Abstract

Many social-ecological systems that are perceived to be marginal have low agricultural productivity and low population densities. Paradoxically, however, economic marginality can persist in systems of high productivity, ecological diversity and population density. We argue that the highly-productive southwest coastal zone of Bangladesh represents a social-ecological system made marginal through high inequality, homogenization and simplification of landscapes, and persistent extraction of surplus value of ecosystem services from outside the locality. We build on the ideas of socio-ecological systems at the margins to propose three inter-related explanations of lack of resilience of this marginal social-ecological system. First, the physical system is high energy and dynamic; any attempt to increase resilience while working against such dynamic processes will be prohibitively costly to sustain. Second, power imbalances, characteristic of marginal systems, mean any benefits of the transformation have been concentrated into the hands of the already powerful, leading to continued struggles over management of such structures with the less powerful groups. Third, the social-ecological system has persistent traps of incentives to allow degraded environments. We review evidence of how, from the 1960s to the 1980s, coastal embankments, constructed to regulate water, prevent coastal flooding and improve agricultural productivity, transformed land use but the gains from increased agricultural productivity were not widely distributed. Salinisation and water-logging create conditions amenable to shrimp aquaculture, generating profit for investors outside the locality. Ecosystem expropriation by non-local entities is another characteristic of marginal environments. We argue that the southwest coastal zone of Bangladesh shows all the characteristics of a system at the margin. The construction of coastal embankments, by strengthening some of the negative aspects of life at the margin, is likely to have perpetuated this characteristic.

Keywords: social, ecological systems, resilience at the margin, land use, transformation, political economy