

The DPSIR framework for causes analysis of mangrove deforestation in Johor, Malaysia

ABSTRACT

Globally, the coastal areas are changing due to increasing threats from different sources. Mangroves are most vulnerable and reducing its size during last few couple of decades. Some of the factors such as land use changes are acting directly while some factors are acting indirectly like socioeconomic factors. The mangroves ecosystem in Johor is changing for the purposes of developments such as agriculture, aquaculture, urbanization etc., which are triggered by different socioeconomic factors like population growth, population density, income etc. This change affects the local mangrove dependent communities both subsistence and commercially by reducing the ecosystem services both production and services functions of the mangroves. In this work the environmental assessment was studied by using the Driver-Pressure-State-Impact-Response (DPSIR) framework to identify, analyze and evaluate complex environmental problems. This complex situation is responded by the society or government through different initiatives (activities or planning) to reduce the negative impacts or to encourage the positive impacts. However this paper only focused on the anthropogenic factors of mangrove changes and the impact of deforestation for understanding the phenomena. The information of this study can be used by ecologists, environmentalists, social scientists, planners and decision makers.

Keyword: Deforestation; DPSIR; Land use factors; Mangrove; Population factors; Socioeconomic driver