

## Chapter 6: Integrated Coastal Zone Management Project

To achieve the objectives of integrated and sustainable coastal management, MoEF&CC approached the World Bank in March 2010 to seek technical and financial assistance for taking up an Integrated Coastal Zone Management Project (ICZMP) which was approved<sup>53</sup> in March 2010. The World Bank proposed to extend financial assistance to the Government of India for ICZMP with overall cost of ₹ 1153.63 crore in which the World Bank component was ₹ 896.37 crores which was 77.7 percent of the project cost. The balance of ₹ 177.66 crore (15.4 percent) was proposed to be borne by the Government of India and ₹ 79.60 crore (6.9 percent) was to be borne by the participating State Governments.

The project's objective (PDO) was capacity development in sustainable coastal management approach for India's coastal zones, and piloting integrated coastal zone management approaches in select states, namely Gujarat, Odisha and West Bengal. The components of the Project are depicted in the table below:

**Table 6.1: Components of ICZMP**

National Component	State component (Gujarat)	State component (Odisha)	State component (West Bengal)
<ul style="list-style-type: none"> <li>• mapping, delineation and demarcation of hazard lines, ecologically sensitive areas (ESAs) and delineation of coastal sediment cells all along the mainland coast of India</li> <li>• capacity building of MoEF&amp;CC as the secretariat for (NCZMA), setting up of the National Centre for Coastal Zone Management and nation-wide training program for ICZM</li> </ul>	<ul style="list-style-type: none"> <li>• piloting ICZM approaches in the state of Gujarat which included preparation of ICZM Plan for the Gulf of Kachchh and capacity building of departments such as Forest and Environment, State Pollution Control Board</li> <li>• priority investments in the Gulf of Kachchh region like conservation and protection of coastal resources, pollution abatement and Livelihood security of coastal communities.</li> </ul>	<ul style="list-style-type: none"> <li>• Piloting ICZM approaches in the state of Odisha which included preparation of an ICZM plan for coastal stretches of Paradip-Dhamra and Gopalpur-Chilika</li> <li>• Capacity building of state departments including the Chilika Development Authority.</li> <li>• Priority investments in Orissa for Gopalpur-Chilika and Paradip-Dhamra, conservation and protection of coastal resources, pollution abatement and livelihood security of coastal communities.</li> </ul>	<ul style="list-style-type: none"> <li>• preparation of ICZM plan for West Bengal</li> <li>• capacity building</li> <li>• priority investments in the two targeted coastal stretches of Digha-Shankarpur and Sagar Island in the Sundarban</li> </ul>

The project had four implementing agencies i.e., MoEF&CC at the National Level with lead responsibility and the Department of Forest & Environment (DoFE) in each of the three participating states for implementing the project<sup>54</sup>. In addition, Steering Committees at the National and state levels were set up for inter-sectoral coordination.

Our observation on the activities taken up under four different components of the ICZMP are given below:

<sup>53</sup> By the Cabinet Committee on Economic Affairs

<sup>54</sup> Each of the four implementing agencies set up Special Purpose Vehicles in the form of registered societies, i.e., National Project Management Unit (NPMU) at the National Level and State Project Management Unit (SPMU) at the State level to manage the Project Development Objectives, coordinate project activities and directly execute some of the relevant project sub-components.

## 6.1 Assessment of activities under the National component of ICZMP (Component 1)

### 6.1.1 Absence of Ground Demarcation of Hazard Line

The concept of Hazard Line<sup>55</sup> was central to the implementation of IZMP. Hazard Line mapping aimed to identify and thus mitigate risks from various disasters to life and property in the coastal areas. The mapping was to be carried out for the entire coastline of the country by the Survey of India at a cost of ₹125 crore, which was later revised to ₹139.04 crore in 2018. Expenditure of ₹112.49 crore was incurred under the project till March 2020. The entire work of mapping of Hazard Line was completed in August 2018. The composite hazard line was to be marked on the ground by iron tip pegs in private land and stone pillars were to be erected on government land subject to requisite approvals taken by MoEF&CC. However, the same was yet to be done by MoEF&CC. As such, the lack of a visible hazard line on the ground prevented its use as tool for planning for local purposes.

### 6.1.2 Non preparation of Integrated Management Plans (IMPs) for Critically Vulnerable Coastal Areas (CVCAs)

Considering the vulnerability to developmental and other threats, the CRZ notification had designated 12<sup>56</sup> ecological sensitive areas as CVCAs. The same were to be declared as CVCAs through a process of consultation with local fisher folk and coastal communities with the objective of promoting conservation and sustainable use of coastal resources and habitats. MoEF&CC was to develop and notify guidelines detailing the process of identifying, planning, and implementing such CVCAs in consultations with the stakeholders<sup>57</sup>. Also, Integrated Management Plans (IMPs) were to be prepared for the CVCAs keeping in view the conservation and management of mangroves, needs of local communities<sup>58</sup> and the impact of sea level rise and other natural disasters.

We observed that though the guidelines for IMPs, had been prepared by National Centre for Sustainable Coastal Management (NCSCM) and submitted to MoEF&CC in September 2016, it was yet to be notified and disseminated to the States. As such, the IMPs could not be prepared by the coastal states. The CVCAs thus remained unprotected, and their sustainable development could not be ensured even after their identification.

MoEF&CC stated (February 2022) that the guidelines would now be notified to enable the coastal States/UTs to prepare the IMPs.

<sup>55</sup> Hazard Line is the line at which natural hazards like adverse weather incidents and tsunami are likely to impact the coast.

<sup>56</sup> Sunderbans mangrove area, Gulf of Khambat and Gulf of Kutchchh in Gujarat, Malvan, Achra in Ratnagiri in Maharashtra, Karwar and Kundapur in Karnataka, Vembanad in Kerala, Gulf of Mannar in Tamil Nadu, Bhaitarkanika in Orissa, Coringa, East Godavari and Krishna in Andhra Pradesh.

<sup>57</sup> State Government, local coastal communities and fisherfolk inhabiting the area.

<sup>58</sup> Dispensaries, schools, public rain shelter, community toilets, bridges, roads, jetties, water supply, drainage, sewerage.

## **6.2 Assessment of activities under Component 2 of ICZMP: Piloting ICZM approaches in State of Gujarat**

### **6.2.1 Delay in the preparation of the ICZM Plans**

Under ICZM Programme, ICZM Plans were to be prepared for selected coastal stretches of the state of Gujarat within 2 years i.e., 2012 from the start of the project. However, Gujarat could complete the preparation of ICZM plan only in 2018. Inordinate delay in the preparation of these plans resulted in the implementation of pilot investment activities which did not emerge from the ICZM plans and thus, these activities could not complement the plans to this extent.

### **6.2.2 Capacity building of various stakeholder institutions such as Gujarat Ecological Education and Research Foundation (GEER) and Gujarat Pollution Control Board (Gujarat SPCB)**

A project for capacity building and coral transplantation activities under the ICZMP was undertaken by SPMU through GEER in the year 2010 at an estimated cost of ₹ 15.74 crore. The project aimed at capacity building of the project staff and establishing marine field stations at different places. During the physical verification of two of the marine field stations at Mandvi and Jamnagar, 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. Further, as against four persons required to be deployed at each field station, only one person at Mandvi and two persons at Jamnagar field station were found deployed.

MoEF&CC attributed (February 2022) the non-utilisation of the equipment to COVID-19 pandemic. However, the fact remains that the equipment had not been utilized during 2016-19 i.e. before the pandemic.

In a similar instance, under the capacity building of Gujarat PCB, the laboratory infrastructure was to be enhanced by purchase of sophisticated analytical instruments. Gujarat SPCB developed State of Art Laboratory at Gandhinagar, Bhuj, Jamnagar and Rajkot and procured 18 sophisticated Scientific Analytical Instruments under ICZM Project. During the joint physical verification of visited Central laboratory at Gandhinagar, it was observed that four scientific instruments, costing ₹4.47 crore were procured under the project, but were never used by the Gujarat SPCB for sample analysis and were lying idle in the labs. The Comprehensive Maintenance Contracts of these instruments also lapsed in the year 2019.

## **6.3 Assessment of activities under Component 3 of ICZMP: Piloting ICZM approaches in State of Odisha**

### **6.3.1 Delay in the preparation of the ICZM Plans**

Under ICZM Programme, ICZM Plans were to be prepared for selected coastal stretches of the state of Odisha within 2 years from the commencement of the project. However, ICZM

plan was prepared only in 2018. Also, the ICZM plan of Odisha was yet to be accorded the formal approval by MoEF&CC. Inordinate delay in the preparation of this plan resulted in the implementation of pilot investment activities which did not emerge from the ICZM plan and thus, these activities could not complement the plan to this extent.

### **6.3.2 Insufficient capacity building measures at Odisha State Pollution Control Board (OSPCB) and Chilika Development Authority (CDA)**

(i) Owing to various industrial activities in the Paradeep- Dhamra coastal stretch in Odisha, the region figured as one of the worst polluted coastal stretches in terms of various coastal Water Quality parameters. OSPCB established a Centre for Management of Coastal Ecosystems in 2010 which aimed to analyse the sources, levels and pathways of various pollutants in the Paradeep-Dhamra coastal stretch. 19 laboratory equipment was procured at Rs. 2.76 crore during the period of 2013-2015. This Centre was to collect water and soil samples and assess the coastal water quality parameters. It was noted that during the period 2015-20, the Centre failed in carrying out this activity effectively. Against the targets set for the collection and analysis of samples there was shortfall ranging from 33 per cent to 59 per cent. Further, the Centre was working at 55 % of the required manpower<sup>59</sup> and this resulted in non- operation of the equipment procured for the analysis of the samples. Though the aim of the Centre was to address the coastal pollution in the region by identifying the local sources of pollution, the Centre could not achieve the same.

MoEF&CC stated (February 2022) that the step-wise recruitment is in process.

(ii) For effective management of Chilika Lake eco-system<sup>60</sup>, a study<sup>61</sup> revealed that the northern sector of this eco-system was getting infested with an invasive weed, Phragmites karka on an area of nearly 150 sq. km, considerably reducing the water holding capacity of the lake. To address this issue, one multipurpose Amphibian Weed Harvester (AWH) was procured (December 2018) under ICZMP at a cost of ₹2.14 crore. Audit observed that the machine was handed over to CDA at Ansupa lake (a freshwater lake) instead of the research center at Chilika Lake which had entered into the agreement for procurement of the weed harvester. It was also observed that the deployment of the machine at Ansupa Lake was more than at Chilika where the weed infestation was major. Although CDA could furnish satellite images of deweeded area of Ansupa Lake, it could not furnish the data regarding the area deweeded at Chilika. Thus, the effectiveness of the Weed Harvester remained unassessed at Chilika for which it was procured.

MoEF&CC stated (February 2022) that the weed harvester machine was currently deployed at Ansupa Lake and would be deployed at Chilika after deweeding at Ansupa is over.

<sup>59</sup> Deficient staff with 22 persons as against the requirement of 41 personnel as of February 2021.

<sup>60</sup> A Ramsar Site that is known to support the largest congregation of migratory birds and Irrawaddy dolphins besides supporting the livelihood of more than 0.2 million local communities.

<sup>61</sup> Study 'Qualitative and Quantitative assessment of biological diversity of macrophytes of Chilika Lagoon' was conducted by Regional Plant Resource Centre, Bhubaneswar.

Further, the CDA had been collecting water and sediment samples from 30 pre-determined stations of the lake at an interval of 30 days. As the salinity gradient of the lake changes with



**Fig. 31: Water Quality Monitoring Buoy System**

every tidal cycle, the monitoring of the lake at an interval of 30 days was found inadequate. Hence, CDA decided to deploy sensor-mounted floating data buoys, powered by solar panel, at 10 strategic locations in four ecological sectors of the Lake to monitor various parameters<sup>62</sup>. These parameters would be measured in each station on real-time basis and transmitted to the modelling computer at the Wetland Research & Training Centre at Chilika.

Ten Water Quality Monitoring Buoy System, twelve multi-parameter Water Quality Monitoring System (WQMS) with sensors and one Control Centre Data reception were purchased and installed (October 2012) at 10 different locations in Chilika lagoon at ₹ 2.69 crore.

On scrutiny of records, we observed that within one year and four months of deployment, out of 10 WQMBS, six were stolen and only four buoys were in operation as of June 2016. Also, the pH data had not been received from any of the buoys since 2014. Thus, without complete and continuous data from 10 stations, the monitoring of Chilika Lake despite an expenditure of ₹2.69 crore could not be achieved by Chilika Development Authority.

### **6.3.3 Activities under the sub component Conservation and protection of coastal resources in Odisha**

#### **(i) Inadequate protection of Olive Ridley turtles in Odisha**

Gahirmatha rookery near Dhamra river mouth, Rushikulya river mouth and Devi River mouth of Odisha have become important mass nesting sites of Olive Ridley sea turtles which are designated as 'vulnerable' species under the IUCN Red List of Threatened Species. To provide protection to the Olive Ridley turtles, Rajnagar Forest Division, Kendrapara District in March 2016 procured two highspeed sea going vessels for coastal patrolling in Gahirmatha Marine Wildlife Sanctuary for ₹ 6.23 crore. Both the vessels were operated between September to October 2017, after which defects arose in both. Even though one vessel was made operational in December 2018, audit observed that the engines of both the vessels became defective in February 2020 and thereafter could not be repaired. Thus, even after the incurring an expenditure of ₹ 6.23 crore, the objective of effective sea patrolling in Gahirmatha Sanctuary remained unachieved.

<sup>62</sup> Salinity, temperature, conductivity, dissolved oxygen, pH, depth, turbidity, chlorophyll and blue green algae.

**(ii) Non-operation of research laboratory at Dangmal, Kendrapara District, Odisha**

Bhitarkanika Wildlife Sanctuary, a unique biodiversity hot spot supports a rich biodiversity including mangroves, largest population of estuarine crocodiles, and other wildlife<sup>63</sup>. There was no facility available for rescue and treatment of injured wild animals, analysis of viscera of dead wild animals for assessment of food habits, pathological/microscopic studies for diseases and development of treatment protocol, preservation of various parts/organs of wild animals for study and analysis.

To facilitate these objectives, under ICZM Project, a research laboratory at Dangmal was constructed in November 2016 at a cost of ₹ 32.78 lakh. Audit observed that the laboratory was not functional since beginning. During physical verification of the laboratory, we observed that the laboratory was still not functional, and the facility was in a dismal state, as shown in the following photographs:



Fig. 32: Room no.1 of the laboratory at Dangmal



Fig. 33: Room no.2 of the laboratory at Dangmal

**(iii) Efforts towards conservation of the Mangroves**

The mangroves along the coast of Odisha are threatened due to high density of population in these areas and competing demand for land for agriculture and prawn farming. Under ICZMP, mangrove plantation was taken up over 228 ha of land in Mangrove Forest Division, Rajnagar and Puri Wildlife Division in three phases during 2016-2018. Audit observed that one of the activities envisaged under the Management Action Plan for Conservation of Mangroves in the Mahanadi Delta of Odisha was construction of trenches and channels to facilitate tidal inundation and smooth flow of tidal water. Audit observed that the flow of tidal water was obstructed as most of the feeder channels around the plantation sites were filled with sand. The survival rate of mangrove plantation carried out under the project ranged from zero to 35 per cent.

**(iv) Shore line protection at Pentha in Odisha:**

Pentha is an agricultural village located in the south of Dhamra in Paradeep-Dhamra stretch in Kendrapara District of Odisha. To prevent the shoreline erosion at Pentha, a proposed pilot

<sup>63</sup> Such as rare white crocodile, largest water monitor lizard, snakes, varieties of resident and migratory birds and mammalian species (spotted deer, sambar, wild boar, fishing cat, jungle cat, otter) etc.

project 'Laying of geosynthetic tubes<sup>64</sup> as protection measure for control of erosion' was granted clearance by Odisha Coastal Zone Management Authority in 2012. An embankment was to be created by covering the geotubes filled with river sand by gabion boxes that are made up of stones tied up by polypropylene ropes. The work was awarded (2012) to M/s Garware Wall Ropes Pvt. Ltd at a cost of ₹32.96 crore and was completed by June 2016. We examined the following deficiencies relating to the construction of embankment:

- During the visit of the review committee in January 2014, it was observed that a part of the wall constructed was damaged by the tidal waves during the cyclone Phailin in 2013 and that most of the rope gabion boxes exposed to the seaside were damaged, as a result of which the stones filled inside the rope gabions had come out and were scattered due to loose filling of granite stones. The damage was due to poor construction, as the size of the stones used were smaller than those specified in the contract agreement.
- The clearance awarded by OCZMA and the DPR of the project had envisaged that coastal afforestation was to be taken up between the Sea and the Geo-tube embankment<sup>65</sup>. The species identified for the sustainability of the project were casurina, proopsis, neem, pandanas and babul. However, it was observed that the plantation was not done, citing that there was no space available in front of geo-tube embankment.
- The armoury stone protection works in front of the geo-textile tube embankment that were to act as a first line of defence to high tide waves was taken up for an additional cost of ₹4.65 crore from the State Fund and completed in March 2018. This armoury section of the geo-tube embankment was damaged in May 2019 when the coast of Odisha was hit by severe cyclonic storm 'Fani'. The embankment suffered further damage in August 2019 when some miscreants set some gabion ropes on fire. This entailed an additional expenditure of ₹ 3.28 crore.

#### **6.3.4 Provision of Alternative Livelihood to the coastal communities**

##### **(i) Idling of infrastructure created under the activity relating Hygienic drying of fish:**

As the fishermen of Odisha lose almost seven months livelihood support in a year due to ban on fishing for the protection of Olive Ridley turtles, ICZMP aimed at providing livelihood support to the fishermen living in the periphery of Chilika Lake and Gahirmatha Wildlife Sanctuary. An activity relating to Infrastructure development for dry fish production was taken up under the project<sup>66</sup> in 2014.

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<sup>64</sup> Under this scheme, geo-synthetic tubes were to be laid in the beach over a length of 675 metres of the coast followed by coastal afforestation with an objective to reduce the wave energy on the coast and facilitate the settlement of sand between the geo-tube and the coast.

<sup>65</sup> So as to break the wave energy and to increase the stability and functioning of the Geo-Tube.

<sup>66</sup> The project involved purchase of solar drier, construction of concrete platform, godown, installation and operationalizing the same. This activity was executed by the Fisheries & Animal Resources Department (F&ARD) as Pilot Executing Agency with formation of Self- Help Group (SHG).

We observed that a total of 150 SHGs were formed in Puri and Ganjam districts which were provided ₹ 1.50 lakh each towards seed money and 99 solar dryers<sup>67</sup> were installed for ₹ 5.23 crore in 2014. During the Joint Physical verification (August 2021) of 82 solar dryers under Gopalpur cluster, the following deficiencies were noticed:

a) Audit observed that the Gopalpur site was devoid of any solar dryers except the godowns constructed for the purpose. The site where the solar dryers were installed was occupied by a garbage processing plant installed by the Gopalpur Notified Area Council.

Further, it was reported by F&ARD department that as the project had become defunct since 2016 and the equipment installed had got damaged and was stolen, the solar dryer yard was demolished by the district administration to facilitate another project under 'Swachha Bharat Mission' to develop Micro Composting Centre.

b) At Sana Aryapalli, audit observed that only platforms had been constructed for the installation of the solar dryers. The sheds and solar panels had been damaged in cyclone and the dryers were stolen.

c) At Purunabandha and Nolia Nuagaon, we observed that the dryers were rusted and in a non-functional condition.



Fig. 34: Damaged Solar Panels at Nolia Nuagaon



Fig. 35: Rusted dryers left unused at Purunabandha

As none of the dryers examined in audit was functional enough to provide livelihood support to the community, the expenditure of ₹6.72 crore on creation of facilities under the ICZMP was rendered unfruitful.

## (ii) Infertuous expenditure on activities for promotion of Eco-tourism

To address the livelihood issues through ecotourism for long term conservation of biodiversity along the coast of Odisha, a few activities like construction of camp infrastructure<sup>68</sup> were to be undertaken at the three sites namely, Gahirmatha Wildlife sanctuary, Bhitarkanika Wildlife Sanctuary and Chilika Coast.

<sup>67</sup> A solar dryer is a system for hygienic drying of fish using solar energy.

<sup>68</sup> With a provision of kitchen, drinking water, solar lighting, along with furniture and fittings, construction of platforms for pitching tents etc.



(a) Audit observed that even though five camp infrastructure along the Chilika coast<sup>69</sup> were constructed in 2018 after incurring an expenditure of ₹ 1.46 crore, the same could not be made functional due to lack of proper water supply and electricity.

(b) A project on Development of Participatory Eco-tourism at Chilika and Tampera under Livelihood security was taken up by Odisha Tourism Development Corporation (OTDC). Scrutiny of records revealed that various assets like construction of food courts, public convenience, parking, tourist information centre etc., were created by OTDC at an expenditure of ₹ 2.97 crore to enhance tourism potential through Eco-tourism Development Society (EDS). Although, these assets were handed over to EDS during May 2016, they could not be made operational by EDS by September 2021, as such the site failed to attract tourists.

(c) To promote livelihood through eco-tourism in Chilika coast and Bhitarkanika, seven transit boats, four luxury boats and three catamaran boats were purchased between March to July 2014 by Wildlife Division of Chilika, Forest Division of Rajnagar and Forest Division of Berhampur respectively at a cost of ₹ 7.95 crore.

On scrutiny of records, it was observed that the seven transit boats purchased by the Chilika Wildlife division were operated for only 11 months<sup>70</sup> by the department. However, due to huge consumption of fuel, these boats were not found useful from the ecotourism point of view. Three catamaran boats purchased by Berhampur Forest division were transferred to Rajanagar Forest Division in February 2016 after lying idle for almost two years from the date of purchase. These three boats were operated up to September 2017 and thereafter left defunct. Audit noticed that four luxury boats under the Forest Division of Rajnagar also could not be made operational. After remaining idle for one year and three months, an agency which was engaged (January 2016) to operate the boats up to September 2017, exited from operation in October 2017 as it sustained huge loss due to lack of support from the department.

## **6.4 Assessment of activities under Component 4 of ICZMP: Piloting ICZM approaches in State of West Bengal**

### **6.4.1 Delay in the preparation of the ICZM Plans**

Under ICZM Programme, ICZM Plans were to be prepared for selected coastal stretches of the state of West Bengal within 2 years from the start of the project. However, the preparation of ICZM plans could take place only in August 2020. Inordinate delay in the preparation of these plans resulted in the implementation of pilot investment activities which did not emerge from the ICZM plans and thus, these activities could not complement the plans to this extent.

<sup>69</sup> Rambhartia, Berhampura, Khirisahi, Balianla, Pokharikuda.

<sup>70</sup> December 2014 to October 2015.

#### **6.4.2 Gaps noticed in respect of activities under the Environment and pollution management sub- component of the ICZMP in West Bengal**

##### **(i) Poor functioning of Sewage Treatment Plant (STP) at Digha leading to release of polluted water into sea**

Under the Environment and pollution management sub- component of the ICZMP in West Bengal, a project namely 'Renovation of Sanitary Sewerage Scheme at Digha' was undertaken by the Public Health Engineering Directorate (PHED), West Bengal in December 2012. The project envisaged construction of an STP with a capacity of 201 million litres per month at an estimated cost of ₹ 34 crore. The same was constructed in September 2016 at a cost of ₹ 28.87 crore.

It was observed that although parameters relating to Biochemical Oxygen Demand (BOD), Chemical Oxygen Demand (COD), suspended solids, Nitrogen, Phosphate, etc. were measured, no periodicity was fixed for collection and testing of the samples. Further, the parameters of the treated water, namely pH, Total Dissolved Solids, Oil & Grease were found to exceed the permissible limits. Further, it was observed the tests for checking the fecal coliform in effluent were not carried out during 2015-20. Thus, even after incurring an expenditure of Rs. 28.87 crore on construction of the STP, the treated sewage water continued to carry pollutants in excess of permissible limits, thereby threatening the marine ecosystems.

##### **(ii) Non- implementation of Solid Waste Management at Digha**

One of the objectives of the ICZMP in Digha and Shankarpur area was to develop a scientific management plan to tackle the issues associated with municipal solid waste collection, transportation and sanitary disposal and reduce the coastal pollution. Digha Shankarpur Development Authority (DSDA) was the implementation agency for this project.

DSDA took up the work in 2010 and got a feasibility study conducted through a consultancy firm<sup>71</sup> after incurring an expenditure of Rs. 24.22 lakh. The study showed that out of the total waste generated i.e., 12.43 TPD, on normal days and 33.64 TPD during peak season, only 3.36 TPD on normal days and 7.86 TPD during peak season could be collected by DSDA and the same was found to be dumped in an open area. This open dumping site was operational since 2002 and had a composting facility which was non- operational. Audit observed that this project was dropped due to paucity of funds as the DSDA authorities pointed out that they would not be able to provide Rs. 2.20 crore per annum required as annual maintenance and operation charge of the project. We also observed that no other project was subsequently taken up by the State Government. Thus, the objectives of reducing the coastal pollution remained unaddressed.

<sup>71</sup> M/s CRISIL Risk and Infrastructure Solutions Limited.

**(iii) Renovation of Fish Auction Centre at Digha**

An unhygienic temporary fish auction centre was operating without a proper drainage and disposal of solid waste at Digha Mohana in the district of Purba Medinipur for more than two decades. Under ICZMP, the fish auction centre was proposed (2010) to be renovated by March 2015. The West Bengal Fisheries Corporation Limited (WBFCL), an enterprise of the Government of West Bengal was entrusted with the responsibilities for planning, designing and executing the construction of fish auction centre at a cost of Rs 6.75 crore. WBFCL prepared the Detailed Project Report after proper site selection and survey of the land required for executing this project. However, it was observed that the land earmarked for construction of Fish Auction Centre that had been transferred to WBFCL by Digha Fisherman and Fish Traders Association was reallocated to BENFISH (West Bengal Fishermen's Co-operative Federation Ltd) for construction of an ice plant without intimating WBFCL. Further, the World Bank experts on their site visit to Digha noticed that there was shortfall in the area of the land for construction of proposed auction centre and the actual area on the ground did not match with the drawing based on which the bid document was prepared, and the advertisement was made.

The project was dropped in the 11th Governing Council Meeting of SICOM held in 2014 for the reason that it had not obtained necessary clearances. Thus, the absence of necessary ground survey by WBFCL before initiating the bidding process resulted in a total expenditure of Rs 18.00 lakh incurred on advertisement cost, pre-bid meeting, bid opening meeting, site visit for measurement of land etc. wasteful.

## **6.5 Conclusions**

- Although the ICZM project, Phase I was termed successful, a number of deficiencies were noticed during the audit of this project at both the Centre and the States. The lack of a visible hazard line on the ground prevented its use as tool for planning for local purposes.
- The IMPs for CVCA could not be notified even after completion of Phase-I of ICZMP and remain unprotected in the absence of specific management plans. The preparation of ICZMP plans were also delayed, resulting no linkage between the plan and actual projects undertaken.
- The project could not strengthen the capacity building of the selected institutes as most of them were operating with insufficient manpower. Infrastructure created under the project was lying defunct due to the inability of the State authorities to raise funds to maintain the same. The monitoring and protection measures of the coastal resources were found to be inadequate. Non- execution of critical projects which had the potential of reducing the coastal pollution to a great extent defeated the very purpose of this project. As a result, the ICZM project was not very successful in the development of capacity for sustainable coastal management for India's coastal zones.