

Platform-based sustainability governance in Indonesian aquaculture

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The aquaculture industry faces several sustainability challenges related to the unsustainable use of inputs such as feeds and antibiotics and the resulting pollution and destruction of sensitive ecosystems. Addressing these challenges is especially difficult in information-poor and fragmented value chains dominated by smallholder production. An increasing number of digital platforms seek to improve the sustainability of aquaculture through the collection, analysis and communication of digital data. Digital platforms provide automated farm management (advice) and digital marketplaces to source inputs such as feeds and to sell 'data-intensive' aquaculture products. Data is generated using a variety of sources such as sensors or input by producers. The informational processes introduced by digital platforms enable new ways of steering towards sustainability. In doing so, digital platforms appear to reorganize aquaculture value chains, changing the roles of producers in managing their farms and the role of traditional aquaculture processing firms in coordinating their supply chains. To reflect on these changing dynamics in aquaculture value chains we perform a case study of the Indonesian start-up eFishery, a digital platform application for the Indonesian aquaculture sector enabling producers to source inputs and sell their products. eFishery is used by thousands of smallholder shrimp and tilapia farmers in Indonesia. The platform is based on an automated feeding machine placed in ponds and equipped with sensors to collect data about the use of feed and water quality. The data collected is used to optimize feeding, whilst the digital app also allows producers to purchase feed, sell their products and get access to finance based on analyses of production data. We conducted interviews with various users of the platform in Java, including producers, traders, processors and input suppliers to reflect on the ways in which the use of the platform changes relations and dependencies in the aquaculture value chain. Based on our findings, we analyse the implications of the platformization of Indonesian aquaculture for the sustainability governance of the sector.