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Scientific Knowledge Transfer on the Mangrove Used Attraction in Segara Anakan Lagoon, Central Java, Indonesia

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Abstract

The Segara Anakan lagoon is located in Central Java, Indonesia. Its ecosystem is made up of a variety of habitats: mangrove, saltwater marshes, inter-tidal mud flats, and open water. Mangrove becomes estuary for the spawning ground, nursery ground, and feeding ground of the fish, shrimp and other water biota. Since the first mapping of the Lagoon in the early 1900s, its surface area has continuously declined. Many researches was conducted and policy was implemented to save the lagoon and mangrove forest, thus conflicts of interests involving economics, conservation, and welfare lead to the shrinking of the lagoon continuing up to now. Reasons are: (1) illegal logging and agricultural activities in the upstream; (2) commercial farming, fishing activities, and aquaculture on the mangrove and lagoon areas; and (3) conflict with neighbouring district for the river diversion plan to bring the upstream sediment to the open sea. The research question of the paper is why scientific knowledge transfer was not successful in this case. For answering this question, the RIU-model of scientific knowledge transfer is applied to analyse the interests and interactions between actors of the science-policy-interface within the three spheres Research (R), Integration (I), and Utilisation (U). The RIU model illuminates the importance of integration activities as the key to successful scientific knowledge transfer from science into political practice. The objectives of our research are: (1) to identify scientific knowledge that was utilised by actors in practice; and (2) to identify and to analyse integration activities between research and utilisation. The results show that due to the weakness of the integration process, emerging science-based policies failed to achieve their goals to conserve the mangrove and lagoons areas. Based on the analysis by the RIU model we identify problems of scientific knowledge transfer in this case and can formulate recommendations that could be used to improve the implementation of science-based policies.

Keywords: Knowledge transfer, lagoon, mangrove, RIU model, Segara Anakan