

# Sustainable mangrove forest management: mangrove-based business development using second-order confirmatory factor analysis in Prigi gulf of Trenggalek

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**ABSTRACT:**

Gulf of Prigi in Trenggalek Regency, Jawa Timur Province, Indonesia, has mangrove forests area in Damas beach and Cengkong beach. The mangrove forest area has decreased drastically in the last one decade. Replanting mangrove trees were done in Cengkong beach at 2008. The replantation activities were resumed and followed on 2009 and 2010. The results showed that the mangrove forest area at Cengkong beach began to flourish. This study aimed to describe the productive activities in the management of mangrove forests in Cengkong beach and analyze the mangrove-based business opportunities that can be developed through Second-Order Confirmatory Factor Analysis (CFA). Currently, the mangrove forests located at Cengkong beach are managed by Supervisory Community Groups of Kejung samudera. Replanting activities of the mangrove forests in Cengkong beach have given impact on the management activities. In 2012, the Department of Fisheries and Marine of Trenggalek regency began to introduce mangrove ecotourism. As the development of ecotourism in the mangrove forest area, it provides opportunities for further development based on the mangrove potentials. Nevertheless, mangrove-based business development should be following the concept of sustainability. Development of sustainable productive activities should be based on human resources, physical resources, natural resources and markets. The Second-order CFA analysis indicated that such productive business development opportunities from mangrove-based business consisted of the production of chips, brownies, syrups and dodol (sweet thick porridge). Based on the feasibility analysis in terms of financial aspect, chips, brownies, syrups and dodol are feasible to develop, while the production of batik enterprises cannot be developed as the community still do not have the expertise in producing batik.

**Keywords:**

Sustainable management, Mangrove forest, GeSCA method.