

Challenges to Effective Aquaculture Adoption in Sierra Leone: The Case of Bo Inland District



Introduction

- Aquaculture now supplies over half of the fish consumed globally. However, Africa, and Sierra Leone in particular, contributes only a very small share of production, despite abundant inland water resources. As a result, the sector remains largely small-scale and underdeveloped.
- Persistent structural, institutional, and socio-economic barriers continue to constrain sector growth.
- This study focuses on Bo District, examining key adoption challenges and opportunities critical to advancing food security, livelihoods, and sustainability.

Objectives

- Analyse trends and patterns of aquaculture adoption in Sierra Leone, with a focus on Bo District
- Identify key barriers and drivers influencing adoption
- Develop policy-relevant recommendations for scaling sustainable

Methodology

- Secondary data analysis: policy documents, FAO, WorldFish, WorldBank, and relevant literature
- Primary data: 2023 National Aquaculture Assessment Survey (MFMR)
- Analytical approach: content analysis, qualitative/thematic analysis

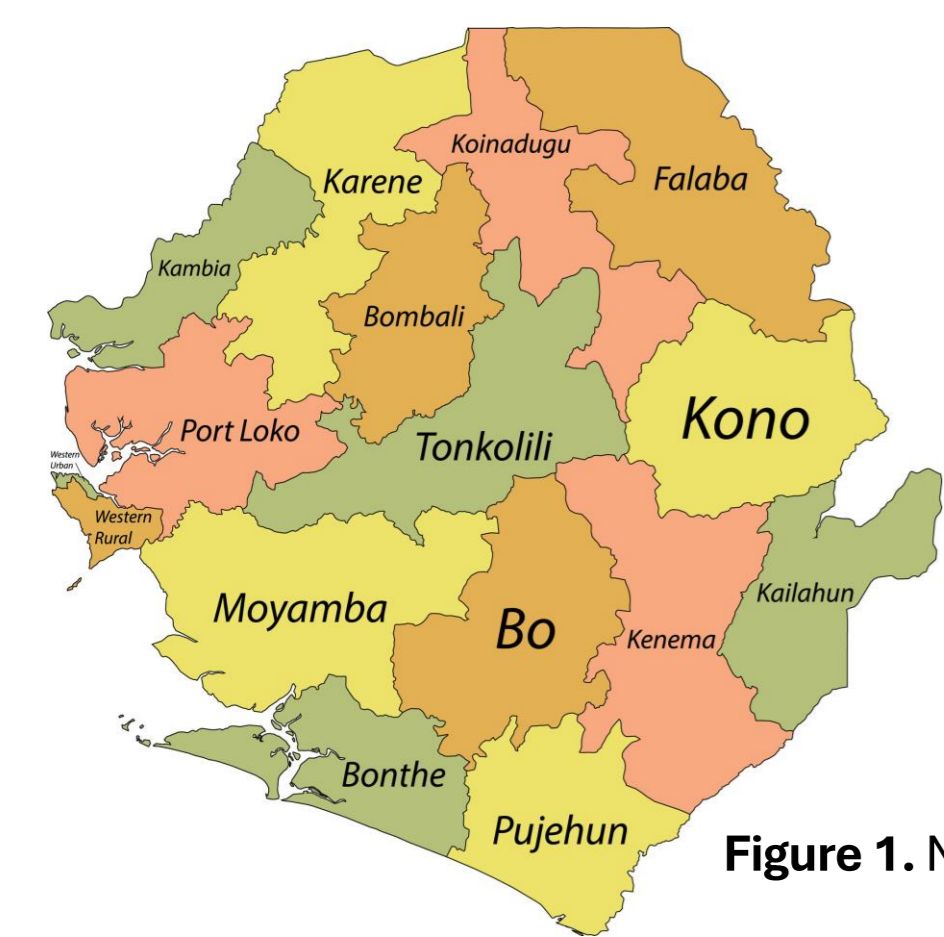


Figure 1. Map of Sierra Leone showing Bo District, the study area

Key Findings

- Aquaculture is dominated by smallholder tilapia farmers who face limited access to quality feed, unreliable fingerlings, and high financial barriers
- Markets are informal and poorly structured
- Weak regulatory frameworks and inadequate extension services further constrain sector growth
- Environmental risks, low youth participation, and gender-related constraints

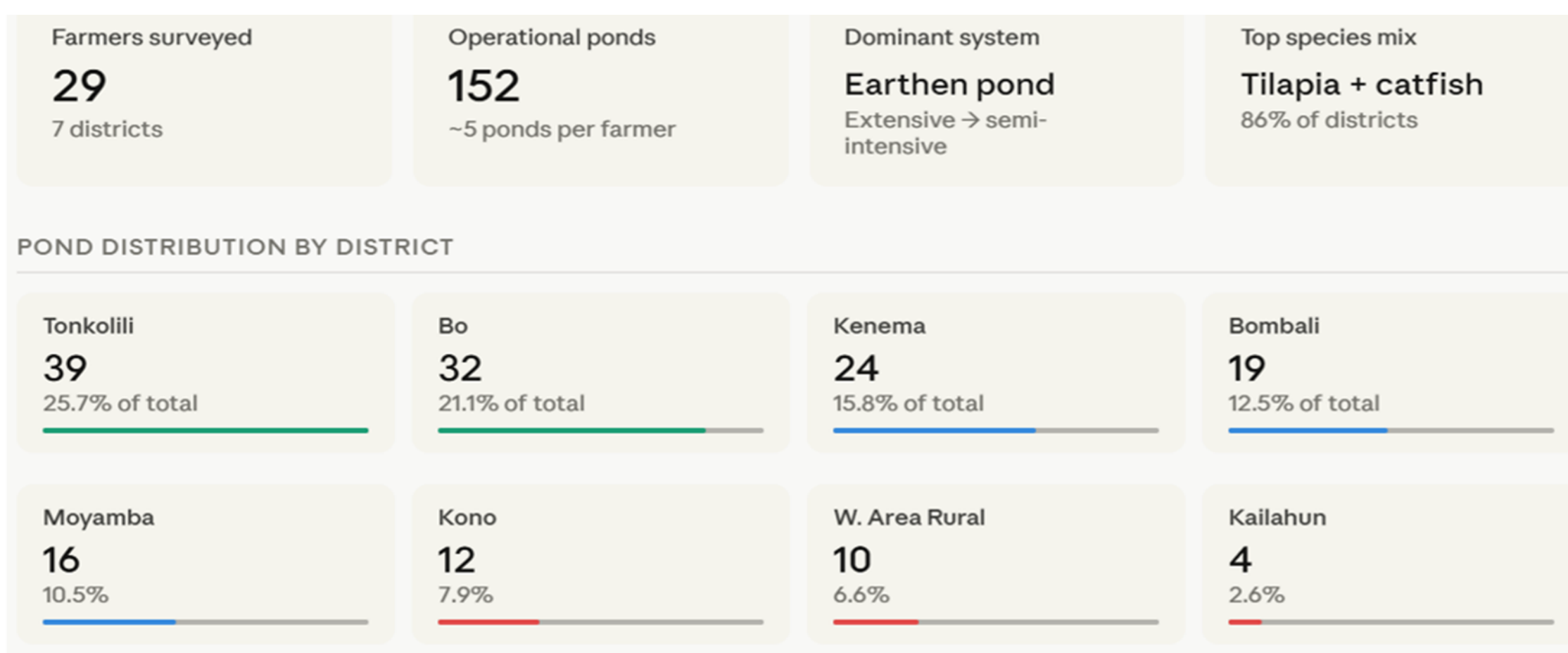


Figure 2. Summary of the 2023 fish farm survey

Table 1. Key Features of the Aquaculture Sector in Sierra Leone

Sectoral features	Implications for aquaculture adoption
Smallholder dominance	Informs how interventions can be tailored to advance aquaculture
Tilapia dominant species	Important for understanding input and capacity requirements, as each species has different needs
Access to feed	A key input challenge that must be addressed
Access to quality fingerlings	A key input challenge that must be addressed
Informal marketing systems	Integrating smallholder farmers into formal value chains
Regulatory barriers	A policy issue requiring government attention
Social and community-level challenges	Manifests in multiple ways
Limited institutional support and extension services	Expand the extension officer workforce within MFMR and simplify farm registration at the district level
Environmental and climate-related challenges	Can only be partially addressed

Conclusion

- Aquaculture adoption in Sierra Leone remains low despite strong natural potential
- Barriers are systemic and interconnected rather than isolated
- Structural constraints (e.g., inputs and infrastructure) are the most immediate limitations
- Institutional and policy gaps weaken sector coordination
- Without targeted interventions, sector growth will remain limited

Recommendations

Short-term (0-2 years): Enable Farmers

- Strengthen extension services and farmer training
- Improve access to quality fingerlings, and facilitate access to quality feeds
- Expand microcredit schemes and support farmer groups and cooperatives
- Improve access to market information

Mid-term (2-5 years): Build systems

- Develop local feed production industries and establish certified hatchery systems
- Improve infrastructure (roads, storage, cold chains)
- Formalise market systems
- Strengthen institutional coordination

Long-term (5+ years): Transform the sector

- Develop clear policy and regulatory frameworks
- Promote private-sector participation and public-private partnerships
- Strengthen research and innovation capacity
- Scale climate-resilient aquaculture practices
- Integrate aquaculture into national food security strategies

Acknowledgements