

## **Abstract**

Community Based Mangrove Management has been advocated by both academia and governing agencies as a viable alternative for sustainably managing the ecologically important mangrove forests which are depleting rapidly worldwide. Management of mangroves in a sustainable ecological as well as economic way is a difficult proposition and needs multi-disciplinary intervention. This thesis highlights the importance of criteria and indicators to evaluate the status of performance of localized communities of Sunderbans, India in managing their mangroves sustainably. The developed framework consisting 6 principles, 12 criteria, 36 indicators and 47 verifiers had been applied for assessment of the functioning status of community institutions of Sunderbans, *i.e.* Forest Protection Committees and Eco Development Committees operating. The environmental conditions of the mangroves and surrounding areas managed by these institutions had also been analyzed in this context. Results show the presence of a highly positive correlation between performance of a community institution in conducting management activities and environmental condition of the mangroves managed by it. Sustained flow of mangrove products and services for generating livelihood for the dependent communities had been identified as the prime determinant for maintenance of healthy mangrove environment regarding the Forest Protection Committees. However, level of implementation of legal and institutional management strategies to protect mangroves had been proved to be the essential pre-condition in achieving sustainability regarding the Eco-Development Committees. Subsequently, few necessary guidelines towards better management of the existing residual mangroves and creation of new plantations in the Indian Sunderbans had been forwarded based on the inferences of this discourse. The study further demonstrates the effectiveness of the developed framework in the context of community forestry since the methodology was designed to be simple and flexible so as to apply it in forest management unit level without any major difficulty.

### **Keywords**

Criteria and Indicators, Community Based Mangrove Management, Eco-Development Committee, Forest Protection Committee, Alternative Livelihood, Sustainability