



Impacts of COVID-19 Pandemic on Ornamental Fish Supply Chain in Sri Lanka

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Abstract

Sri Lanka is one of the leading ornamental fish exporters globally, with total export earnings of around 15 million USD in 2019. The novel human coronavirus (COVID-19) pandemic has become a great threat to many industries worldwide, including the ornamental fish trade. The present study was conducted to explore the qualitative and quantitative impacts of the pandemic on the ornamental fish supply chain in the Western Province of Sri Lanka with a sample size of 100 respondents representing the key stakeholders of the supply chain. The results concluded that all the stakeholders experienced a negative impact on their business process with the ongoing pandemic. There was a general reduction in sales and along the supply chain, the fish exporters were the least affected sector (7 % reduction), followed by breeders and growers (31 %), and aquarium fish dealers (38 %). The stakeholders who handled a diversified fish stock managed to do better than those who dealt with a single fish species during the pandemic. The supply of fish feeds was one of the significant constraints for all the stakeholders during a complete and partial lockdown. As a positive outcome of the pandemic, 30 % of the fish exporters received an unexpected increased number of export orders from their buyers. Government intervention is crucial to rebuild and strengthen the impacted key players within the ornamental fish supply chain under the pandemic situation.

Keywords: coronavirus, aquaculture, socio-economic, fish trade

Introduction

The fisheries sector comprising marine capture fisheries, inland capture fisheries and aquaculture, plays a vital role in the economy of Sri Lanka by contributing 1.3 % to the gross domestic production (GDP) in 2019 (MFARD, 2020). The ornamental fish sub-sector has grown significantly over the last decade in Sri Lanka, and it has contributed approximately 18 % of the total export earnings of the fisheries sector in 2019 (MFARD, 2020). The supply chain of the ornamental fish industry is highly specific and diversified with the country or region of origin (locality) and category of fish (fresh or marine) (Monticini, 2010). There are various stakeholders in the ornamental fish supply chain namely, breeders, growers, fishers (wild fish collectors), exporters, importers, aquarium fish dealers (retailers), and hobbyists who play a significant

role to maintain the healthy supply chain (Wijesekara and Yakupitiyage, 2001; Monticini, 2010). When considering the ornamental fish supply chain in Sri Lanka, the aquarium fish dealers are the major suppliers of the local market, and they are primarily located in cities (Wijesekara and Yakupitiyage, 2001). The fish farmers (breeders/growers) are varied both in size (small, medium, and large-scale) and the types of cultured species (Heenatigala, 2012). The contract growers assisted by exporters become the major fish growers in Sri Lanka (Wijesekara and Yakupitiyage, 2001). Fish exporters are the foremost local community who compete to maintain the Sri Lankans' share in the international export market. They fulfil their export shipments from their hatcheries and the small and middle-scale fish breeders and growers (Wijesekara and Yakupitiyage, 2001).