

MANGROVES, SHRIMP AQUACULTURE AND RESOURCE TENURE: PROVIDING ECONOMIC INCENTIVES FOR COMMUNITY-BASED RESTORATION ACTIVITIES IN COASTAL SE ASIA By Peter Riggs: Rockefeller Brothers Fund, 1290 Avenue of the Americas, #3450 New York, NY 10104-0233, UNITED STATES:—Traditionally, coastal communities of SE Asia have managed mangrove forests as a commons. The Regalian Doctrine of state ownership of natural resources has in many cases allowed powerful political actors to override the vernacular tenurial arrangements in these mangrove systems, and to privatise access to coastal mangrove resources, oftentimes by converting mangroves to shrimp ponds. The destruction of the commons and the externalisation of the environmental costs of shrimp aquaculture has left many of these areas over-exploited and derelict. Rehabilitation will be costly, and is unlikely to succeed unless it provides specific economic incentives for adjacent communities to support restoration activities. Many observers in SE Asia today are calling for greater environmental accountability on the part of the shrimp aquaculture industry. Shrimp aquaculture has been among the most destructive coastal zone activities, but new technological breakthroughs coupled with a greater awareness of the costs imposed by inappropriate pond siting and development suggest that this industry can be put on a more sustainable footing. Interventions to spur change within the industry can come from both supply-side and demand-side initiatives—that is, from a change in productive relations at the pond level and changes in consumer behaviour to demand a product reflecting environmental and social values. One common approach to changing consumer behaviour is through the use of eco-labelling schemes. This paper examines the interaction between mangrove rehabilitation, coastal resource tenure and community control of resources, and market differentiation of shrimp, based on social and environmental costs. One way to approach restoration is through granting communities secure use-rights to the rehabilitated system so as to ensure support for long-term solutions. Such reconstituted tenurial arrangements can draw upon both traditional common property management systems as well as new property relations grounded in the state's civil code. Tenurial rights would include rights to harvest fish and shrimp out of the regenerating system. A further set of incentives for ecosystem protection and rehabilitation can come through a demand-side mechanism: the differential pricing of shrimp according to the production system. The paper explores an eco-labelling programme for these rehabilitated areas, in which local governments collaborate with shrimp exporters and independent third-party certifiers to build trust for "eco-friendly" shrimp. This demand-side approach can be coupled with supply-side efforts to raise funds for rehabilitation through preferential export schemes and environmental taxes or levies on industrial producers. Consumer willingness to pay a price premium for a product which reflects social and environmental values will only come about through greater public awareness of the social utility of avoiding the negative impacts often associated with shrimp aquaculture. Restoration activities themselves can be a means of building consumer awareness. The paper concludes by looking at various modes of financing such initiatives based on a sharing of transaction costs at each step along the product chain of custody (producers, processors, exporters, wholesalers, and retail consumers). The potential roles of the multilateral development banks, socially-progressive private investors, and national line agencies are also explored.