

## ABSTRACT

### **Application of the DPSIR Framework to Coastal and Marine Fisheries Management in Kenya**

**Mumini Dzoga, Danny Mulala Simatele, Cosmas Munga, Shadrack Yonge**

Natural resource management frameworks are important in generating information that promotes the development of appropriate policies and regulation for effective management and utilization of different aspects of ecosystems. The Drivers-Pressure-State-Impact and Response (DPSIR) framework is one of such frameworks which has been widely applied globally in assessing, addressing and communicating with regard to environmental problems. This framework provides a nexus between the causes of environmental problems and the resultant pressures, associated impacts and responses needed to resolve and manage specific environmental issues and challenges. Based on improved management evidence for natural resources enabled by the application of the DPSIR framework globally, this paper is a review of the application of the framework in the management of coastal and marine fisheries resources in Kenya. Findings indicate that there exists a limited number of studies which have adopted the DPSIR framework approach in Kenya, and these are mainly focused on terrestrial ecosystems. However, coastal and marine resources have been well studied in Kenya using different methodological approaches that have given insights into the conditions of resources. This review, therefore, analyzed these studies to understand drivers, pressures, states, impacts and responses in relation to coastal and marine fisheries resources in Kenya. The main drivers observed were a high population growth rate of 3.7% as well as a high dependency rate on natural resources of 74% and 58% in Ngomeni and Kipini fishing areas of north coast Kenya, respectively. There is also a lack of understanding regarding the potential of the DPSIR framework to effectively manage coastal and marine fisheries resources, particularly in the context of sub-Saharan Africa, taking Kenya as a case study. This may result in the development of fisheries regulations that are not holistic in their approach, and therefore, ineffective from a management perspective. Within this context, this paper provides a discourse on how the DPSIR framework may enhance coastal and marine fisheries resources management in Kenya.

**Keywords:** DPSIR framework, coastal and marine fisheries, management framework, Kenya