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Sustainable Development Approach for Coastal Erosion Problem in Thailand: Using Bamboo Sticks to Rehabilitate Coastal Erosion

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Abstract : Coastal erosion is a major problem in Thailand, in both the Gulf of Thailand and the Andaman Sea coasts. According to the Department of Marine and Coastal Resources, land erosion occurred along the 200 km coastline with an average rate of 5 meters/year. Coastal erosion affects public and government properties, as well as the socio-economy of the country, including emigration in coastal communities, loss of habitats, and decline in fishery production. To combat the problem of coastal erosion, projects utilizing bamboo sticks for coastal defense against erosion were carried out in 5 areas beginning in November, 2010, including: Pak Klong Munharn- Samut Songkhram Province; Ban Khun Samutmaneerat, Pak Klong Pramong and Chao Matchu Shrine-Samut Sakhon Province,and Pak Klong Hongthong – Chachoengsao Province by Marine and Coastal Resources Department. In 2012, an evaluation of the effectiveness of solving the problem of coastal erosion by using bamboo stick was carried out, with a focus on three aspects. Firstly, the change in physical and biological features after using the bamboo stick technique was assessed. Secondly, participation of people in the community in the way of managing the problem of coastal erosion were these aspects evaluated as part of the study. The last aspect that was evaluated is the satisfaction of the community toward this technique. The results of evaluation showed that the amounts of sediment have dramatically changed behind the bamboo sticks lines. The increase of sediment was found to be about 23.50-56.20 centimeters (during 2012-2013). In terms of biological aspect, there has been an increase in mangrove forest areas, especially at Bang Ya Prak, Samut Sakhon Province. Average tree density was found to be about 4,167 trees per square meter. Additionally, an increase in production of fisheries was observed. Presently, the change in the evaluated physical features tends to increase in every aspect, including the satisfaction of people in community toward the process of solving the erosion problem. People in the community are involved in the preparatory, operation, monitoring and evaluation process to resolve the problem in the medium levels.

Keywords : bamboo sticks, coastal erosion, rehabilitate, Thailand sustainable development approach
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