

Novel digital tools to strengthen shrimp production in Bangladesh

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Researchers at the University of Exeter are helping the Bangladesh shrimp industry become more sustainable through a new set of digital training tools.

The digital tools created by the Exeter team are for shrimp hatcheries, which produce larval shrimp and supply the entire industry of more than 300,000 farmers across Bangladesh.

They have been produced in collaboration with shrimp hatcheries and in-country partners WorldFish and the Centre for Communication Action Bangladesh.

The shrimp industry is hugely important for the Bangladesh economy, employing around 3.5 million people. It is a key source of dietary protein for the Bangladeshi people.

The industry has expanded rapidly over the past 40 years but now faces increasing losses from disease – partly due to poor biosecurity (preventing the introduction and spread of harmful organisms).

This has substantial economic, social and environmental costs.

“Our project aims to help the Bangladesh shrimp aquaculture industry become more sustainable by improving biosecurity,” said Professor Charles Tyler, project lead.

“If we can support the shrimp industry to improve biosecurity in Bangladesh, this should in turn increase productivity and lower the impacts on biodiversity loss, pollution of water systems and the risk of antimicrobial resistance.”

Lead researcher Dr Kelly Thornber said: "Most biosecurity training materials are not aimed at low-income, extensive farming systems, which are commonly found across Bangladesh, and they are usually technical and text-based, so not very appropriate or readily accessible.

"By working with in-country partners, we have identified pragmatic solutions that are simple and relatively cheap to implement.

"We have developed a set of digital training videos, a self-assessment app and monitoring sheets, to make biosecurity training more engaging and accessible."

"In this endeavour disease control is key, and therefore projects such as this, focused on training and improving biosecurity measures, are hugely important for the long-term sustainability of the industry."