Environmental and Economic Entanglements: Tuning Social Relations, Technology and the Nature of the Coastal Aquaculture

Ko-Kang Chien

ABSTRACT

Aquaculture is an important livelihood for many people in coastal southern Taiwan. However, since the industry relies on groundwater, aquaculture is highly susceptible to environmental problems. Meanwhile, the industry is now facing declining profits and fluctuating growth rates. Given that aquaculture in Taiwan has been predominantly engaged by smallholder households, these trends beg the question: how have smallholders constructed a highly developed industry that is also economically and environmentally vulnerable? To answer this question, this study explores how social, technical and natural conditions interact in coastal areas of Southern Pingtung, where export-oriented aquaculture both thrives and grapples with environmental and economic threats. By pointing out how social actors cannot be fully aware of or contain non-human conditions that play a distinguished role, such as the natural world and indigenous techniques, this study argues for a nondualistic, entangled relationship between the environment and economy. In this entangled relationship, the more smallholders try to leave the situation, the more they are involved, thus exposing themselves to environmental and economic risks. Despite this, some smallholding fish farmers take a further step into such an entangled relationship: instead of stepping away from the industry, they practice 'tuning' (a concept drawn from Andrew Pickering), in which their own aquaculture practices meet up with social, technical and natural conditions. Thus, this study suggests that when we consider non-human conditions as potential 'actors' as much as the smallholders who did the 'tuning', we may discover a different point of view in terms of the difficult relationship between the environment and economy. This line of inquiry brings a new light to studies of smallholding fishers and fish farmers and the environmental and economic issues involved in the development of aquaculture and nature-based industries.