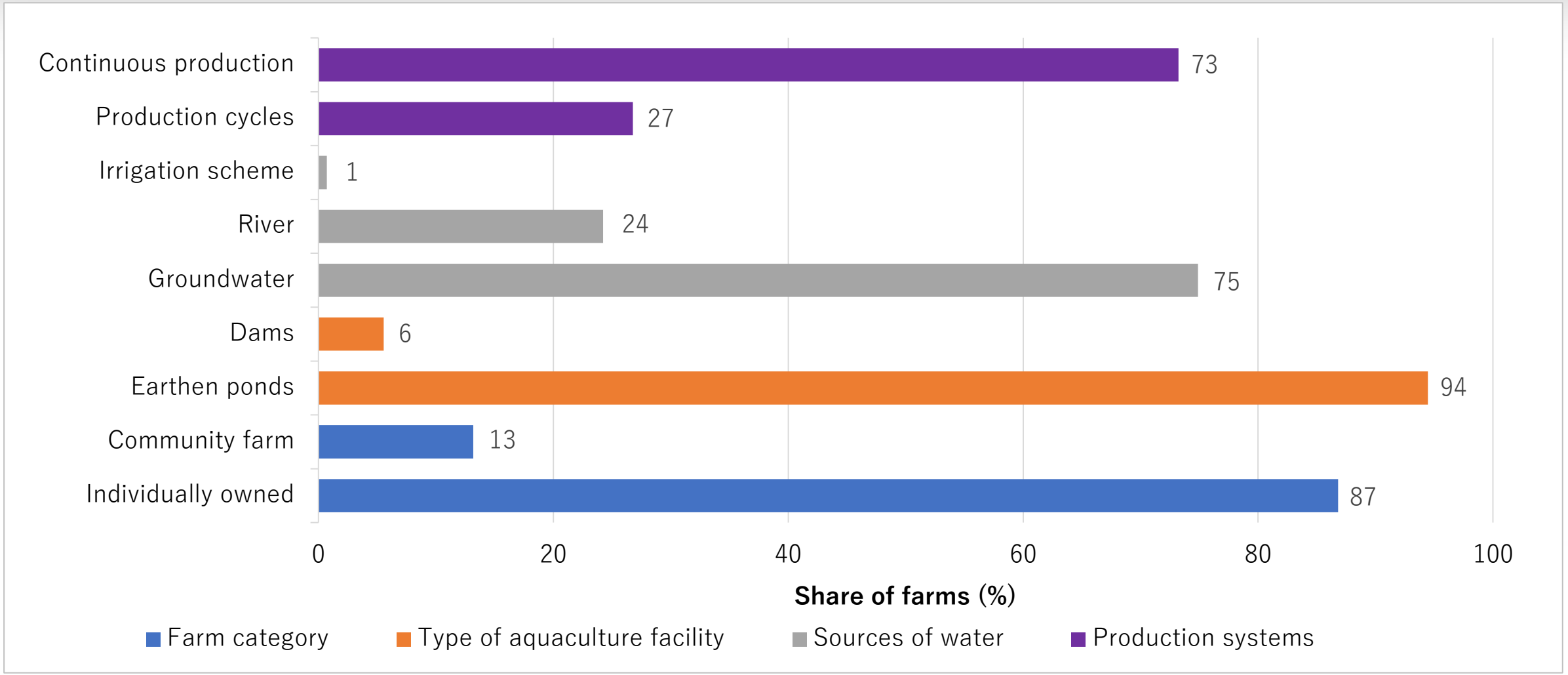
Study districts & distribution of surveyed farms



Characteristics of farming households & community farms

	Mean or %
Individually owned farms/household head:	
Age of household head	52 years
Male-headed household	86%
Literacy of household head	89%
Fish farming experience	12 years
Observations	606
Community farms/leaders:	
Share of women in the community farm	61%
Share of youths in the community farm	31%
Fish farming experience	8 years
Age of leaders	45 years
Literacy of leaders	90%
Observations	126

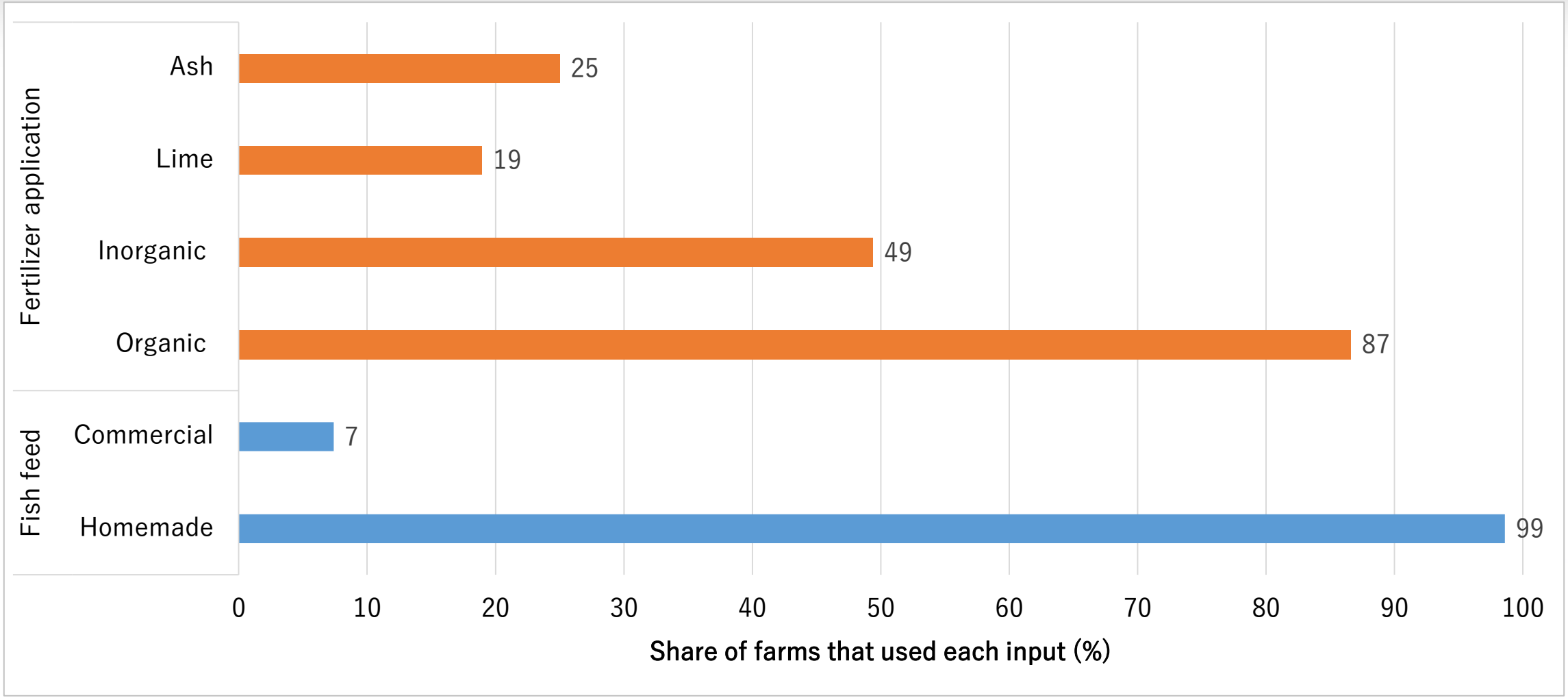
Characteristics of fish farms



Fish production

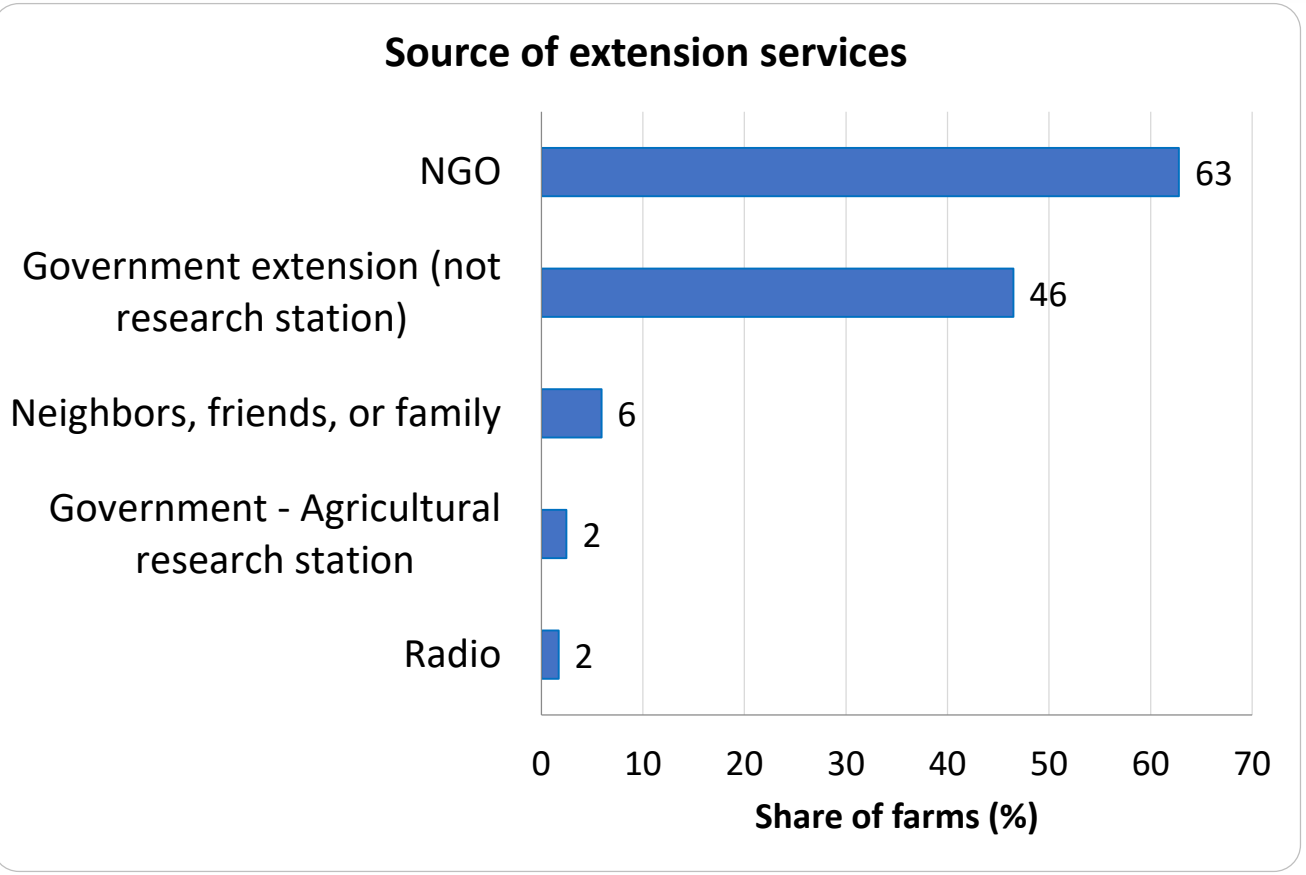
Fish species	% of farms	Quantity (kg/farm)	Yield (kg/m²)
Chilunguni *(Tilapia rendalli)*	53	145	0.8
Makumba *(Oreochromis shiranus)*	57	147	0.6
Chambo *(Oreochromis karongae)*	19	91	0.7
Mlamba *(Clarias gariepinus)*	2	341	1.4

Usage of inputs



Access to extension services and credit

- 72.8% of the fish farms accessed extension services



- 6.2% of the fish farms accessed agricultural credit

Source of credit	% of farms
Village bank	56
Relatives/neighbors/friends	30
Money lenders	6
NGO	2
Microfinance institution	2
MERDEF/MRFC/NEEF	2
Input supplier/agro-dealer	2
Commercial bank	0
SACCO	0
Output buyer/trader/processor	0

Marketing of fish

Marketing channels	% of farms
Direct to consumers (pondside)	66
Direct to customers in a rural market	41
Traders that come to the village	21
Traders outside the village	12
Direct to customers in another setting	6
Direct to customers in an urban market	5
Direct to customers by the road	4
Processors/wholesalers	2
Contract market	0.4

Out of the fish harvested:

- 27% consumed
- 60% sold
- 12% gifted
- 1% post-harvest loss

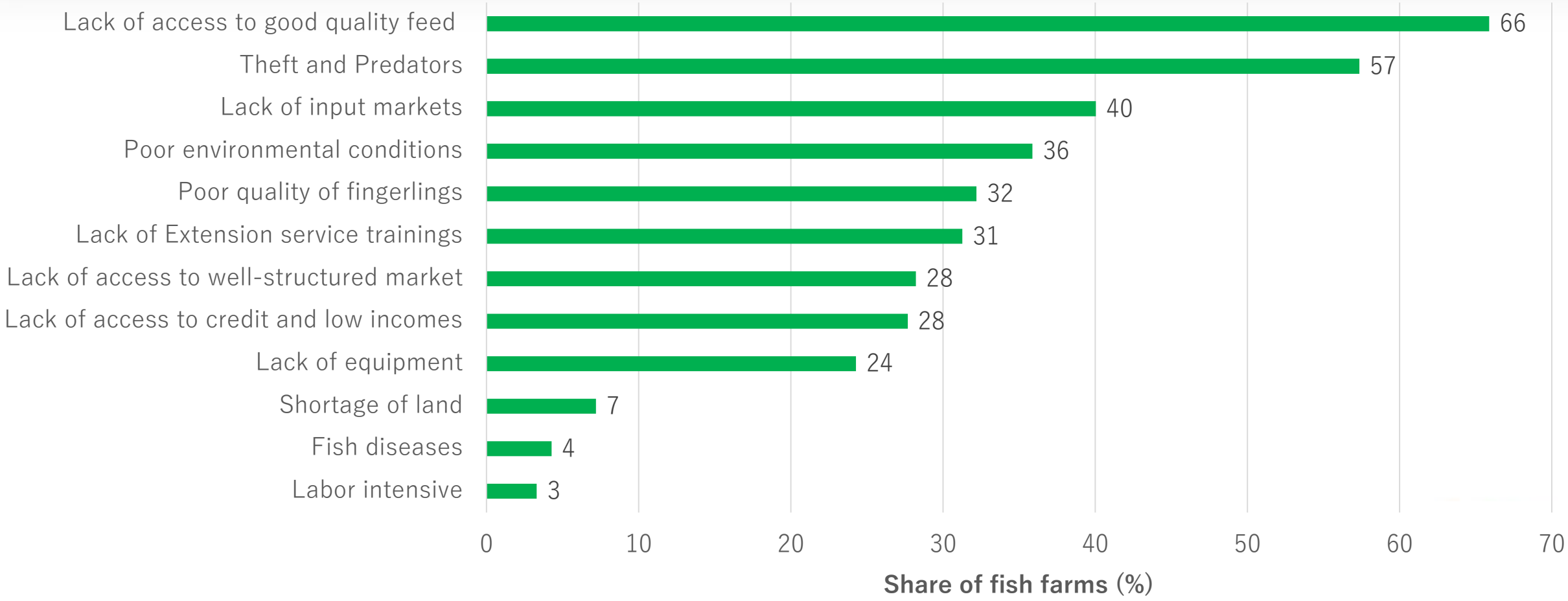
(Average values)

Is small-scale fish farming profitable?

Category	Gross margin at farm level (Mean MK)	Gross margin per pond of size 299.5 m^2
Overall	116,258	97,041
By farm type		
Individually owned	128,012	108,525
Community farm	38,876	21,945
By production system		
Continuous production	62,765	101,980
Production cycles	262,509	95,274
By species		
Makumba	79,440	79,146
Chilunguni	106,113	84,957
Chambo	54,942	105,517
Mlamba	247,884	66,051
By region		
Southern Region	124,487	112,957
Central Region	47,502	75,784
Northern Region	142,083	65,560
By farm size		
0-200 m^2	34,516	126,057
200-1,000 m^2	91,771	63,238
>1,000 m^2	693,008	96,166

- Most of the fish farmers realized positive profits (81.5%)
- Median: MK 25,000

Challenges affecting small-scale aquaculture



Opportunities for the growth of small-scale aquaculture in Malawi

- Feed production
- Fingerling production
- Access to formal markets
- Provision of loans / credit
- Cage farming

Policy recommendations (1)

- Improve access to high quality fish feed
- Incentivize private sector investment in aquaculture e.g production of floating fish feed
- Explore the use and cost effectiveness of insects, such as Black Soldier Fly (BSF), as fish feed
- Develop certification protocols for fingering production and train certified hatchery operators
- Improve fish farmers' access to loans and credit
- Promote and disseminate best fish farming practices and technologies

Policy recommendations (2)

- Promote the active participation of youths and women in small-scale fish farming through targeted interventions and strategies
- Organize small-scale fish farmers into groups/ organizations/ cooperatives and strengthen existing farmers' associations
- Invest in aquaculture extension services
- Encourage fish farmers to embrace farming as a business

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