

## Chapter 4: Post clearance monitoring and enforcement of CRZ Notifications

Monitoring is an essential component for sustainability of any developmental project. It forms an integral part of any environmental assessment process. Monitoring of the project after its approval helps in verifying the outcome of the implemented mitigation measures and also to alter the mitigation measures in case of identification of problems.

### 4.1 Effectiveness of post clearance monitoring

We examined the effectiveness of post clearance mechanism of the approved projects through site verification, and examination of the compliances to the conditions as stipulated by SCZMAs as well as the clearances granted by MoEF&CC. Regional Offices of the MoEF&CC have been assigned the responsibilities for monitoring compliances to the conditions stipulated in the clearances. PPs are to submit half yearly compliance reports and annual environmental statements to the Regional Offices. SPCBs are to monitor the compliance to the conditions while granting 'Consent to Establish/ Operate'. Our observations in this regard are given in succeeding paragraphs.

#### 4.1.1 Non-compliance to conditions stipulated in the Clearances

We observed that in 18 projects (**Annexure 11**), the Project Proponent failed to comply with conditions mentioned in the Clearance as well as the conditions stipulated by SCZMA while recommending for the clearance. A few cases are illustrated below.

A. The proposed project of **Construction of Petroleum Products Storage Terminal, Karnataka Port by Tropicana Liquid Storage Pvt. Limited** was accorded clearance by MoEF&CC in 2015. Audit observed that oil spillage contingency plan as required under the clearance was not formulated and dedicated boats were not deployed to avoid oil spillage, as specified while granting approval. There was no computerized SCADA (Supervisory Control and Data Automation) system at the project site to identify leakages in the pipeline and to cut off the pumping immediately. The project proponent had not set up separate environmental management cell for effective implementation of the stipulated environmental safeguards as instructed by MoEF&CC while granting clearance.

B. The proposed project of **Integrated Cooum River Eco-restoration Project by Chennai Rivers Restoration Trust, Tamil Nadu** was granted clearance by MoEF&CC in 2017. While recommending clearance for this project, TN SCZMA allowed for de-siltation of 5,08,177 cu.m. silt of the Cooum River. Also, MoEF&CC imposed condition that the silt generated through dredging was to be scientifically disposed outside the CRZ area. Bunding and landscaping changes were also prohibited. It was observed that the project proponent carried out desiltation of 8,94,757 cu.m, and only 40 percent of the silt generated was sent to dump yards. The remaining silt was deposited on the river banks, leading to formation of bunds that affected the landscape.

C. A proposed project of **Cochin Residential project by TRIF, Kochi Projects Pvt Ltd. In Kerala** was approved by MoEF&CC in 2016. As per the EC, no development was to be carried

out within 0 to 200 metres from the High tide Line. It was observed that the entire project was carried out within 200 metres from HTL. The CRZ Notification 2011 permitted drawl of groundwater only when done manually through ordinary wells for drinking requirements, horticulture and fisheries, and where no other source of water was available. Audit noticed that water was drawn from a tubewell which met the entire water requirement for construction related activities.

D. A proposed project **Mumbai Trans Harbor Sea Link by MMRDA, Maharashtra** approved in 2016, aimed to divert 47.41 ha of forest land. MoEF&CC granted clearance while imposing the condition that the Government of Maharashtra should create and maintain alternate habitat for the avifauna whose nesting trees were cleared under the project. Artificial bird nests made out of the eco-friendly material was to be used in the area including forest area and human settlements adjoining the forest area being diverted for the project. We observed that although a total of 669 number of trees were removed for the project, no alternate habitat for the affected avifauna was created.

Thus, MoEF&CC and its regional offices failed to ensure that the project proponents adhere to the conditions prescribed in the clearances. Non-compliance to these key conditions have an adverse impact on the surrounding ecosystem of the project as well as indicate inefficient monitoring on part of the MoEF&CC and its regional offices.

#### **4.1.2 Non-submission of mandatory reports**

The post clearance mechanism for the projects which are granted clearance under EIA/CRZ Notification mandate submission of half-yearly compliance reports in respect of the stipulated terms and conditions of the environmental clearance. These are to be submitted to the concerned Regional Offices of MoEF&CC and form the basis for monitoring by different authorities.

##### **(i) Non-submission of half-yearly reports**

Audit observed that the project proponents in 13 cases (**Annexure 12**) granted clearance by MoEF&CC failed to periodically submit these reports. MoEF&CC, while granting clearance stipulates a condition that it has the right to revoke the clearance in the event of non-compliance to the provisions of the notifications. However, audit could not find any case where MoEF&CC initiated action on the project proponent in this regard.

MoEF&CC assured (February 2022) that the ministry is planning for online submission of the half yearly monitoring reports by the project proponents.

##### **(ii) Non submission of annual environment statements**

As per the provisions of the notification, the proponent has to submit an annual environmental statement to the concerned State Pollution Control Board. It was noticed that this statement dealt with generic issues of air and water quality and, did not contain the details specific to the project. It was also observed that the mandatory annual environmental

statement was not furnished for 17 projects (**Annexure 13**) out of 43 sampled projects granted by MoEF&CC during 2015-20.

**(iii) Consent to Operate/ Establish not obtained before commencement**

As per Section 25 of the Water (Prevention and Control of Pollution) Act 1974, all industries and local bodies discharging any domestic sewage or trade effluent into water, stream, well, sewer or on land are required to obtain Consent to Establish (CTE) from the State Pollution Control Board for establishment of any new unit or before carrying out construction activities. The units are also required to obtain Consent to Operate (CTO) before commencing commercial production.

We found that 13 projects in the CRZ areas (**Annexure 14**) were observed to have commenced without obtaining any CTE or CTO from the concerned State Pollution Control Board. Further, no project proponent was penalized though contravention of Section 25 of this Act was an offence punishable with imprisonment for a term not less than one year and six months but which may extend to six years and with fine.

As such, the system of post monitoring of clearances suffered due to lack of necessary information from the project proponents regarding the environment impact of the projects. Further, audit noticed instances where the clearance conditions were not followed by the project proponents, indicating failure of MoEF&CC and its regional offices to monitor effectively. These infirmities would impair the ability of regulatory agencies from noticing and stopping any negative impacts on the coastal environment as a result of the approved projects.

## **4.2 Enforcement of CRZ provisions**

CRZ Notification 2011 authorises SCZMAs to recommend grant of approvals to permissible projects and ensure compliance of their orders, identify violations, if any and direct the concerned authorities for follow up action. Audit reviewed the enforcement of CRZ provisions by SCZMAs and DLCs and observed instances where SCZMAs failed to take action against CRZ violations. Also, the DLCs failed to identify violations and report the same to SCZMAs. Audit reviewed the status of sample CRZ violations<sup>31</sup> in the states and observations in this regard are detailed below.

### **4.2.1 Irregular development activities in CRZ 1 areas**

**(i) Construction on Olive Ridley Turtle Nesting Sites**

Audit observed irregular construction of a jail complex in CRZ 1A area located at Bangar in Puri district, Odisha. The construction was inside Balukhand-Konark Wildlife Sanctuary, which

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<sup>31</sup> Cases of violation reported in the para are of two kinds. First is reported violations, wherein a complaint was made to SCZMAs and audit conducted a joint physical verification, which is mentioned in report, wherever applicable. Second type are the unreported violations where audit have used GIS tools to compare the satellite images of irregular construction with approved CZMPs for the place to conclude if they are in prohibited zones.

also has Olive Ridley Turtle nesting sites on the beaches. The figures below indicate the approved CZMP for the area and the satellite images obtained by audit for the area in December 2020.



Fig. 4: CZMP for the coast around Balukhand sanctuary and Turtle reserve, indicating CRZ 1A zone in green shade and irregular construction is marked in red

Further, satellite images obtained by audit below indicates that there was no construction in the area in 2011.



Fig. 5: Satellite Image (October 2011) of area before construction of jail complex showing empty land within the red marked area



Fig. 6: Satellite Image (December 2020) of jail complex at Bangar within the red marked area

(ii) Irregular construction of racetrack in CRZ 1 area in Pattipulam, Tamilnadu

Audit observed that a racetrack was constructed at Pattipulam, Chennai in CRZ 1 area. The figures below indicate the approved CZMP for the area and the satellite images obtained by audit for the area in March 2021. As per the approved CZMP, the area where racetrack is constructed (marked in red) falls partly in CRZ 1A area and partly in No Development Zone (NDZ). The satellite images obtained by audit from March 2021 indicates the presence of irregular construction of the racetrack in the restricted area.



Fig. 7: Approved CZMP of Pattipulam area indicating CRZ 1A zone in green shade and NDZ in yellow shade



Fig. 8: Satellite image (March 2021) of racetrack constructed in CRZ 1A and NDZ area

#### 4.2.2 Irregular activities in No Development Zone

##### a) Irregular construction of Beach Resort in No Development Zone

A complaint was received at TN SCZMA about the construction of a resort (Golden Bay Resorts) in No Development Zone in Kuvathur area of Kanchipuram district. The CZMPs approved as per CRZ notification 2011 defines No Development Zone as area upto 200 metres<sup>32</sup> from HTL on the landward side in case of seafront and 100 metres along tidal influenced water bodies or width of the creek whichever is less. Audit assessed the follow up action of TN SCZMA and found that DLC, Kanchipuram district visited the resort and reported to TN SCZMA that the resort has been in operation since 2013 without a valid Consent to Establish Certificate. It was also reported that the resort had been discharging untreated sewage to the sea. TN SCZMA issued show cause notice to the resort in 2017. It was noted that no further follow up action was taken by TN SCZMA as on March 2021. Audit obtained satellite images of the area and compared it with the approved CZMP, as shown below.

<sup>32</sup> Revised to 50 meters from the HTL, or width of the creek whichever is less, along the tidal influenced water bodies, as per CRZ notification 2019.

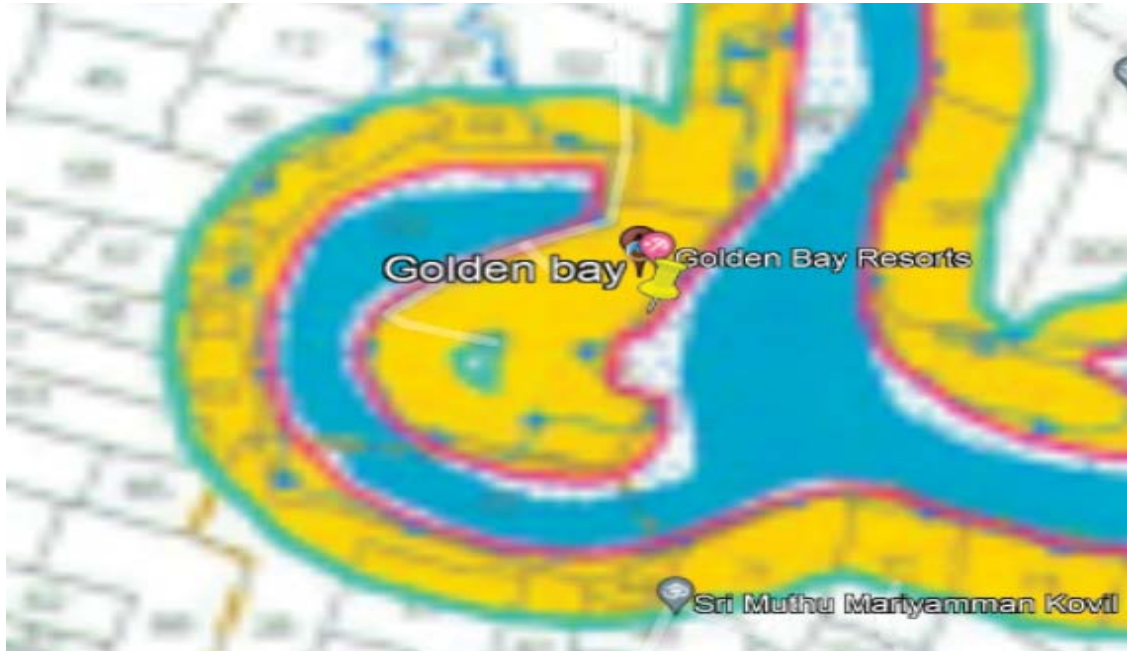


Fig. 9: Approved CZMP for the area with NDZ indicated in yellow shade

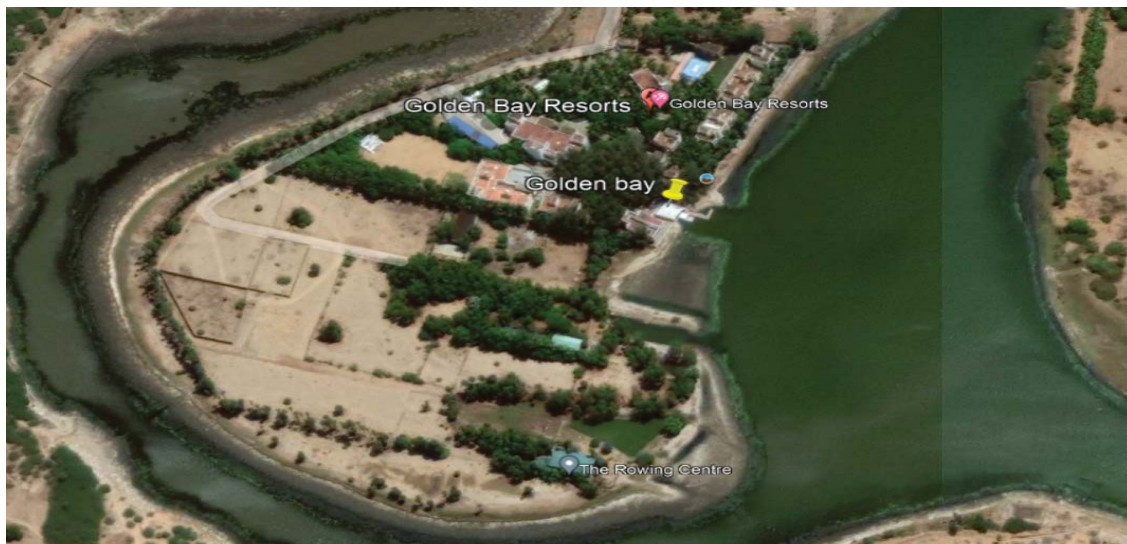


Fig. 10: Satellite Image (October 2021) of the resort in No Development Zone

During JPV by the audit team and relevant officials from the State in March 2021, the presence of the resort as well as a boat jetty was confirmed.

**(b) Irregular construction of Jetty extension in No Development Zone**

Gujarat SCZMA received a complaint in June 2018 about an irregular construction in Devbhumi, Dwarka and instructed the Gujarat SPCB for site inspection. Gujarat SPCB confirmed the illegal construction of a 30-meter-long jetty and instructed the violators to remove the construction. Audit obtained satellite images of the area as shown below:



Fig. 11: Satellite image (November 2015) of area without jetty extensions in yellow marked region

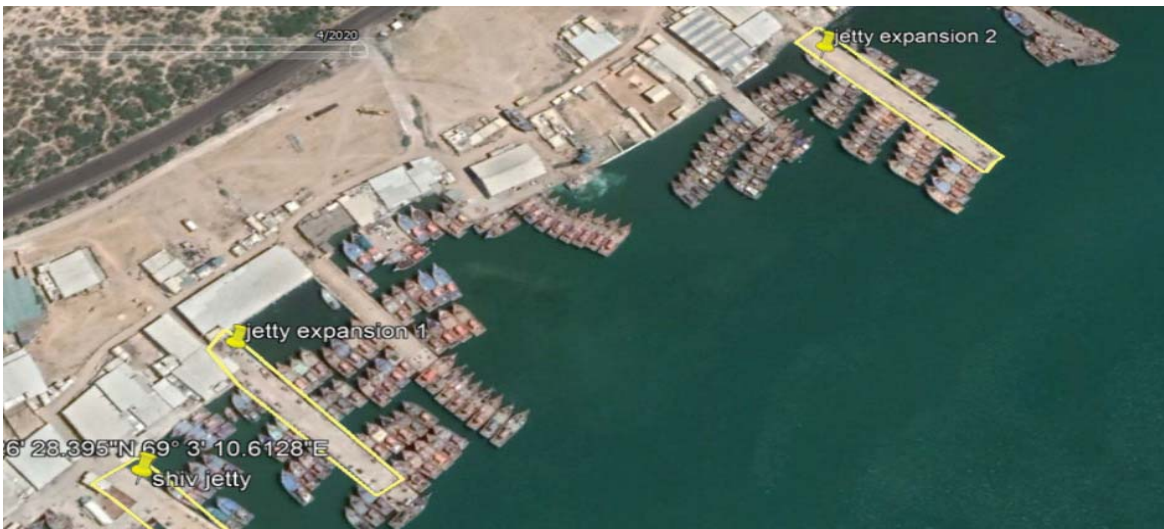


Fig. 12: Satellite image (September 2021) of the jetty extensions

From the images above, it is observed that even though the Gujarat SPCB instructed the violators to remove the construction in 2018, the structure still remains even as of 2021, indicating ineffective follow up on part of concerned authorities.

### c) Encroachment and CRZ violations in Vembanad Lake region

Vembanad lake<sup>33</sup> is the largest lake in the state of Kerala and is designated as Critically Vulnerable Coastal Area. Approved CZMP for the region identifies the islands in the lake ecosystem as No Development Zone. The Vembanad ecosystem is under developmental pressures from irregular reclamation and construction in and around the lake area.

Kerala SCZMA in June 2018 received a complaint about construction of a resort in Nediathuruth island in Panavally panchayat, Alleppey district. As per approved CZMP for the region, the island is designated as No Development Zone. The Hon'. Supreme Court in January 2020 declaring the resort as encroachment in the lake region, directed to demolish the resort. It was found that the resort is yet to be demolished. While analysing the satellite images of

<sup>33</sup> With an area of 2033 sq. kms. and a maximum length of 96.5 km, it is the second largest Ramsar site in India



the project area, audit identified another resort, Grand Ayur Island in Anjuthuruthu island in Panavally panchayat, Alleppey district. These islands formed a part of No Development Zone in the lake region under CRZ notification. The figures below indicate the approved CZMP for the island area (NDZ indicated in yellow shade) and satellite images obtained by audit for the area indicating irregular construction in No Development Zone.



**Fig. 13: Approved CZMP of the area on left and satellite image from 2021 for the area on right**

**d) Irregular development activities in Akkulam lake region**

Akkulam lake in Trivandrum is a wetland ecosystem in Thiruvananthapuram, that has continuously been threatened by reclamations and construction activities<sup>34</sup> in the lake region. Audit observed that based on a complaint received by Kerala SCZMA about illegal constructions and reclamation in the Akkulam lake region, Kerala SCZMA directed Municipal Corporation of Thiruvananthapuram to furnish an Action Taken Report (ATR), to which response is still awaited. DLC conducted a site verification September 2020 and found irregular construction in the region. While analysing the satellite imagery of the region, audit found irregular construction of a residential building on the HTL. We observed that the residential complex is constructed around the HTL and an approximate area of 1.48 Hectares falls in the intertidal zone (seaside from HTL). The images for the same are given below:

<sup>34</sup> The MoEF&CC conducted a study on Akkulam lake in 2017 and observed that reclamation and modification on many parts of backwaters resulted in the shrinkage of wetland area. Kerala State Remote Sensing and Environment Centre (KSREC) reported construction of public offices within the lake region. These activities have resulted in shrinkage of wet land area of 28.49 hectares from 1967 to 2020.

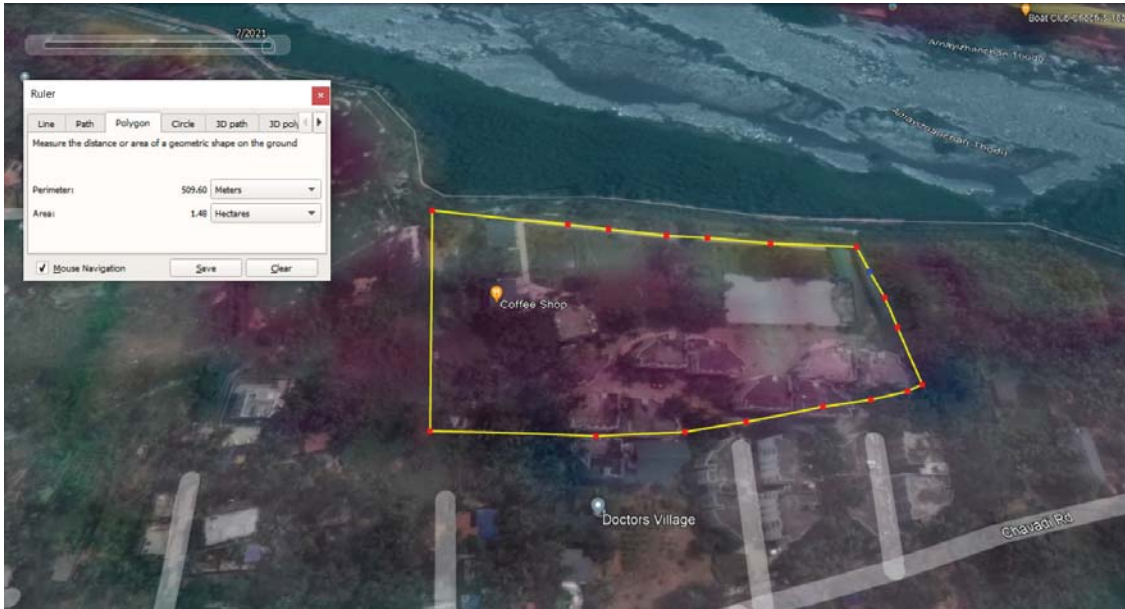


Fig. 14: Site image in 2021 indicating approx. 1.48 hectares construction in intertidal zone (HTL in purple shade)

**e) Construction of a mall in No Development Zone**

M/s Lulu International Shopping Mall is constructed in the NH Bypass Road near Aakkulam in Thiruvananthapuram. JPV conducted by the audit revealed that the portion of land adjacent to the boundary line with nearby TS Canal falling under NDZ area has been reclaimed and concrete beams and basins for fixing high mast lights were constructed. A stone wall with an average height of three metres with a wire mesh fencing on the top of it was constructed in the CRZ area adjacent to TS canal, as shown in the following photos:



Fig. 15: Images indicating reclamation and construction of stone wall in No Development Zone

**f) Illegal Road construction in No Development Zone in Udupi district, Karnataka**

A complaint was received by Karnataka SCZMA about illegal construction of a road in the islands of Shambhavi River. During the site inspection, it was observed that a road and two bridges were constructed without obtaining CRZ clearance. Further, it was reported that

mangrove plantations were destroyed for construction of the road. Though show cause notice was issued to the state works department, no follow up action has been taken by Karnataka SCZMA. The presence of the road was verified by the audit team during JPV. Audit obtained satellite images of the site which clearly show the road as depicted below:



**Fig. 16: Satellite image of the road constructed in the middle of the island (No Development Zone)**

**g) Irregular approval of a commercial project in wetland area of Vembanad Lake by M/s TRIF, Kochi**

The proposed project of residential complex by TRIF was recommended for clearance by EAC of MoEF&CC in September 2011. MoEF&CC raised query to Kerala SCZMA about the nature of the land and the clearance was kept in abeyance. The report of Kerala SCZMA declared the project area as CRZ area and that reclamation cannot be carried out for commercial activity in the project area, which is a part of wetland. Kerala SCZMA conveyed the same stance when MoEF&CC in 2012 sought the status for the nature of land. In 2016, clearance was granted for the project by MoEF&CC. During audit examination, it was found that the project proponent started construction in 2013, much before the grant of clearance. It was noted that MoEF&CC granted approval to the project though the project area falls in notified wetland area in violation of the provisions of CRZ notification 2011 as well as Wetland notification 2010.

**h) Discharge of untreated effluents by coastal aquaculture units in Guntur district, Andhra Pradesh**

Complaints were received by Andhra Pradesh Pollution Control Board (APPCB) in 2018 about discharge of wastewater from the prawn seed hatcheries namely M/s Gayathri Hatchery-I and M/s Surya Vamsi Shrimp Hatcheries<sup>35</sup> operating on shore area causing contamination of coastal waters. APPCB while issuing show cause notice, directed the firms to stop further discharge of untreated wastewater outside the premises within three days. Audit conducted a JPV with APPCB at Gayatri hatcheries in August 2021 and found that the hatcheries continued to discharge untreated effluents directly into the sea (CRZ IV).

<sup>35</sup> M/s Gayathri Hatcheries-I, Pandurangapuram Village, Adavi Panchayat of Bapatla Mandal, Guntur District.

We further observed that APPCB issued show cause notices (March 2018) and closure orders (May 2018) as they did not obtain/renew consent. The firms applied (May/June 2018) for CTOs by claiming ignorance of law and the APPCB granted/renewed consents revoking (May/June 2018) the closure orders subject to condition that they shall not discharge untreated effluents outside the industry premises under any circumstances. Audit obtained satellite images of the area which showed the existence of many hatcheries which were releasing their effluents into the sea.



**Fig. 17: Surrounding area of Gayatri Hatchery on Kothapeta Rural Beach side in East Godavari district, indicating direct release of effluents in the sea by many other hatcheries**

We further examined the aerial imagery of the Konapapapeta beaches in East Godavari district and observed that Konapapapeta beach also has clusters of hatcheries and shrimp farms that release effluents directly into sea as seen in the satellite image from March 2021 below:



**Fig. 18: Presence of many hatcheries on coastline and open discharge of the effluent into sea by hatcheries on Konapapapeta beach, East Godavari district.**

**(i) Irregular operation of Ice plants and Fish Packing Units in CRZ areas of Kanyakumari district, Tamil Nadu**

Setting up and operation of ice plants in CRZ areas require CRZ clearance. We noted cases of ice plants operating in Kanyakumari district without obtaining CRZ clearances. During JPV, it was observed that a fish packing unit was operating within the premises of an ice plant. The activities were irregularly granted clearance by DLC, Kanyakumari. TN SCZMA in August 2020 directed DLC, Kanyakumari to take penal action against the violation and report on the same. It was noted that DLC is yet to take any action in this regard till March 2021.



Fig. 19: Pictures taken during JPV for unauthorised operation of Ice plant and Fish Packing unit

Another instance of irregular operation of an ice plant was noted in Kanyakumari district, where the plant discharged wastewater directly to the sea. It was also found that the ice plant was drawing ground water, violating provisions of CRZ notification. Though TN SCZMA directed DLC to take penal action, DLC was yet to take any action in this regard.



Fig. 20: Pictures taken during JPV for open discharge of wastewater to sea by the Ice plant

**4.2.3 Storage of impermissible products in port areas**

As per the CRZ Notification 2011, 15 specified petroleum and chemical products were permitted for storage in CRZ area. While examining the compliances to the terms of clearance granted, we observed that in two cases, impermissible items were allowed to be stored in the CRZ area:

**A. Expansion of Adani Petronet (Dahej) Port by Adani Petronet Port Private Limited (APPPL)** was granted clearance in October 2016. The project involved expansion of cargo handling capacity along with reclamation of 23 hectares back- up area to store and handle dry multi-purpose cargo (steel and silica sand) and development of additional coal stockpile I.

Development of a storage area for the aforesaid dry bulk cargo in the intertidal zone (CRZ-IB) and development of coal stockpile in CRZ- III zone in the instant case was in contravention to the CRZ Notification 2011 as none of the aforementioned items were included in the list of permissible products of the notification.

B. **Construction of Petroleum Products Storage Terminal at Karwar by Tropicana Liquid Storage (P) Limited** was granted CRZ clearance in March 2008. We observed that the facility was used to store bitumen by the project proponent, which does not figure in the list of the petroleum products permitted for storage in the port areas as per the CRZ Notification 1991 and 2011. Even though the fact that the facility was being used to store bitumen was indicated in the compliance report submitted by the PP, no action was taken against the violation. Though storage of bitumen in CRZ area is now allowed under the new CRZ Notification 2019, the fact remains that EIA Report prepared then for seeking CRZ clearance had evaluated only the impacts of storing and transferring liquid petroleum in the tanks.

Thus, SCZMAs and DLCs did not proactively monitor the violations in coastal space and irregular constructions in restricted CRZ zones were carried out.

MoEF&CC stated (February 2022) that information related to violations are of utmost importance to the Ministry and assured that the recommendations would be taken up at the highest level of the Ministry.

#### 4.3 Conclusion

- Post clearance monitoring of the project was ineffective as mandatory reports such as half yearly compliance reports and annual environmental statements were not being furnished by project proponents. Project proponents did not adhere to the conditions prescribed in the clearance.
- SCZMAs did not take proactive action against the CRZ violations and in the instances where they acted upon, follow up action was ineffective. With help of GIS tools, we identified unreported violation such as irregular constructions in CRZ 1A zone and No Development Zone.
- NCZMA did not monitor the activities of SCZMA related to monitoring and follow up of violations. Lack of monitoring and enforcement actions would result in providing ineffective deterrence for the destruction of coastal ecology by development projects.