Executive Summary

Introduction and Background

The coastal zone is an interface between the land and the sea which comprises of coastal land, intertidal area, coastal ecosystems including rivers, estuaries, marshes, wetlands and beaches. India has a coastline of about 7516 kms of which the mainland accounts for about 5422 kms, Lakshadweep coasts extend to 132 kms and Andaman & Nicobar Islands have a coastline of about 1962 kms. The coastal zone is endowed with a very wide range of natural resources. Beside the coastal waters, the other major ecosystems found in the coastal environment are Mangroves; Coral reefs; Sea Grass; Mud Flats; Estuaries/backwaters; Lagoons; Sand Dunes etc. The coastline supports a huge human population, which is dependent on the rich coastal and marine resources. However, increasing human population, urbanisation and accelerated developmental activities has put huge pressure on the fragile coastal ecosystems of India.

Ministry of Environment, Forest and Climate Change (MoEF&CC) and Ministry of Earth Sciences (MoES) are the two nodal Ministries which deal primarily in the coastal and ocean areas. The Environment (Protection) Act,1986 authorises the central government to protect and improve environmental quality, control and reduce pollution from all sources, and prohibit or restrict the setting and/or operation of any industrial facility on environmental grounds. The Government has issued notifications under Section 3 and 5 of Environment Protection Act 1986 to regulate the activities in coastal space so as to protect the coastal environment from various anthropogenic activities. Coastal Regulation Zone Notification (CRZ) 2019 which was superseded by its earlier versions in 1991 and 2011 implemented by MoEF&CC aims to classify the coastal area into different zones and manage the activities in an integrated manner. Pre-audit studies conducted to understand the risks in coastal zone management revealed that there were large scale CRZ violation in the coastal stretches. Incidence of illegal construction activities (reducing coastal space), effluent discharges from local bodies, industries and aquaculture farms have been recorded from various data sources. It was imperative to assess the implementation of Coastal Zone Regulation Notification 2011 by the coastal states as well as the centre in order to evaluate on the efforts of the Government of India towards protection and conservation of coastal environment.

Also, Given the significance of Sustainable Development Goals and the commitments of the country towards achieving them, we have attempted to evaluate the efforts viz. planning, implementation and delivery mechanism towards attaining the targets under SDG 14- Life Below Water.

Accordingly, we decided to take up a Performance Audit on 'Conservation of Coastal Ecosystems' with the following objectives:

1. To examine if institutional mechanism exists at Centre as well as State to regulate the activities in CRZ areas as per the provisions of CRZ notification 2019.

2. To examine if CRZ clearances granted by the Government is as per due procedure, to conserve coastal ecology
3. Whether post clearance monitoring as well as enforcement of CRZ notifications safeguarded coastal ecosystems
4. To examine if the project development objectives under Integrated Coastal Zone Management Programme (ICZMP) were successful.
5. To evaluate the measures taken up by the Government towards achieving the targets under SDG-14.

Key Audit Findings

Chapter 2: Institutional Framework

MoEF&CC has not notified NCZMA as a permanent body with recommended members. NCZMA is reconstituted every few years and in the absence of defined membership, it was functioning as an ad-hoc body, devoid of permanent members. Further, the composition of NCZMA has not been uniform over these years, indicating a lack of continuity of approach towards coastal conservation issues.

(Para 2.1 a)

Instances were observed where Expert Appraisal Committees (EAC) granted clearances, though domain experts were not present during the project deliberations. Also, cases were noted where the members of EAC were less than half of the total strength during the deliberations as there was no fixed quorum for EAC members.

(Para 2.1 b)

SCZMA was not reconstituted in the state of Karnataka and there was delayed reconstitution in the states of Goa, Odisha and West Bengal. SCZMAs held meetings without fulfilling the quorum requirements and lacked representation from relevant stakeholder bodies. SCZMAs in the states of Andhra Pradesh, Karnataka, Goa, Tamil Nadu, Odisha and West Bengal did not have sufficient manpower to perform their mandate.

(Para 2.1 c & d)

DLCs of Tamil Nadu lacked participation from local traditional communities. In Andhra Pradesh, DLCs were not established in all the nine coastal districts as on March 2021. In Goa, DLCs were formed in 2017 after delay of six years of promulgation of the CRZ notification. DLCs are yet to be reconstituted in two coastal districts of Karnataka as on March 2021.

(Para 2.1 e)

Absence of any active and functional website to disseminate the information related to NCZMA such as the agenda notes, minutes of the meetings was against the mandated responsibilities of the institution.

(Para 2.3)

Chapter 3: Project Clearances under CRZ Notifications

Projects were approved despite inadequacies in the EIA Reports which included non-accreditation of the consultant involved with the preparation of the EIA Report, usage of outdated baseline data, non- evaluation of environmental impacts of the project, non-addressal of disasters which the project area was prone to.

(Para 3.1)

Activities forming a part of the mitigation plans like mangrove conservation/ replantation, biodiversity conservation plan, rain water harvesting plan failed to be included in the Environment Management Plan as the same was left to the project proponent (PP) to be carried out.

(Para 3.2)

Projects were approved where MoEF&CC failed to make independent efforts to verify the veracity of the information given by private consultants and merely relied on the information submitted by the Project Proponent with respect to potential ecological risks due to the project activities.

(Para 3.4)

Instances were observed where the SCZMA usurped the powers of clearance granting authorities and granted clearance to the projects. Further, there were cases of project approvals where the SCZMAs recommended the projects without the submission of mandatory documents.

(Para 3.7)

Modification of CRZ notifications for approval of specific projects defeated the efforts to conserve the coastal ecosystems.

(Para 3.8)

Cases were observed where projects were approved without undergoing the multistage process of EIA as major infrastructure projects are not comprehensively covered under the EIA Notification 2006.

(Para 3.9)

Chapter 4: Post clearance monitoring and enforcement of CRZ Notifications

Instances were observed where the Project Proponent failed to comply with conditions mentioned in the Clearance and did not submit the mandatory half yearly compliance reports to the Regional Offices of MoEF&CC. There were cases where the projects commenced without obtaining any CTE or CTO from the concerned State Pollution Control Board.

(Para 4.1)

The enforcement of CRZ provisions by SCZMAs and DLCs were reviewed and instances were observed where SCZMAs failed to take action against CRZ violations and the DLCs too failed to identify violations and report the same to SCZMAs.

(Para 4.2)

Chapter 5: Conservation of Coastal Ecosystems

Despite serious reduction and degradation of the live coral cover in the Gulf of Mannar Islands, no viable strategy to mitigate the propagation of the invasive species had been devised by the Department of Forest, Tamil Nadu. Issues such as absence of a monitoring system for coral reefs, and non- preparation of management plans for turtle nesting sites in Goa were observed. Instances were observed where prohibited activities like infrastructure development in areas of coastal sand dunes were observed in Goa. Gaps in the efforts to conserve mangroves in Goa and Gujarat were noticed. Instances were observed where the sewage treatment plants were either altogether absent or were functioning without any monitoring leading to discharge of harmful effluents into coastal waters.

(Para 5.1 and 5.2)

Chapter 6: Integrated Coastal Zone Management Project

Although the entire work of mapping of Hazard Line was completed in August 2018, the ground demarcation of the Hazard Line was yet to be done by MoEF&CC. The Integrated Management Plans (IMPs) for Critically Vulnerable Coastal Areas (CVCAs) were yet to be prepared by the coastal states.

(Para 6.1)

In the marine field stations at Mandvi and Jamnagar in Gujarat, it was observed that out of 40 instruments installed under the project at these two places, 33 instruments were operated only for checking and calibration and were never used for the intended purpose i.e., to study the physiochemical parameters of soil and water of the intertidal area of the Gulf of Kutch.

(Para 6.2)

Insufficient capacity building measures at Odisha State Pollution Control Board (OSPCB) were noticed as Against the targets set for the collection and analysis of samples there was a huge shortfall ranging from 33% to 59%. Further, the Centre was working at 55 % of the required manpower and this resulted in non- operation of the equipment procured for the analysis of the samples.

(Para 6.3.2)

We observed that even after the incurring an expenditure of ₹ 6.23 crore, the objective of effective sea patrolling in Gahirmatha Sanctuary remained unachieved. A research laboratory at Dangmal, Kendrapara District, Odisha constructed in 2016 could not be made functional till date. We observed Idling of infrastructure created under the activity relating

Hygienic drying of fish at Gopalpur in Odisha where the solar dryers could not be made functional enough to provide livelihood support to the community, the expenditure of ₹6.72 crore on creation of facilities under the ICZMP.

(Para 6.3.3 and 6.3.4)

Chapter 7: Sustainable Development Goals

Audit examined the stakeholder map and found that a few significant stakeholder organisations like the Indian Coast Guard and Ministry of Ports, Shipping and Waterways were not included in the map. We observed that the indicators do not holistically address the SGD target and do not conform to global indicators, as the indicator essentially measured only the output of the programmes developed for management of mangrove ecosystems. The list of activities planned to achieve the target should have also formed the sub-indicators and biodiversity, fisheries indices etc., should have ideally formed the output indicators for the target. We observed that the State Indicator frameworks were not prepared by the states of Maharashtra and Kerala. It was observed that with the exception of Gujarat, all other coastal states adopted the national indicators as developed by MoSPI without adapting them to the state specific environmental aspects. Also, in the states where SIFs had been formulated, further localization to District levels was done only by the State of Karnataka by notifying District Indicator Framework (DIF).

(Para 7.1, 7.2 and 7.4)

Recommendations

We recommend that:

1. SCZMAs and NCZMAs may be made as permanent bodies with full time members to carry out all the mandated activities for protecting the coastal environment.
2. The DLCs may be formed and reconstituted without delay in all the relevant districts. The composition of DLCs may be inclusive in nature representing all the relevant stakeholder sectors.
3. MoEF&CC needs to ensure that the NCZMA/ SCZMAs share information regarding their discussions/minutes of meetings with the public in a uniform manner. Interactive Grievance Redressal Mechanism may be adopted by the SCZMAs.
4. The Ministry may ensure that the PP carry out in-depth ecological evaluation of the project environment before granting the clearances to the projects as well as enforce the practice of cumulative assessments already defined in the EIA Notification, 2006.
5. MoEF&CC may ensure that the PPs submit a viable EMP addressing all the risks to the environment and the EMP along with the Impact Prediction analyses are largely coherent. Also, the mitigation proposals may be clearly brought out in the EMP and costed.
6. MoEF&CC may revisit the roles and composition of different agencies to strengthen the post clearance monitoring.

7. Expert cells, which are well versed in GIS tools may be created in DLCs to effectively and efficiently monitor the changing landscape on the coastline and track irregular developments. Presence of such a surveillance mechanism would not only track irregular activities but would also serve as a deterrence tool.
8. The State Governments may make necessary efforts for mapping and preparation of Management Plans for the coral reefs, turtle nesting sites etc.
9. Efforts may be made by MoEF&CC to notify the IMPs for Ecologically Sensitive Areas at the earliest.
10. MoEF&CC should ensure deploying sufficient manpower with technical expertise at SICOM and various institutes strengthened under the project. Efforts should be made to rationalise the manpower deployment to ensure optimum utilisation.
11. MoES and MoEF&CC may review the stakeholder mapping to ensure the inclusion of all relevant institutions with respect to SDG 14 targets.
12. Localisation of the indicators should be prioritised in the stakeholder states by ensuring formulation of District Indicator Frameworks in the states.