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RESEARCH REPORTS

Sustainable Aquaculture for a Secure Future

Title: Application of Porter's Framework to assess aquaculture value chain in Kenya

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Aquaculture (fish farming) is an agricultural as well as fisheries activity, competing with other agricultural enterprises and artisanal fisheries for the same basic inputs. Therefore, aquaculture is subject to the same basic resource constraints that traditional agricultural activities face. The literature suggests that competition within a value chain is between chains and not individual actors. This study examined the aquaculture value chain in Kenya, assessing the entire value chain, and determining the appropriate points to participate in economically sustainable ways. The competition analysis assessed attractiveness at each stage of the chain by reviewing the rivalry in terms of five competitive forces within the Kenyan aquaculture industry; competitive rivalry, the threat of new entrants, bargaining power of suppliers, threat of substitutes and bargaining power of buyers. The aquaculture industry in Kenya is assessed using Porter's model with marketing mix (Ps) and factor evaluation matrix (FEM). Input supply is found to be the most difficult value chain function in which to participate because it requires relatively large initial capital outlays and additional operating funds. Although fish farming is the driving function of the entire value chain, the significant capital investments required could be a barrier to entry. Fish farming has largely benefited from the support of government, NGOs and other regional development initiatives. The

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study established that the easiest sector to enter (in terms of low barriers to entry and exit and low labour requirements) is the fish marketing sector. This chain function provides the most flexibility and liquidity to participants, whether as full-time or part-time occupation. Overall, participation in the Kenya aquaculture value chain will depend on the prospective entrant's level of experience, time, capital commitment and financial goal (long term stability versus liquidity). Aquaculture requires a long term commitment and high capital outlays, as well as persistence, and should therefore be considered by those looking for long term stability and not short term benefits. Established fish farmers may consider diversifying into input supply and value addition as well.

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