Transformative capacity of Balinese irrigation societies (subak)

Rachel P Lorenzen

This study focuses on a very specific social-ecological system (SES) with clearly defined boundaries in both the social and ecological spheres and its transformative capacity amid possible regime shift. The Balinese subak – an efficient, long-enduring and self-organising farmer-managed irrigated rice production system – can be defined as a resilient social-ecological system (SES) that includes a specific irrigated rice ecosystem, the institutions which govern resource use, as well as farmers’ methods and labour in cultivating and irrigating rice.

A growing population and a diversifying rural economy are threatening the future and resilience of the subak, which was once the mainstay of Balinese society and economy. This ongoing process of rural transformation is gradually reducing the very resource base that these systems depend upon: land is being converted to residential and industrial settlements, new stakeholders have emerged to demand water, and attractive off-farm employment combined with better education opportunities lures the younger generation away from rice farming.

With such imminent threats it is questionable whether the subak can survive being left to its own devices. I argue that the subak’s future depends upon a combined effort of a supportive government and as well as an active and involved farming community. To this end, I develop three scenarios of alternate regimes assuming varying degrees of government interventions and farming households’ abilities. One scenario is further investigated to examine the subak’s transformative capacity by means of a present-day case study of a subak which has turned to organic farming for accessing premium-price niche markets.

While there is potential for the preservation of the subak’s cultural heritage and stewardship of this specific ecosystem it remains to be seen whether the subak can transform from simple facilitation of irrigation and cultivation to a business-oriented producer group for its members are a heterogeneous group of tenants and owners alike.