BEFORE THE NATIONAL GREEN TRIBUNAL

SOUTHERN ZONE, CHENNAI

Application No. 151 of 2016 (SZ) &
Miscellaneous Application Nos.264 of 2016 and 9 of 2017

IN THE MATTER OF:

- Radhakrishnan K.U.,
 S/o. Unni,
 Karolil,
 Puthuvyppe 682 508
- K.S. Murali,
 S/o. Sundaran,
 Kannanveetil,
 Puthuvyppe 682 508

... Applicant(s)

AND

- The Union of India
 Rep. by the Ministry of Environment and Forests
 Through its Principal Secretary,
 Paryavaran Bhavan,
 New Delhi.
- State of Kerala, Rep. by its Secretary, Department of Environment and Climate Change, Secretariat, Thiruvananthapuram -695 001
- State Coastal Zone Management Authority, Rep. by its Chairman, Science and Technology Department, Shasthra Bhavan, Pattom, Thiruvananthapuram – 695 004
- State Environmental Impact Assessment Agency, Rep. by its Chairman, Devikripa, Pallimukku, Pettah P.O., Thiruvananthapuram – 695 024
- Elankunnappuzha Grama Panchayat,
 Rep. by its President,
 Elankunnappuzha Grama Panchyat Office,
 Malippuram P.O., Ernakulam 682 511

 Indian Oil Corporation Ltd., Rep. by its Senior Manager, Cochin LPG Import Terminal Site Office, Puthuvypeen P.O., Ernakulam – 682 508

(Respondent No.4 deleted as per order of the Tribunal dated 23.11.2016.)

... Respondent(s)

Counsel appearing for the Applicant:

M/s. Yogeshwaran & Neha Miriam Kurian

Counsel appearing for the Respondents:

Mr. G.M. Syed Nurullah Sheriff for R1
M/s. Rema Smirithi for R2 and R3
Mr. Harish Vasudevan for R5
M/s. King & Patridge and M. Vijayan
Mr. M. Kumaresan for R6

ORDER

PRESENT:

HON'BLE SHRI JUSTICE M.S. NAMBIAR, JUDICIAL MEMBER

Delivered by Hon'ble Shri Justice M.S. Nambiar

Dated 22nd December, 2017

Whether the Judgement is allowed to be published on the Internet – Yes/No

The application is filed under Section 14 of the National Green Tribunal Act with the following prayers:

Whether the Judgement is to be published in the All India NGT Reporter – Yes/No

"i. Inject the 6th respondent from carrying on any work in the intertidal zone and between the High Tide Line and 200 metres of the High Tide Line in Puthuvyppe Special Economic Zone on the Vypeen Island.

- ii. Direct the 1st respondent to cancel the environmental clearance issued to the 6th respondent for violations of the Environmental Clearance dated 05.07.2010 as mandated by condition V of the general conditions attached to the subject clearance.
- iii. Direct the 6th respondent to demolish the compound wall already constructed and restore the area to its earlier condition.
- iv. Direct the 1st, 2nd and 3rd respondents to initiate prosecution against the 6th respondent for violating conditions of the Environmental Clearance dated 05.07.2010.
- v. Direct the 1st respondent to cause the conduct of a cumulative impact assessment and a varying capacity study all the projects, existing and proposed in the Puthuvyppe CRZ area on the Vypin Island.
- vi. Issue any other order or orders as may be fit, proper and necessary in the facts and circumstances of the case."
- 2. The case of the applicants is that the applicant No.1 is a traditional fisherman who makes a livelihood out of fishing in the coastal waters off the coast of Ernakulam at Puthuvypeen and the applicant No.2 resides within a distance of 1 KM from the project site of the LPG Terminal of the India Oil Corporation Ltd at Puthuvypeen and he was present at the Public Hearing of the project and raised objections on 29.09.2009. According to the applicants, Environmental Clearance (EC) dated 05.07.2010 was granted by respondent No.1, the Ministry of Environment Forests and Climate Change (MoEFCC). The project activity of respondent No.6, M/s.Indian Oil Corporation Ltd (IOCL) extends to an area of 15 hectares between 200 metres and 300 metres

from the High Tide Line (HTL). It is to involve establishment of facilities for receipt, storage and dispatch of imported LPG at Puthuvyppeen, Cochin having a capacity of 0.6 MMTPA and has facilities for (i) uploading of LPG from ships at proposed jetty of Cochin Port Trust, (ii) Transfer to mounted bullets through thermal insulated pipelines, (iii) Storage under pressurised condition in mounted bullets and (iv) loading in road tankers for distribution. The LPG unloaded at the Multi User Liquid Terminal in Cochin Port Trust will be transferred to the terminal through 2.8 KM long pipeline of 20" diameter. The storage facility consists of 8 mounted bullets, each having a capacity of 1025 MT each in two clusters. The applicants would contend that from late November 2015 trucks carrying materials for the project construction are being brought to the project site and unloaded. The applicants then realised that the project is being constructed in the intertidal zone and in the area from the HTL to around 300 metres from the HTL as against the condition in the EC which stipulated that the project be situated between 200 metres and 300 metres from the HTL. The compound wall of the project has been built in such a manner that waves are being stopped by the wall. As seen from the photographs the compound wall is located within the HTL itself. The CRZ Notification does not permit any development within 200 metres of the HTL even in CRZ - III areas. Hence, the construction is in blatant violation of the conditions in the EC. It is contended that CRZ recommendation dated 09.12.2009 of respondent No.3, the State Coastal Zone Management Authority (in short SCZMA) in para - 2 provides that "The project site falls in SEZ. IOC plans to set up a 0.6 MMTPA capacity LPG Import Facility. The main activity involved is import of LPG through tankers, storage in bullets and distribution of the same. The proposed site falls between 200-500 metres of HTL of Sea." The EC dated 05.07.2010 at point 3 reads that, "The project site falls in SEZ in the land allotted on lease by Cochin Port Trust at Longitude 76° 13'34" East and latitude 09°59'82" North. The proposed construction of LPG Import Terminal and pipeline lies between 200 to 300 metres from HTL of Sea. Facilities for receipt and storage of petroleum products and LPG can be permitted in CRZ area except CRZ-I (i). The proposed area is devoid of classified CRZ -I (i) area. The KCZMA had recommended the proposal vide letter No.2126/A2/08/S&TD dated 9/12/2009." It is therefore contended that as per the CRZ recommendation and the EC, the project should be between a distance of 200 metres and 300 metres from the HTL, but the manner in which the project is being constructed shows that it is entirely falling within a distance of 200 metres from the HTL. Aggrieved by the blatant violation of respondent No.6, the second applicant sent representation to respondent No.5, Elankunnappuzha Panchayat dated 08.12.2015. Panchayat was requested to intervene and prevent the construction in violation of CRZ Notification and the conditions of the EC. While applying EC the project proponent has to submit application for CRZ clearance through the local self development authorities and along with the same complete details regarding the project and the fee shall also be submitted and the local development authority has to verify the application in their entirety including the maps submitted by conducting site inspections and forward the same to the KCZMA for their consideration. Respondent No.5 should have taken action. But inspite of pointing out the violations and request made to take action, no action was taken.

3. Puthuvypeen is a fishing hamlet of Kochi of the State of Kerala, which is predominantly dependent upon traditional fishing. 1000 families reside within a radius of 1 KM from the project site. If the project is materialised it would be a threat to the life and livelihood of the fishermen of the locality as it would cut off their access to the Arabian Sea. The project would result in loss of their livelihood. Puthuvyppeen area on the Vypin Island is seen a lot of development as an industrial hub of the coast of Cochin, the commercial capital of Kerala. A Liquified Natural Gas Terminal (in short, LNG Terminal) of Petronet LNG Ltd was granted EC in 2003 and it commissioned in 2013. It is also situated in the SEZ in Puthuvypeen near the entrance to The jetty facility is designed to receive LNG tankers the Cochin Port. between 65,000 to 2,16,000 cubic metres. The terminal has two full containment above the ground LNG storage tanks of net capacity of 1,55,000 cubic metres each. Due to the LNG Terminal itself the fishermen have been adversely affected as fishing ban proposed along the Puthuvyppeen coast citing security reasons. The ban order is imposed for the LNG Terminal in February 2016. The construction of the LPG Terminal between the HTL and 200 metres threatens to hamper the fishing activities on the Puthuvypeen beach. There is complete lack of any cumulative impact study on the effect of these projects upon the marine environment and the livelihood of the fishermen. Construction of boundary wall within the intertidal zone would act as a seawall and the same will lead to unprecedented damage to the coastline since littoral drift is interfered and the movement of sand is interrupted. In Southern side of the wall there will

be an accretion. So also there will be an erosion on the northern side which would considerably hamper the fishing activities in the area. No such study was conducted for the project while granting EC. Respondent No.6 brought further changes to the design, when applying for EC afresh. The construction is in violation of EIA Notification, 2006. In the EC dated 05.07.2010 though the components of the project have been described, recently it came to the knowledge of the applicants that in contravention of the conditions in the EC, which provides for a crosscountry pipeline, a cross-country pipeline is constructed from the LPG Terminal to the Kochi refinery to transport the LPG out of the LGP Terminal. The clearance for pipeline appears to have been obtained in the EC dated 27.11.2015 without conducting Public Hearing or Environmental Impact Assessment Study. Though the pipeline creates major change in the project design of the LPG Terminal, no fresh EIA has been done. Respondent No.6 had filed a Writ Petition for police protection before the Hon'ble High Court claiming protection to the project site, arraying applicants as respondents, and the Hon'ble High Court originally granted an order for protection to carry out the activities. The entire operation of respondent No.6 is in violation of EIA Notification, 2006 and the conditions of the EC dated 05.07.2010. Respondent No.6 has already built a compound wall and filled and levelled the land. They unloaded materials at the project site for commencing construction. Unless further construction is restrained, it would lead to fait accompli situation.

4. The applicant therefore sought the reliefs on the grounds that the act done by respondent No.6 is in violation of the conditions in the EC dated 05.07.2010. It is also in violation of the EIA Notification, 2006.

It is also in violation of the CRZ recommendation dated 09.01.2009 as well as in violation of the CRZ Notification, 1991 and 2011. contended that respondents ought to have seen that the construction activities being carried out, including the use of concrete and cement in the intertidal zone, will cause immense pollution during the operational phase and it would lead to large scale damage to the shoreline as well as livelihood of fishermen living in the area. Without proper study on the harmful effects of the project upon the coast, the EC was granted. Because of the change in the project design, a fresh environmental impact assessment should have been done and as many projects are sanctioned in the eco sensitive Puthuvypeen CRZ area of the Vypin Island without conducting any cumulative impact assessment, a cumulative impact assessment is mandatory and has to be directed to be taken. The applicant would contend that the CRZ Notification, 1991 and the conditions of the EC are being violated and none of the requests of the applicants resulted in any action and the action of respondent No.6 in proceeding with the construction is in violation of the conditions of the EC and the EIA Notification, 2006.

- 5. By order dated 23.10.2016, respondent No.4, State Environment Impact Assessment Authority was deleted from the array of parties finding that respondent No.4 is not a necessary Party. Consequently, Respondent Nos.5 and 6 are now Respondent Nos.4 & 5
- 6. Respondent No.1, Ministry of Environment, Forest & Climate Change (MoEF& CC) pursuant to the order of this Tribunal dated 13.07.2016 directing the respondent Nos.1, 3 and 5 to make a joint inspection and file a status report. Site inspection was carried out on 31.08.2016 and the Respondent No.1 filed the report dealing with all the

- aspects. A separate reply was also filed adopting the contents of the said report as the reply.
- 7. Respondent No.2 filed a memo adopting the reply filed by respondent No.3.
- 8. Respondent No.3 filed a reply contending that CRZ Notification, 1991 provides that facilities for receipt and storage of petro products and LPG can be permitted in the CRZ area, except in CRZ-I (i). The area in question is not classified under CRZ-I (i). There is no violation of the provisions of CRZ Notification in this case. The site was inspected by the team as directed by the Tribunal. It is clear from the google maps that the compound wall was much away from the HTL prior to and during the construction. Since there were adverse effects of sea erosion over the past decade in that area, the compound wall is constructed as a measure to protect the land.
- The Kerala Coastal Zone Management Authority (KCZMA) 9. recommended the proposal to the Government of India. It would have recommended the proposal even if the site is lying within 200 meters of HTL, because it is an activity permitted by the CRZ Regulations. As per para 2 (i) of CRZ Notification, 1991, the projects directly related to water front or directly needed foreshore facilities are permissible. Further, as mentioned under para 3 (ii) (b) of CRZ Notification, 1991, facilities for receipt and storage of petroleum products and Liquefied Natural Gas (LNG) and facilities for regasification of Liquefied Natural Gas are permissible except in the area classified as CRZ-I (i). proposed area does not come under CRZ-I (i). It is reported that the description of the area that it is lying between 200-300 meter from HTL is a mistake which is to be corrected to make the record clear. No

public hearing is required to be conducted as per the Rules, for granting CRZ clearance for any project. As per para 3 (i) of the CRZ Notification, 1991, projects directly related to water front or needing foreshore facilities are permitted. As per para 2 (ii) of CRZ Notification, 1991, facilities for receipt and storage of petroleum products and liquefied natural gas and facilities for regasification of liquefied natural gas are permissible except in an area classified as CRZ-I (i). The proposed site does not fall in the area classified as CRZ-I (i).

10. Respondent No.5, now the respondent No.4 – Elangunnapuzha Grama Panchayath through its Secretary filed a reply affidavit contending that the respondent did not get any information about the Joint Inspection conducted by respondent No.1 and others as directed On a perusal of the records in the office of the by the Tribunal. respondent, it is seen that Environment Clearance was granted in favour of Respondent No.6 now respondent No.5. It was not communicated to respondent No.5 till date. At no point of time, the opinion of the respondent was sought for considering grant of clearance. The respondent received several complaints from persons in the locality including the applicant against the project of respondent As per the recommendations and minutes the project falls between 200 to 300 meters of HTL. It is seen from the EC granted that it was granted on the presumption that the project falls between 200 – 300 meters from the HTL of sea. However, the construction activities of respondent No.5 are within 200 meters of HTL and finding that the respondent No.5 was carrying out the construction activities,

without obtaining permission or license from the respondent and in violation of Kerala Building Rules, it was noted in the proceeding of the Panchayat Committee dated 25.05.2016.

- 11. On 17.06.2016, respondent No.3 issued a communication to the respondent No.5 to take all steps to stop construction activities which cannot be made in CRZ area in violation of the CRZ Notification. Even before the clearance was granted to respondent No.5, respondent received complaints that respondent No.5 was undertaking construction activities on the site which can be seen from the photographs and from copy of the Environment Clearance annexed to the application.
- It is seen that the port road which is running to the site of 12. respondent No.5, is 300 meters away from HTL. Any prudent man can clearly understand from the photographs that the project of respondent No.5 is within 200 meters of HTL. The respondent issued a stop memo to respondent No.5 finding that illegal constructions are being The respondent No.5 submitted a site plan of the carried out. construction in the said plot on 18.03.2016. On 25.05.2016 the respondent issued a communication to the respondent No.5 verification to produce the approved site plan of the ongoing Respondent No.5 refused the site inspection on flimsy construction. It is clear that the respondent has taken all steps to see that the provisions of CRZ Notification and other relevant statutes complied with.
- 13. The respondent Panchayat is densely populated and the construction activities of respondent No.5 are in violation of the existing

laws and pose great risks to the lives and properties of the local residents. Prima facie it is seen that the construction activities being carried on by the respondent No.5 are in contravention of the distance criteria. The respondent is ready to conduct any site inspection if directed by the Tribunal.

- 14. Respondent No.6 now Respondent No.5, the project proponent filed a reply contending that 50% to 60% of the country's LPG demand is being met through imports and coastal movements. To import LPG, LPG Import Facilities are set up by Public Sector Oil Companies viz., Indian Oil Corporation Ltd. (IOCL), Bharat Petroleum Corporation Ltd. (BPCL), and Hindustan Petroleum Corporation Limited (HPCL). IOCL owns and operates only one LPG Import Facility at Kandla in Gujarat. The joint venture company of IOCL viz., Indian Oil Petronas Pvt. Ltd. owns and operates two LPG Import facilities one at Haldia, West Bengal and another at Ennore, Tamil Nadu. BPCL owns and operates only one LPG Import Facility at Uran, Mumbai. HPCL owns and operates two LPG Import Facilities one at Mangalore and another at Thus the number of LPG Import Facilities in the Visakhapatnam. Country is very few, compared to huge demand at present as well as ever growing LPG market at the rate of 10% per annum. The demand is increasing. To meet the huge demand, existing LPG import facilities are operating at 200% of their designed capacity.
- 15. At present the demand both (domestic and non-domestic) of LPG in Kerala is about 60,000 MT per month. This demand is met out from supplies from BPCL-Kochi Refineries Ltd. at about 30000 MT per month and about 30000 MT per month from Mangalore LPG Import

Facility (MLIF), through road movement. The average round trip distance from MLIF to the LPG Bottling Plants situated in Kerala at Cochin, Calicut and Kollam is around 1000 km. On an average, MT of bulk LPG is transported from MLIF to Kerala through road tanker lorries every day which is equivalent of 60 tanker lorries per day. Considering 17 MT as the average capacity of LPG road tanker, 60 tanker lorries are plying on the roads of Kerala which are narrow and in damaged conditions, covering a distance of 6000 km per day. Movement of bulk LPG through road is a risky affair, compared to the movement through pipeline and coastal route. From the records, almost every month there is an accident involving LPG road tankers in Kerala involving loss of human life coupled with environment pollution due to the road movement. Movement of bulk LPG through Sea route is safer compared to pipeline movement. Therefore, for bringing LPG through Sea route, more and more LPG Import facilities have to be set up in the country. The project is undertaken by IOCL at the instance of the Government of Kerala, as major road accidents involving hundreds of human lives occurred at Chala near Kannur and Karaunagupally near Kollam involving LPG transport by tanker lorries on National Highway (NH) which has made it imperative to transport LPG by the coastal route.

16. The Government of India, Ministry of Commerce and Industry allotted 70 acres of land covering 1.5 km of coastal stretch to M/s.Petronet LNG for setting up of LNG Terminal, out of which 37 acres of land was allotted to this respondent in 2009 for setting up a LPG Import Terminal (Project). The BPCL Crude oil terminal was

commissioned in the year 2007 and Petronet LNG Terminal in 2013. CoPT is the developer of SEZ and BPC-KR, Petronet LNG and respondent No.6 obtained Co-Developer status from the Government of India, Ministry of Commerce and Industry on 17.06.2011. The respondent obtained all the statutory approvals from the State of Kerala and Government of India.

- 17. The project has two parts viz., one LPG Storage terminal for receipt, storage, manufacture and evacuation of bulk LPG and the Jetty viz., the Multi-User-Liquid-Terminal (MULT) to provide berthing facilities for Ship Tankers, uploading and transfer of the LPG through pipeline to the LPG Storage Terminal. The LPG Storage terminal and the jetty are situated in Puthuvypeen SEZ. The Respondent is directly undertaking construction of LPG storage terminal, while the construction of MULT has been entrusted to CoPT on deposit work basis.
- 18. MoEF & CC granted Environmental Clearance (EC) for the LPG Import Terminal on 05.07.2010. On receipt of the EC, the respondent has undertaken land development and compound wall works and completed the same in 2011.
- 19. The project was thereafter 'put on hold' as the construction of MULT which was undertaken by CoPT was delayed. Based on the request of the respondent, CoPT agreed for construction of MULT on deposit work basis in July, 2012.
- 20. A construction agreement with CoPT for construction of MULT could be signed only on 04.04.2014. CoPT, on behalf of the

respondent applied to MoEF & CC for grant of EC for MULT which was granted on 12.02.2016. The construction work for MULT is in progress.

21. Respondent No.6 resumed the construction activities of LPG Storage terminal in November, 2015 after commencement of MULT. During July, 2013, when the project was on 'Hold', the respondent brought the attention of the CoPT about the sea erosion and the need for providing shore protection based on a report published in newspaper 'The Hindu' dated 16.06.2013. The CoPT replied as follows:

"That seasonal shoreline variation and erosion/accretion along the coast is a natural phenomenon, all along Kerala coast. If required you may carry out a detailed study to ascertain the measures, if any, to be adopted to arrest such variations is to be carried out.

As part of future development scheme, CoPT envisages to develop an outer harbour as per the recommendation of IIT, Madras with two break waters on either side of the approach channel, the feasibility study of which is going on, this may take a few years for its total implementation. Once the outer Harbour development works are implemented the entire coast will get full protection from the seasonal shoreline variations.

CoPT requested permission from Government of Kerala to relocate the redundant seawall and groynes situated at the northern side of approach channel on Vypin Island to the present shoreline as a short term measure.

On the News reported in "The Hindu", it is stated that the author has floated without any scientific basis, some hydrological theories and requesting to assure that the developments being undertaken in the port have been scientifically investigated and modelling tried out at Central Water and Power Research Station (CW &PRS), Pune and hence no credence need to be attached to the content of the author in "The Hindu".

The proposed implementation of outer harbour works and the work of relocating the redundant sea wall and groynes is under examination by CoPT.

- When the respondent resumed the work in November, 2015, the services of Department of Ocean Engineering at IIT, Madras was availed, to conduct study on shore protection measure to prevent coastal erosion along the coastal stretch of the project land. IIT, Madras conducted the study and submitted a report in May, 2016. The salient features of the report are:
- 1) The Coastal stretch of IOCL- Puthuvypeen, just north of Cochin Port, Trust has been adverse effects of sea erosion over the past decade.
- 2) The shore stabilization along Puthuvypeen coastal stretch has been designed using systematic modelities.
- 3) The field survey such as shoreline mapping, beach profiling, analysis of sediment characteristics required for the preparation of detailed project has been conducted.
- 4) The report details of field measurements, layout planning through mathematical modelling and design of sections that lead to the coastal protection scheme.
- 5) The soil samples are collected at five locations, while beach profiles have been measured at seven locations.
- 6) A groyne field consisting of seven short groynes has been designed. The short groynes would stabilise the coast within few seasons by capturing the sediments in motion due to littoral movement in between the groyne.
- 7) The short groynes would stabilise the coast within few seasons by capturing the sediments in motion due to littoral movement in between the groynes.
- 8) Three years after implementation short groynes the shore line will get stabilised without any further shoreline erosion at any location.
- 9) If proper shore protection works are not carried out, the sea intrudes into the land slowly. The average intrusion rate is about 2 to 5 m per annum. This rate might enhance or stabilise depending on the construction and dredging activities near the harbour mouth.
- 23. On receipt of the report from IIT, Madras, the respondent sought permission from CoPT by letter dated 06.06.2016, to take

up the shore protection works. CoPT permitted respondent to carry out shore protection work which would be started slowly.

- 24. Environmental Clearance was granted to the respondent on 05.07.2010, not by respondent No.4 State Environmental Impact Assessment Authority (SEIAA), Thiruvananthapuram but by respondent No.1 MoEF & CC.
- 25. Respondent had brought 7200 MT of steel plates required for fabrication of LPG storage vessels and unloaded the same at the project site from November, 2015 to March, 2016. In fact, the construction activities of the project were commenced as early as October, 2010 after obtaining the EC. Land development and boundary wall construction were commenced in October, 2010 and completed in the year 2011. At the time of construction of compound wall in 2010, a distance of 30 m was available between shoreline and the compound wall. There is no condition in the EC that construction should be between 200 and 300 meters from the HTL. A perusal of EC reveals that clearance was granted, subject to the compliance of specific conditions in para 6 and general conditions in para 7 and none of the conditions were violated by the respondent. The allegation of blatant violation of the conditions of EC is not correct. The longitude and latitude of the project site allotted to the respondent was not changed. If the sea now touches the compound wall, the respondent cannot be faulted on that. If due to sea erosion, the beach was eroded, the applicants can only blame the sea and not the respondent.

- 26. The CRZ recommendation as well as EC record the distance of the sea from the project land during the relevant time (i.e. in the year 2009 and 2010) when the respondent had taken over 37 acres of land from CoPT on lease basis, for 30 years on 10.02.2009. The co-ordinates of the boundary have been shown in the sketch produced. The respondent constructed the compound walls of the project site as per the coordinates. The area beyond the compound wall belongs to CoPT. The respondent responsible for any variations which are beyond the control of the Merely because of sea erosion, the distance respondent. between the compound wall and HTL got reduced, it cannot be alleged that coordinates of the land leased to the respondent are not tallying or there is violation of the conditions of EC.
- 27. The total length of the project on the sea side is only 0.69 km. A crude oil terminal of M/s.BPCL is situated just 120 m away from the project site on the southern side. The total coastal length of the BPCL terminal is 2.0 Km. There is a corridor of 120 m between BPCL terminal and the project site of respondent No.6 which is accessible to the public to reach the sea shore. Respondent through CoPT, has laid a road along the northern boundary of the project site, through which fishermen are accessing the sea. Mere 0.69 km coastal stretch of the project site is not causing any obstruction to the fishermen. There is no hindrance for the activities. Fishing activities are going on day-inday out in the area.

- The length of the coastal line of Petronet LNG terminal is 1.5 km, whereas the length of coastal line of the project of the respondent is 0.69 km. BPCL terminal was commissioned in 2007. It is in operation for the last 9 years. The Petronet LNG terminal was commissioned in the year 2013. It has been in operation for the last 3 years. The EC for the project of the respondent was granted six years ago. The need for cumulative impact study on the environment therefore does not arise. Respondent constructed boundary wall on the lease hold land from CoPT. The length of the wall on the sea side is only 0.69 km.
- 29. The respondent has not brought any changes in the project as alleged. A joint venture Company of the respondent and BPCL viz., Kochi- Salem Pipeline Pvt. Ltd. (KSPPL) is proposing to lay LPG pipeline from the project of the respondent to KRL. The necessary EC has also been obtained. The applicant has not challenged the EC granted on 27.11.2015.
- 30. The respondent No.6 procured the steel plates worth Rs.32 crores for fabrication of LPG Storage vessels at the project site. When the trucks carrying the steel plates reached to the site on 27.11.2015, local people stopped the same and prevented unloading the plates at the site. Respondent therefore filed a Writ Petition in the High Court of Kerala for an order to maintain law and order during the unloading.
- 31. The construction of compound wall and land filling works were completed in 2011. Steel plates for fabrication of LPG

storage vessels were unloaded at site for November, 2015 to Respondent further contended that they have not March. 2016. caused any violation or variation of the conditions in the Environmental Clearance dated 5.7.2010 and they have not caused any violation of the EIA Notification, 2006 Respondent has not caused any violation of recommendation dated 9.12.2009. The construction activities are not in violation of the CRZ Notification 1991 and 2011. The Inter-Tidal Zone is not constant along the entire Kerala Coast, including the Puthuvypeen area and the seasonal variation in Inter Tidal Zone is a natural phenomenon in the entire Kerala Coast, including The respondent's project construction has not the project site. caused any shoreline damage and the fishermen living in the area are continuing their fishing activities. The respondent has voluntarily done the study to prevent coastal erosion through IIT, Madras and would be undertaking shore protection measures as recommended by IIT, Madras to arrest the erosion. respondent has not brought any changes in the progress of the project.

32. The pipeline project is handled by a separate company called Kochi Salem Pipeline Pvt. Ltd. (KSPPL). The total coastal stretch involved in the project is only 0.69 km. The Environment Impact Assessment (in short 'EIA') conducted for the project by M/s PDIL, a Government of India Undertaking, confirmed that there is no adverse impact on the environment due to the project. The need for conducting Cumulative Impact Assessment does not arise. Even if such

assessment is required, the same has to be taken up by CoPT, as they are the owners of the entire SEZ area. As per the EIA study report, there would be no contamination, encroachment and destruction to the Vembanad Kayal, as alleged by the applicants. The construction activities of the project are undertaken in the land allotted to the respondent by CoPT and as per the EC conditions. The respondent has not done any violation of the principle of Sustainable Development, Inter-generational Equity and Public Trust Doctrine. The respondent has not done any violation of the duty enshrined under Article 48-A and 51-A(g) of the Constitution of India. As per General Condition No.12 of the EC, since no appeal is preferred, the EC has become final.

- 33. The total cost of the project is Rs.714.25 Crores. Through various contractors, respondent has continued the works. As on 25.7.2016, the respondent has incurred an expenditure of Rs.109 Crores. The interest accrued on the investment of Rs.109 Crores would be Rs.3 Lakhs per day, calculating at 10.25% p.a. Per day loss to the respondent due to delay of the project is about Rs.3 Lakhs. The respondent is incurring an expenditure of Rs.205 Crores per annum towards transportation charges for bringing bulk LPG from MLIF to Kerala which works out Rs.56 Lakhs per day. If the work is commenced, the expenditure would be saved. It is therefore contended that the application is only to be dismissed.
- 34. The learned counsel appearing for the applicants Mr. Yogeshwaran vehemently argued that they are not challenging the EC, but the construction being made on the ground is in violation of the conditions of the EC granted to the respondent. The learned counsel vehemently

argued that the respondent No.5 can construct only within the area covered under the EC and the construction carried out is not in the place covered under the EC and therefore the respondent has no right to proceed with the construction. The learned counsel argued that from the EC granted to the respondent No.5, it is clear that the construction could only be in an area 200 M - 300 M from HTL but the construction is being carried on in the intertidal zone. The argument is that the EC was granted pursuant to Form No.I submitted by the respondent No.5 and from Form - I as well as the EC it is clear that the construction made is not within the area covered under the EC, as construction under the EC could only be 200 m to 300 m to the HTL. The learned counsel vehemently argued that even in paragraph 3 (iii) of the EC it is stated that the project site falls in the latitude of 90 58'27.99" N and Longitude 76° 14'01.66" and the land lies between 200 m - 300 m from the High Tide Line of the sea, receipt and storage of LPG is permissible in CRZ-I except CRZ I (i) and the proposed area is not part of CRZ I (i). The learned counsel also argued that the report filed by the Scientist of MoEF & CC and the director of Kerala State Council for Science and Technology and Environment before the Tribunal establishes that the construction is not being carried out in the land covered under the EC. It was pointed out that as per the report, the construction site does not fall beyond 200 m of HTL and if the longitude and latitude of the area where the project work is being carried out, is fixed, the site is entirely different from the longitude and latitude shown in the EC and therefore it is clear that the construction is not in the land covered under the EC. Mr. Yogeshwaran, the learned counsel further argued that the Form - I submitted by the respondent No.5 for EC

shows that the proposed project is in the land between 200 m - 300 m of High Tide Line and the photographs produced by the applicants establish that the project site where construction is being made is actually inside the High Tide Line. The learned counsel also argued that when the construction site falls in Inter Tidal Zone, and not 200 m -300 m away from the High Tide Line, it is clear that the land covered under the EC and the land where the construction is being carried out are different and distinct. The learned counsel argued that as the construction is carried out in the Inter Tidal Zone, without proper Environment Impact Study, the project cannot be proceeded with. The learned counsel also argued that towards South of the project site, there are two other similar projects already under operation by BPCL and Petronet and in such circumstances a Cumulative Impact Assessment is mandatory and hence the respondent No.5 cannot be allowed to proceed with the construction without the proper cumulative impact assessment study of the project.

35. The learned counsel appearing for the respondent No.1 MoEF & CC, Mr. Syed Nurullah Sheriff argued that as directed by the Tribunal, the project site was inspected and the records were verified and the location stated in the EC that the site is beyond 200 m from HTL is a mistake and on measurement, it was seen that the corner of the compound wall was constructed beyond HTL but because of the erosion in the coastal line, now the construction lies in the Inter Tidal Zone which is a subsequent event. The learned counsel argued that the description in the EC that the project site is beyond 200 m from HTL, was not proposed by IOCL in their original application and even

under the CRZ Notification, 1991, those projects which are directly related to water front or directly needing foreshore facilities are permissible activities and therefore the storage of petroleum products and Liquefied Natural Gas are permissible activities except in the area classified as CRZ – I (i). The proposed area is not included in the area classified as CRZ I (i). The learned counsel also argued that the identification of the area by the applicant based on the Google Map is not correctly done and there is no prohibition to proceed with the construction under CRZ Notification, 1991 or 2011.

- 36. The learned Senior Counsel Mr.Masilamani appearing for Respondent No.5 argued that the land leased out to Respondent No.5 where the project was proposed is on the accreted land of Puduvypeen and as far as those accreted lands are concerned, the local authority is the Cochin Port Trust and not respondent No.4 Elankunnappuzha Grama Panchayat. It is also pointed out that there is no dispute with regard to the identity of the land obtained on lease by respondent No.5 and the Cochin Port Trust who granted the land on lease. The EC and CRZ Clearance were sought for the project proposed is that land and in fact the construction of the project is also being carried on in the same land and therefore there cannot be any dispute with regard to the identity of the land.
- The learned Senior Counsel argued that there is no basis for the dispute on the identity of the land where the construction is going on and the land for which Environmental clearance was granted as it is one and the same and there is no basis at all for the dispute canvassed, based on longitude and latitude of land involved. The

learned Senior Counsel also submitted that as stated by respondent No.5 in Form No.I, the area extends from a distance of 50 meters approximately from High Tide Line to a maximum distance of 400 meters towards landward side. It was argued that it has not been stated by the project proponent that the proposed project site for construction of the LPG Import Terminal and pipelines falls in the area between 200 – 300 meters from High Tide Line. The learned Senior Counsel also argued that the total area granted on lease lies to the north of the Light House and is having the northern measurement of 159.41 meters and southern measurement of 217.70 meters and it was by mistake the proposed site is described in the EC as lies between 200 – 300 meters from the High Tide Line.

- 38. The learned Senior Counsel also submitted that as directed by the Tribunal, the project site was inspected by a team consisting of Scientist of Ministry of Environment, Forest & Climate Change, Kerala Coastal Zone Management Authority and submitted a report which establishes that the site is located about 30 meters from HTL and the Google imageries prior to and after construction and viz., prior and after 2010 reveal that the boundary/ compound wall was much away from HTL prior to and during construction, though at the time of inspection it was found to be in the inter tidal zone.
- 39. The learned Senior Counsel referring to the map prepared by Centre for Earth Science Studies, Akkulam submitted to the Ministry of Environment and Forest & Climate Change reveals that there existed a sea wall to the east of the project site from north to south, indicating that the sea was then upto the wall and the land now seen to the west of the

wall from north to south were subsequent accretion of the sea coast taken place at Puduvypeen and based on the present position of the land and the sea, it cannot be found that the project site lies in the inter tidal zone. The learned Senior Counsel also pointed out that similar project by BPCL and Petronet LG, exist to the South of the project site of respondent No.5 and the original existing sea wall was extending upto the south and therefore there is no basis for the dispute with regard to the identity of the land.

- 40. The learned Senior Counsel also argued that the applicant is not entitled to challenge the Environmental Clearance/CRZ clearance granted on 5th July, 2010, in 2016 by filing an application under Section 14 of NGT Act and if agrieved, the remedy is to file an appeal as provided under Section 16 of the NGT Act. The learned Senior Counsel also argued that the points which are to be agitated in an Appeal cannot be raised in an application and as no appeal was filed, the EC, granted on 5th July, 2010 has become final and the applicant is not entitled to get the matter reopened.
- 41. The learned Senior Counsel also submitted that the reply of respondent No.3 KCZMA establishes that the project would have been recommended even if the site is lying 200 meters of the HTL, as under Para 2 (i) of the CRZ Notification, 1991 projects those directly related to water front or directly needing foreshore facilities, are permissible and as per para (ii) of annexure 3 (ii) of the CRZ Notification 1991, facilities for receipt and storage of petroleum products and Liquified Natural Gas and facilities for regasification of Liquified Natural Gas are permissible, except in the area classified as CRZ I (i) and the project area does not

include any part classified as CRZ (I) (i). The learned Senior Counsel also argued that as is clear from the Joint Inspection Report submitted by the MoEF & CC and KCZMA and the reply, the reference in the EC that the project area lies between 200 – 300 meters from High Tide Line is only a mistake which has to be corrected and based on the mistake, the applicant is not entitled to seek any relief. The learned Senior Counsel therefore argued that the application is only to be dismissed.

- 42. At the outset, it should be noted that EC granted to respondent No.5 on 5th July, 2010 is appealable under Section 16 of NGT Act. The applicants have not filed any Appeal. The remedy of an Appeal is now barred by time. Therefore, the applicants by filing an application under Section 14 of the NGT Act is not entitled to challenge the EC indirectly, which they cannot do directly. Though the EC could be challenged in an Appeal filed under Section 16, the grounds which could be raised in the Appeal are not available to the applicants in an Application under Section 14.
- 43. Evidently, realising this aspect, the learned counsel appearing for the applicant did not challenge the EC. The challenge is only on the construction of the project at the site, contending that the EC granted on 05.07.2010 is not for this land but to a site which lies 200 300 meters from the High Tide Line and within the longitude and latitude shown in the EC. It cannot be disputed that the project proponent cannot construct the project on any other land, which is not covered under the EC.
- 44. Therefore, the only point for consideration is whether the EC granted to the respondent No.5 for construction of LPG Import Terminal

and Pipeline is for the land, where the construction is now being carried out and whether the EC granted on 05.07.2010 is for another land and if so, whether respondent No.5 can proceed with the construction at the site.

The Point:-

45. Along with the Joint Inspection Report submitted by the Scientist of MoEF & CC and KCZMA, Form No.I submitted by respondent No.6 was produced. In Form No.1, the following answers were furnished on the relevant aspects involved in the application.

III. Environmental Sensitivity:

S. No	Areas	Name/ Identity	Aerial distance(with in 15 km) Proposed project location boundary
2	Areas which are important or sensitive for ecological reasons – Wetlands, watercourses, or other water bodies, coastal zone, biospheres, mountains, forests	Coastal Zone (Arabian Sea)	Boundary line of the proposed site extends from a distance of 50 meters (Approx.) from the high tide line of Arabian Sea to a maximum distance of 400 meters towards land
3			
4.	Inland, coastal, marine or underground waters	Coastal Zone (Arabian Sea)	Boundary line of the proposed site extends from a distance of 50 meters (Approx.)from the high tide line of Arabian Sea to a maximum distance of 400 meters towards land. Inland marine and underground waters are not affected.

46. On the basic information regarding location/ site alternatives under consideration, respondent No.5 stated as follows:

"Land taken on lease from Cochin Port Trust at Pudu Vypeen on the western sea coast of Vypeen located 8.0 km away from Cochin City"

Thus from Form I furnished by the respondent No.5 to MoEF & CC, for the purpose of obtaining the EC, it is clear that there is no case for respondent No.5 that the proposed project is on a site which lies between 200 – 300 meters from High Tide Line. On the directions of

this Tribunal, the MoEF & CC produced the scanned copies of the file relating to the grant of EC for LPG Import Terminal project of respondent No.6 at Puduvypeen in the land owned by Cochin Port Trust.

47. A report on Environmental Impact Assessment prepared for the project which forms part of the said file, describes project location and assessibility as follows:

"Proposed site falls in sea SEZ area under the ownership of Cochin Port Trust at longitude 76 13' 34" East and latitude 09 The site is located at about 17 kms from the 59'82" North. district head quarters, Ernakulam. The proposed LPG import/ storage terminal is connected to the Banerii road passing through Ernakulam town at a distance of about 8 Km, Parur, Vypeen State Highway at a distance of about 2 Km and NH-47 at a distance of about 12 Kms by metal road, Ernakulam Town railway station is located at about 9 Km and Ernakulam Junction railway station is located at about 10 km away from Other than Cochin Port Trust, the SEZ area the project site. has many similar type of industry like SBM of M/s.BPCL and upcoming industry like LNG terminal of M/s.Petronet LNG Limited etc."

48. Applicants have no case that the site where the project work is now being carried out is not the property owned by CoPT or is not the land transferred by CoPT under the lease agreement to respondent No.5. In fact, even at the time of argument there is no case for the applicants that the land where the construction is being carried out is not the area covered by the lease agreement between CoPT and respondent No.5. Therefore, it is clear that the project site is the site obtained by respondent No.5 from CoPT for the purpose of establishing the project and respondent No.5 is constructing the project in the land obtained on lease from CoPT for that very purpose.

- 49. Hence the only question is whether the EC granted in favour of respondent No.5 is not for this land but for any other land. The argument of Mr.Yogeshwaran, learned counsel appearing for the applicants is that as per the EC, the site lies at longitude 76° 13' 34" East and latitude 09° 59'82" North and if the longtitude and latitude are fixed, the site cannot be the one under construction, but it should be far away from the sea towards the east. The learned counsel built the argument based on a copy of Google earth image showing the longitude and latitude 76° 13' 34" East and 09° 59'82", where under the points are fixed further East and not at the Site where the construction is being carried out.
- Mr.Masilamani, learned Senior Counsel appearing for the 50. respondent No.5 argued that there is no basis for the said submission as the point fixed based on the coordinates as claimed by the learned counsel appearing for the applicant, is not correctly fixed and even a very small variation in fixing the coordinates in the Google map would result in much variance in the field and therefore based on that map, it cannot be found that the site where the construction is being carried out and the site for which EC was granted are different. The learned Senior Counsel also relied on the map prepared by the Centre for Earth Science Studies. Incidentally, the same Authority has been authorised under CRZ Notification, 2011 to prepare the coastal zone maps under para 5 (ii) of the Notification. As per the site plan the plot respondent No.5 having obtained on lease from belonging to the CoPT, is demarcated as 30 meters to the east of the HTL and further to the west of the original sea wall which runs from North to South.

Normally to identify an area, there should be 4 coordinates with full details of longitude and latitude. Unfortunately, in the EC only coordinates of East and North are shown.

- 51. The file produced by the Ministry of Environment and Forest & Climate Change relating to the EC granted to respondent No.5 shows that the proposal submitted to the Ministry by the KCZMA was to construct the LPG Import Terminal in the land obtained by respondent No.5 from CoPT. It is already found that the land which was obtained on lease from CoPT by respondent No.5 is the very land where the construction was proposed. The records establish that public hearing was conducted on 29.09.2009 at the Collectorate, Ernakulam, where all the stakeholders including those who opposed the project, were present and submitted their response on the issues raised.
- 52. The report on Environmental Impact Assessment for the proposed LPG Import Terminal of respondent No.5 also establish that the proposal was to construct the LPG Import Storage Terminal at the site obtained on lease from CoPT. So also the details of the public hearing and the response by the project proponent, which form part of the file produced by the MoEF, reveals that all were aware that EC is sought for the site obtained by respondent No.5 on lease from CoPT.
- 53. The 32nd meeting of the KCZMA recommending the project for CRZ Clearance reads:

"KCZMA discussed the case in detail and decided to recommend to Government of India for CRZ clearance for the project on payment of necessary scrutiny fee." The 87th meeting of EAC held on 19th and 20th April, 2010 under

Agenda Item No.4.13, recommended the project as follows:

"4.13 Environmental Clearance for LPG Import Terminal at Puduvypeen SE-2 (Cochin Port Trust, Cochin) by M/s.Indian Oil Corporation Ltd., Cochin (F.No.11-21/2010-IA.III)

As presented by the project proponent, the proposal involves establishment of facilities for receipt, storage and despatch of imported LPG at Puduvypeen, Cochin by M/s.Indian Oil Corporation (IOC) Ltd.

It is proposed to set up a 0.6 MMTPA capacity LPG import facility. The project site falls in SEZ in the land allotted on lease by Cochin Port Trust at longitude 76 13'34" and latitude 09 59' 82" The main activity involves i) Uploading of LPG from ships at proposed jetty of Cochin Port Trust, ii) Transfer to mounted bullets through thermal insulated pipelines, iii) Storage under pressurised conditions in mounted bullets and iv) Loading in road tanker for distribution of the same.

The LPG unloaded at Multi User Liquid Terminal being constructed by Cochin Port Trust and transferred to the terminal through 2.8 km long pipeline of 20 dia. The storage facility consist of 08 Nos. of mounted bullets (capacity: 1925 MT each) constructed in two clusters. The mounted storage is he safest LPG storage suitable to the site as the LPG bullets are buried in sand and enclosed inside concrete bunkers with minimum wall thickness of 50 cm. The stored LPG shall be further distributed through road tankers to different consumption centres.

The proposed construction of LPG Import Terminal and Pipeline lies between 200 to 300 m from High Tide Line of sea. Facilities for receipt and storage of petroleum products and LPG can be permitted in CRZ area except CRZ I (i). The proposed area is devoid of classified CRZ I (i) area.

The Kerala coastal zone management Authority discussed the proposal in their 32nd Meeting and recommended the proposal for the clearance of MoEF vide letter No.2126/A2/08/ S & TD dated 09.12.2009.

The TOR for the project was issued vide letter No.10-89/2008-IA-III dated 02.09.2008 and Public hearing was conducted on 29.09.2009.

During the discussion, the following points emerged:

- (i) All the issues raised in the public hearing shall be incorporated and complied with strictly.
- (ii) Clearance /NOC shall be obtained from Petroleum & Explosives Safety Organisation (PESO)
- (iii) Necessary Safety measures shall be incorporated conforming to the standards.

The Committee recommends the proposal for CRZ clearance with the above conditions for strict compliance by the project proponent."

54. The comprehensive check memo indicating the time taken for clearance shows that application for clearance was received by MoEF & CC on 04.03.2010. Recommendation of the KCZMA was on 09.12.2009. It was placed in the EAC Meetings held on 21st and 22nd August, 2008 and 19th and 20th April, 2010. The public hearing was conducted on 29.09.2010. It was examined by the Ministry of Environment, Forest and Climate Change on 17.03.2010 and finally granted EC on 05th July, 2010 which reads as follows:

"Sub: Environmental Clearance for LPG Import Terminal at Puduvypeen SEZ (Cochin Port Trust, Cochin) by M/s.Indian Oil Corporation Ltd., Cochin – Reg.

This has reference to the letter No.2126/A2/08/ S &TD dated Chairman, Kerala of the Coastal Zone Management Authority forwarding your proposal for the Environmental Clearance under the Environmental Impact Assessment Notification, 2006 and Coastal Regulation Zone (CRZ) Notification, 1991. The proposal has been appraised as per prescribed procedure in the light of provisions under the Environment Impact Assessment Notification, 2006 and Coastal Regulation Zone Notification, 1991 on the basis of the mandatory documents enclosed with the application viz., the Questionnaire, EIA, EMP, Public Hearing proceedings and the additional clarifications furnished in response observations of the Expert Appraisal Committee constituted by the competent authority in its meetings held on 21st - 22nd August, 2008 and 19th-20th April, 2010.

- It is interalia, noted that the proposal involves establishment of facilities for receipt, storage and despatch of imported LPG at Puduvypeen, Cochin. The import facility will be of 0.6 MMTPA capacity. The main activity involves i) Uploading of LPG from ships at proposed jetty of Cochin Port Trust (ii) Transfer to mounted bullets through thermal insulated pipelines (iii) Storage under pressurised conditions mounted bullets and (iv) Loading in road tanker for distribution The LPG unloaded at Multi User Liquid of the same. Terminal in Cochin Port Trust and transferred to the terminal through 2.8 KM long pipeline of 20"dia. The storage facility consist of 08 Nos. of mounded bullets (capacity: 1925 MT each) constructed in two clusters. The mounded storage is the safety LPG Storage suitable to the site as the LPG bullets are buried in sand and enclosed inside concrete bunkers with minimum wall thickness of 50 cm. The stored LPG will be distributed through road tankers to consumption centres. The total cost of the project is Rs.170.00 crores.
 - 3. The project site falls in SEZ in the land allotted on lease by Cochin Port Trust at longtitude76 13'34" E and latitude 09 59' 82" N. The proposed construction of LPG Import Terminal and Pipeline lies between 200 to 300 m from High Tide Line of sea. Facilities for receipt and storage of petroleum products and LPG can be permitted in CRZ area except CRZ-I (i). The proposed area is devoid of classified CRZ I (i) area. The Kerala coastal zone management authority had recommended the proposal vide letter No.2126/ A2/08/S & T dated 09.12.2009.
 - 4.The TOR for the project was issued vide letter No.10-89/2008-IA-III dated 02.09.2008 and Public hearing was conducted on 29.09.2009.
 - 5. The Expert Appraisal Committee, after due consideration of the relevant documents submitted by the project proponent and additional clarifications furnished in response to its observations, have recommended for the grant of Environmental Clearance for the project. Accordingly, the Ministry hereby accords necessary Environment Clearance and CRZ Clearance for the above project as per the provisions of Environment Impact Assessment Notification, 2006 and CRZ Notification, 1991 and its subsequent amendments, subject to strict compliance of the terms and conditions as follows:

6. SPECIFIC CONDITIONS:

i) Clearance /NOC shall be obtained from Petroleum & Explosives Safety Organisation (PESO).

- ii) Necessary Safety measures shall be incorporated conforming to the standards.
- iii) All the issues raised in the public hearing shall be incorporated and complied with strictly.
- iv) No construction work other than those permitted in Coastal Regulation Zone Notification shall be carried out in Coastal Regulation Zone area.
- v) The project proponent shall set up separate environmental management cell for effective implementation of the stipulated environmental safeguard under the supervision of a Senior Executive.
- vi) The project proponent shall take up mangrove plantation /green belt in the project area, wherever possible. Adequate budget shall be provided in the Environement Management Plan for such mangrove development.
- vii) The funds earmarked for environment management plan shall be included in the budget and this shall not be diverted for any other purposes.

7. GENERAL CONDITIONS:

- i) Adequate provision for infrastructure facilities including water supply fuel and sanitation must be ensured for construction workers during the construction phase of the project to avoid any damage to the environment.
- ii) Appropriate measures must be taken while undertaking digging activities to avoid any likely degradation of water quality.
- iii) Full support shall be extended to the officers of this Ministry/ Regional Office at Bangalore by the project proponent during inspection of the project for monitoring purposes by furnishing full details and action plan including action taken reports in respect of mitigation measures and other environmental protection activities.
- iv) Ministry of Environment & Forests or any other competent authority may stipulate any additional conditions or modify the existing ones, if necessary in the interest of environment and the same shall be complied with.
- v) The Ministry reserves the right to revoke this clearance if any of the conditions stipulated are not complied with the satisfaction of the Ministry.

- vi) In the event of a change in project profile or change in the implementation agency, a fresh reference shall be made to the Ministry of Environment and Forests.
- vii) The project proponents shall inform the Regional Office as well as the Ministry, the date of financial closure and final approval of the project by the concerned authorities and the date of start of land development work.
- viii) A copy of the clearance letter shall be marked to concerned Panchayat/ local NGO, if any, from whom any suggestion/ representation has been made received while processing the proposal.
- ix) Kerala Pollution Control Board shall display a copy of the clearance letter in the Regional Office, District Industries Centre and Collector's Office/ Tahsildar's office for 30 days.
- 8. These stipulations would be enforced among others under the provisions of Water (Prevention and Control of Pollution) Act, 1974 the Air (Prevention and Control of Pollution) Act, 1981, the Environment (Protection) Act, 1986, the Public Liability (Insurance) Act, 1991 and EIA Notification 1994, including the amendments and rules made thereafter.
- 9. All other statutory clearances such as the approvals for storage of diesel from Chief Controller of Explosives, Fire Department, Civil Aviation Department, Forest Conservation Act, 1980 and Wildlife (Protection) Act, 1972 etc. shall be obtained, as applicable by project proponents from the respective competent authorities.
- The project proponent shall advertise in atleast two 10. local Newspaprs widely circulated in the region, one of which shall be in the vernacular language informing that the project has been accorded Environmental Clearance and copies of clearance letters are available with the Kerala State Pollution Control Board and may also be seen on the website of the Environment *Ministry* and **Forests** //www.envfor.nic.in. The advertisement should be made within 10 days from the date of receipt of the clearance letter and a copy of the same should be forwarded to the Regional Office of this Ministry at Bangalore.
- 11. Environmental Clearance is subject to final order of the Hon'ble Supreme Court of India in the matter of Goa Foundation vs. Union of India in Writ Petition (Civil) No.460 of 2004 as may be applicable to this project.
- 12. Any appeal against this clearance shall lie with the National Environment Appellate Authority, if preferred, within a period of 30 days as prescribed under Section 11 of the National Environment Appellate Act, 1997.

- 13 A copy of the clearance letter shall be sent by the proponent to concerned Panchayat, Zill Parisad/ Municipal Corporation, Urban Local Body and the Local NGO, if any, from whom suggestions/ representations, if any, were received while processing the proposal. The clearance letter shall also be put on the website of the company by the proponent.
- 14. The proponent shall upload the status of compliance of the stipulated EC conditions, including results of monitored data on their website and shall update the same periodically. It shall simultaneously be sent to the Regional Office of MoEF, the respective Zonal Office of CPCB and the SPCB.
- 15. The project proponent shall also submit six monthly reports on the status of compliance of the stipulated EC conditions including results of monitored data (both in hard copies as well as by e-mail) to the respective Regional Office of MoEF, the respective Zonal Office of CPCB and the SPCB.
- 16. The environmental statement for each financial year ending31st March in Form –V as is mandated to be submitted by the project proponent to the concerned State Pollution Control Board as prescribed under the Environment (Protection) Rules, 1986, as amended subsequently, shall also be put on the website of the Company along with the status of compliance of EC conditions and shall also be sent to the respective Regional Offices of MoEF by e-mail."
- 55. When the period for EC so granted expired, in the 10th Meeting of the EAC held on 24th October, 2016 it was recommended for extension of the validity of EC. The Ministry of Environment, Forest and Climate Change thereafter extended the validity of EC for 3 more years with effect from 05.07.2017. Though the applicant challenged that EC belatedly before the Tribunal in Appeal No.23 of 2017, by order dated 21st September, 2017 the application to condone the delay in filing the appeal was dismissed and consequently the appeal also was dismissed.

- The file shows that respondent No.5 submitted the point wise reply to the issues raised in the Minutes of the Public Hearing along with the replies, on 03.10.2009. Plans have also been appended by the respondent No.5, which show exactly the site where the proposed project has to come and it tallies with the site where the construction is now being carried out. It is clear that irrespective of the mentioning in the EC that the site lies 200 300 meters from the HTL line, the exact location of the area where the proposed construction was expected to come up was clear to the Authorities viz., the EAC, KCZMA and the MoEF &CC. True, there is a mistake in the EC granted to respondent No.5 as the site is described as between 200 300 meters from the HTL line, which could be corrected.
- The reply submitted by MoEF & CC as well as the report jointly submitted by the Scientist of the MoEF and the KCZMA supports the case of respondent No.1 & 5 that the reference about the distance from HTL in the EC was an error. The relevant portion of the reports reads as follows:
 - "3.5 With regard to the observation in EC about the location of the facilities beyond 200 m from HTL, the DGM, IOCL responded that it was not the proposal from their side. In fact only 10-20% of the land falls beyond 200 m which is not at all possible to develop the facilities in this piece of land. However, with respect to project description in EC, the DGM informed that company focussed on implementation of the conditions of the EC where there is no condition that the project should be located beyond 200 m from HTL. DGM has also pointed that both the KCZMA and Ministry have recorded that the "Facilities for receipt and storage of petroleum products and LPG can be permitted in CRZ area except CRZ I(i) area. The proposed area is devoid of classified CRZ I (i) area."

Again in Para 4.7 it is recorded as follows:

"The description in EC about the location of the facilities beyond 200 m from HTL appears to be an error since it is not proposed by IOCL, in their original application an also it is permissible activities within CRZ area. As per the para 2(i) of CRZ Notification, 1991, projects those directly related to water front or directly needing foreshore facilities are permissible. Further, as per Annexure III mentioned under para 2 (ii) of CRZ Notification 1991 facilities for receipt and storage of petroleum products and Liquefied Natural Gas and facilities for regasification of Liquefied Natural Gas, are permissible except in areas classified as CRZ-I (i) areas. The proposed area is devoid of classified CRZ I (i) area"

- 58. Therefore on the entire facts and circumstances of the case and the materials, I have no hesitation to hold that the construction being carried out by the respondent No.5 is in the land obtained by them on lease from CoPT. We also find that the EC was granted for the very same land irrespective of the discrepancy in the EC with regard to the distance from the HTL. The EC was sought for and granted for the very same land, which was obtained by respondent No.5 on lease from CoPT.
- 59. It is clear from the materials placed in the case that the sea coast in Pudu Vypeen is subject to high erosion and accretion. The google map for the year 2002 shows that sea was further towards the west of the lease hold land obtained by respondent No.5. When Google map of 2005-2006 is taken into consideration, it is seen that the sea had moved further towards the coast and consequently the distance of the lease hold land of respondent No.5 from the sea is reduced. Again changes are seen in the Google map of 2009, where also the land allotted under the lease is seen further to the west.

- 60. When the google maps of 2011 and 2014 15 are taken, it is seen that sea has moved towards the land side and consequently lease hold land is almost touching the sea. In some photographs made available, it is seen that even sea waves are touching the compound wall. It is on the basis, the learned counsel appearing for the applicants vehemently argued that the construction is on inter tidal zone and it cannot be permitted.
- 61. When it is clear that there is erosion on the sea coast and therefore change on the sea coast, based on such changes it cannot be found that the EC granted in 2010 is for a different site, when all other facts establish that it is for the same site.
- While hearing arguments it was found that the CZMP map of the disputed area produced by the KCZMA is not clear. The KCZMA was therefore directed to produce a clear map. When the arguments were heard finally on 31st October, 2017, learned counsel appearing for 3rd respondent sought further time to produce the map stating that it would take five more days to prepare the same. Therefore while reserving the case for judgement, the 3rd respondent was directed to produce the map within 5 days. The 3rd respondent thereafter produced the map. While going through said map, it is found that there is apparent difference between the map relied on by the 3rd respondent for recommending the clearance and accepted by respondent No.1 for granting the E.C and the map now produced. Therefore to grant opportunities to the parties, the matter was posted before the Bench on 14th November, 2017.
- 63. As per the map which was acted upon by the KCZMA and the MoEF to grant clearance, the land where the project is proposed to be

constructed lies further to the east of the HTL. While as per the map now produced, 3/4th of the area where the proposed project is to be constructed falls to the west of the HTL. That portion as per the said map, lies between HTL and the LTL, the intertidal zone. It was also noted that the map produced by the project proponent, which was acted upon by the KCZMA for recommending the clearance and the MoEF for granting the clearance is prepared by the National Centre for Earth Science Studies, Ministry of Earth Science, Government of India, Tiruvananthapuram. So also the map now produced by the respondent No.3 is also prepared by the same authority. In such circumstances, it was felt that necessary clarification is to be obtained before accepting this new map. First of all, the map produced by the 3rd respondent was not signed by Head of the Institute, much less by the person who prepared it. Secondly, the HTL varies in the two maps and thirdly the 3rd respondent has already relied upon the map which was prepared by NCESS for recommending the clearance. Therefore clarification was necessary as to how a different map could be produced by respondent No.3. The matter therefore had to be adjourned. By that time, Hon'ble Mr.P.S.Rao, the Expert Member, has completed his term. Therefore, the case thereafter has to be heard and disposed by the By GSR 1473 E dated 1st December, 2017 Judicial Member alone. exercising the power conferred under Rule 3(1) of the NGT (Practise and Procedure) Rules, 2011 was amended by the MoEF and the Chairperson by order dated 05.12.2017 constituted Single Member Bench including the NGT South Zone Bench empowering the Single Member Bench to deal with all the matters in accordance with laws in

view of the exceptional circumstances on account of shortage of Members.

- Or.K.K.Ramachandran, the Scientist and Head of NCESS appeared before the Tribunal and filed a verified report along with the KZMP map of the area signed by him, which exactly is the same map which was produced by respondent No.3 earlier and for which a clarification was sought. Along with the map, Surveyed SOI Topsheet of High Water Level of 1981-82 (in 1: 25000 scale) brought to 1: 4000 scale and the KZMP map of the area super imposed with satellite image were produced.
- The explanation offered by Dr.K.K.Ramachandran is that when NCESS prepared the plan, to enable the project proponent to apply for clearance, which was granted by the MoEF on the recommendation of the KCZMA, the facility or modern gadgets like GPS gadgets were not available and that map was prepared based on the SOI top sheet of 1: 25000 and therefore there is likelyhood of error in transferring the features mapped in the field.
- 66. It is also stated that maps prepared in 1: 4000 scale are more accurate than the previous one since modern tools are used in the field and computer based GIS Platform were employed for capturing and registering the features to compile into a map.
- 67. Dr.K.K.Ramachandran has also stated that location accuracy and content accuracy are two important measures to be considered while dealing with a map. Location accuracy of any hand drawn map is of the

order of 1/10th of the map scale, taking into account the cumulative error due to manual error, error crept-in during registration onto GIS Platform using collateral control points and error while digitizing the neat lines. All the three HTLs, brought into 1: 4000 scale for preparing the three maps produced by him, were composed on to the computer based GIS platform itself in 1: 4000 scale registered with respect to a satellite image of 0.5 m resolution with precision. GPS coordinates and hence as per the accuracy standard it is 1/20th of the scale which is to the extent of 2 meters.

- It has also been stated that Google maps from 2002 to 2013 68. were taken and it is found that HTL has progressively shifted seaward attaining a maximum seaward limit during 2009. It is also stated that it is based on these Google images also, HTL is fixed in the new map. Based on the field features it has been reported by Dr.K.K.Ramachandran as follows:
 - a) "It is pertinent to note that the sea wall constructed along the coast during 1980s is considerably inland on the eastern side of the present north-south trending road connecting to the project site of IOCL. This lends credence to the observation that the HTL was considerably inland during that time.
 - b) Google time –line images since 2002 show building of the coast with alternating ridges and runnels leading to beach formation considerably seaward. As per the 2009 image, it may be seen that the HTL has been mapped along the monsoonal berm crest as per the mapping practice of capturing the geomorphologic signature in situ at the time of mapping.
 - c) Since the map (1) and (2) were mapped much earlier, it is quite likely that the HTL during their respective mapping time might have been positioned indicatively at the locations shown in the map prepared.
 - d) Toposheets are authenticated map records published by the Survey of India; the accuracy of the same is indisputable for the scale for which it is mapped. Therefore, considering the smaller

- scalability of the map, location inaccuracy of \pm 25 meters can be attributed to the same.
- e) The HTL of the CZMP (1996) being based on the SoI maps combining with field investigations, it can be attributed with marginal error of 25 meters however, indicative of a HTL far inland from the present position.
- f) It is a well established fact that, post 1990s have witnessed accretion of the Vypin area (vernacular of Puthu Vype means newly formed) with considerable seaward shift of HTL which can be readily surmised from the time-line Google Earth Images."
- 69. The learned counsel Mrs.Rema Smirithi appearing for 3rd respondent argued that the new map produced depicts the HTL accurately, based on the relevant data using the modern gadges and facilities and in any case, there is no prohibition for the construction of the project by the 3rd respondent under CRZ Notification, 1991. It is also pointed out that this was the stand taken by the 3rd respondent even in the reply and it is also supported by the Joint Report submitted as directed by the Tribunal.
- 70. Mr.Yogeswaran, learned counsel appearing for the applicant submitted an Additional Written Submissions, after the application was once again posted for orders. The applicant has made the said submissions accepting the report submitted by KCZMA and the map produced contending that they also support the contentions originally addressed by the applicant.
- 71. Mr.Masilamani, the learned Senior Counsel appearing for the 5th respondent project proponent submitted that when HTL has already been fixed in the KCZMP prepared and approved, as provided under the CRZ Notification, 1991, the new CZMP map is not yet prepared and

approved by MoEF, till this day as provided under the CRZ Notification, 2011. It is also argued that the CZMP prepared in 1996, in accordance with CRZ Notification, 1991 can only be relied on and it was in accordance with the CZMP map, the EC was granted and hence the EC cannot be challenged based on the new map. The learned senior counsel also argued that once the HTL is fixed in the approved CZMP, that alone can be looked into and irrespective of the availability of the modern gadgets or facilities now available, the HTL once fixed cannot be changed, except in accordance with the provisions of the CRZ Notification, 2011.

- The learned senior counsel also pointed out that if the HTL is to be changed or varied in accordance with the new map made available by the 3rd respondent now and if such HTL is extended further towards the south, the existing refineries of Petronet and HPCL would also be affected, as they would also fall to the west of HTL and all those ECs cannot be revisited or reviewed.
- 73. The learned Senior Counsel also argued that the map prepared by the approved NCESS which was accepted and acted upon by KCZMP cannot be now challenged in this application as the remedy to challenge the EC in an appeal cannot be exercised in the application. The argument is that what could not be done directly, cannot be done indirectly by filing an application under Section 14 of the NGT Act when the remedy of an appeal is barred.
- 74. The learned senior counsel also argued that the clearance was granted based on 1996 KZMP and it cannot be revisited or reviewed in

this application. Learned Senior counsel also argued that in any case, even if the project site is in an inter tidal zone, there is no prohibition for proceeding with the project as admitted by MoEF and KCZMA and therefore the application is only to be dismissed.

- 75. The learned senior counsel also argued that if the project is not to be materialised, it would only create more environmental problem as at present the required LPG for Kerala is from MLIF, Mangalore and on an average 3000 MT of LPG per month is transported by hundreds of tanker lorries everyday travelling around 1000 kms and the air pollution caused by the vehicles apart from the safety of the general public is enormous. It is also argued that more than Rupees one Crore is now being spent which could be saved each day. The learned senior counsel argued that apart from possibility of accident which in fact occurred several times, the air pollution being caused can be avoided.
- 76. The CRZ Notification, 1991 provides under para 1 (i) that for the purpose of this Notification, the high tide line means the line on the land upto which the highest water line reaches during the spring tide and the high tide line shall be demarcated uniformly in all parts of the country by the demarcating authority or authorities so authorised by Central Government in accordance with general guidelines in this regard.
- 77. The CRZ Notification,1991 also provides for preparation of Coastal Zone Management Plans under Regulation 3(3) which reads as follows:
 - "3 (i) The Coastal States and Union Territory Administrations shall prepare, within a period of one year from the date of this Notification, Coastal Zone Management Plans identifying and

classifying the CRZ areas within their respective territories in accordance with the guidelines given in Annexure I and II of the Notification and obtain approval (with or without modifications) of the Central Government in the Ministry of Environment & Forests.

- (ii) Within the framework of such approved plans, all development and activities within the CRZ other than those covered in para 2 and para 3(2) above shall be regulated by the State Government, Union Territory Administration or the local authority as the case may be in accordance with the guidelines given in Annexures-I and II of the Notification; and
- (iii) In the interim period till the Coastal Zone Management Plans mentioned in para 3 (3) (i) above are prepared and approved, all developments and activities within the CRZ shall not violate the provisions of this Notification. State Governments and Union Territory Administrations shall ensure adherence to these regulations and violations, if any, shall be subject to the provisions of the Environment (Protection) Act, 1986."

CRZ Notification, 2011 under Regulation 5 (xii) reads:

"5 (xii) The CZMPs already approved under CRZ Notification, 1991 shall be valid for a period of twenty four months unless the aforesaid period is extended by MoEF by a specific notification subject to such terms and conditions as may be specified therein."

As no CZMP was prepared under CRZ Notification, 2011, the CZMP map prepared in 1996 under CRZ Notification, 1991 alone can be looked into for the purpose of this application.

78. Once the HTL is fixed under CZMP map prepared and approved under 1991 CRZ Notification, there cannot be any change in HTL either due to the availability of the modern gadgets or facilities or changes in the shoreline due to accretion or erosion till the CZMP is prepared under the CRZ Notification, 2011. Therefore, when the NCESS has already prepared a map depicting the HTL, which was accepted by the respondent No.3, the KCZMA and recommended for the clearance of the project under the CRZ Notification, 1991 and the MoEF approved the same by granting the clearance, the KCZMA cannot project a different HTL than what is shown in the map approved by the KCZMA,

for granting the clearance to respondent No.5. In such circumstances, it is not necessary to deal with that aspect any further.

- 79. The only question then remains is whether the project can legally be permitted in the land in question.
- 80. The arguments of the learned counsel appearing for the applicants is that as the land is in the intertidal zone, the project cannot be permitted.
- 81. As the EC was granted in 2010, before the enactment of CRZ N1otification, 2011, it is to be settled as provided in the CRZ Notification, 1991.
- 82. The prohibitory activities under the CRZ Notification, 1991, are provided in para 2 of the Notification. The proviso to para 2 (ii) was incorporated by S.O. 329 (E)dated 12th April, 2001. Para 2 reads as follows:

Prohibitory Activities:

The following activities are declared as prohibited within the Coastal Regulation Zone, namely;

i) setting up of new industries and expansion of existing industries, except (a) those directly related to water front or directly needing foreshore facilities; (b) Projects of Department of Atomic Energy and (c) non-polluting industries in the field of information technology and other service industries in the Coastal Regulation Zone of Special Economic Zones(SEZ).

(Provided that (a) facilities for generating power by non conventional energy sources and setting up of desalination plants may be permitted within the said zone in areas not classified as CRZ-I (i); and (b) construction of airstrips in the said zone in areas not classified as CRZ –I (i) may also be permitted in the Islands of Lakshadweep and Andaman &

Nicobar by Government of India in the Ministry of Environment & Forests.)

ii) manufacture or handling or storage or disposal of hazardous substances as specified in the Notifications of the Government of India in the Ministry of Environment and Forests No.S.O. 594 (E) dated 28th July, 1989, S.O. 966 (E) dated 27th November, 1989 and GSR 1037 (E) dated 5th December, 1989 (except transfer of hazardous substances from ships to ports, terminals and refineries and vice versa in the port areas)

(Provided that, facilities for receipt and storage of petroleum products and Liquefied Natural Gas as specified in Annexure III appended to this Notification and facilities for regasification of Liquefied Natural Gas, may be permitted within the said Zone in areas not classified as CRZ-I (I), subject to the implementation of safety regulations including guidelines issued by the Oil Industry Safety Directorate in the Government of India, Ministry of Petroleum and Natural Gas and guidelines issued by the Ministry of Environment and Forests and subject to further terms and conditions for implementation of ameliorative and restorative measures in relation to the environment as may be stipulated by the Government of India in the Ministry of Environment and Forests.)

(Provided that facilities for receipt and storage of fertilizers and raw materials required for manufacture of fertilizers like ammonia, phosphoric acid, sulphur, sulphuric acid, nitric acid, etc. shall be permitted within the said Zone, in areas not classified as Coastal Regulation Zone)

83. Annexure III of the Notification provides the list of petroleum products and chemicals permitted for storage in Coastal Regulation Zone except CRZ I (i) as provided in paragraph 2 of sub-paragraph (ii) reads as follows:

- i) Crude Oil
- ii) Liquefied Petroleum Gas
- iii) Motor Spirit
- iv) Kerosene
- v) Aviation Fuel
- vi) High Speed Diesel
- vii) Lubricating Oil
- viii) Butane
- ix) Propane
- x) Compressed Natural Gas
- xi) Naptha
- xii) Furnace Oil
- xiii) Low Sulpher Heavy Stock
- xiv) Liquefied Natural Gas
- xv) 65 fertilizers and raw materials for manufacture of fertilizers
- 84. Therefore, the project of respondent No.5 viz., the facilities for receipt and storage of petroleum products, liquefied natural gas is undoubtedly not a prohibitory activity. Instead it is a permissible activity, even if it falls on an inter tidal zone, provided it is not under CRZ I (i) area.
- 85. Under the CRZ Notification, 1991, classification of Coastal Regulation Zone is provided in paragraph 6. Category (CRZ I) reads as follows:
 - i) Areas that are ecologically sensitive and important, such as national parks/ marine parks, sanctuaries, reserve forests, wildlife habitats, mangroves, corals, coral reefs, areas close to breeding and spawning grounds of fish and other marine life, areas of outstanding natural beauty/historically/ heritage areas, areas rich in genetic diversity, areas likely to inundated due to rise in sea level consequent upon global warming and such other areas as may be declared by the Central Government or the concerned authorities at the State/Union Territory level from time to time.
 - ii) Area between Low Tide Line and the High Tide Line
- 86. Hence the area between the Low Tide Line and High Tide Line, which is the intertidal zone does not come under the category of CRZ I (i), unless the ingredients of CRZ I (i) is attracted. Nobody has a case that ingredients of CRZ I (i) is attracted so as to include the land under

- CRZ I (i). The contention of the applicant could have been accepted if the area falls under CRZ-I (i). As it is not the case and the land is in CRZ I (ii), it is definitely a permissible activity.
- 87. It is thus absolutely clear that the project area falls only on CRZ I

 (ii) and no part of it falls on CRZ (i). Therefore, the project activity is a

 permissible activity. Applicants are therefore not entitled to any relief

 on that ground.
- 88. The applicants have a case that due to the project the fishermen will lose access to the sea for fishing. The case of respondent No.5 that sufficient access is provided on the north of the project site to enter the sea, which is proved by the undisputed facts depicted in the maps produced, it can only be held that applicants are not entitled to challenge the project on that ground also.
- 89. But the facts of the case and the material produced establish that the sea coast of Pudu Vypeen, including the land covered under the Environment Clearance granted to respondent No.5, is subjected to high level of coastal erosion /accretion. The 5th respondent has already obtained a report from the Department of Ocean Engineering, Indian Institute of Technology, Madras for shore protection measures to prevent coastal erosion along on the coastal stretches of respondent No.5
- 90. The report shows that the coastal stretch of the land of respondent No.5, which lies to the north of Cochin Port has been experiencing adverse effects of sea intrusion over the last several years. The Experts had therefore advised that protective measures for shore

stabilisation is necessary. They had given the following recommendations:

"The series of groynes would stabilize the coast within few seasons by capturing the sediments in motion due to littoral movement in between the groynes. During the initial period of 2 to 3 years, the shore built up may not be significant and also, small erosion packets could occur on the down drift side of groynes. However, these effects will be only short lived.

The coastal protection scheme is presented in Plate 2. It is advised to commence the construction of all the groynes simultaneously in order to avoid probable local erosion that might be caused for groynes constructed in isolation. It is preferable to inform IITM team prior to the commencement of the construction. During the process of construction, the shoreline configuration need to be closely monitored by the Department authorities. Plate 3 represents the cross section of trunk portion and head portion of the groynes. Plate 4 depicts the top view of the groynes along with the longitudinal section. It is estimated to have a settlement of about 0.5 m during the construction of groynes due to poor soil conditions. Hence, proper care should be taken in the construction process. In case of excessive settlement, the crest elevation of the groyn may be limited to +3.2 m after settlement during the construction process.

It is to be noted that if proper shore protection works have not been carried out, the sea intrudes into the land slowly. The average intrusion rate is about 2 m to 5 m per annum. This rate might enhance or stabilise depending on the construction and dredging activities near the harbour mouth.

- 91. Mrs.Rema Smirithi, learned counsel appearing for the KCZMA who was earlier appearing for the State of Kerala also submitted that when the construction of the project was obstructed by the people and it developed into a law and order problem, the Hon'ble Chief Minister of Kerala intervened and a Committee was appointed by the Government to submit a report.
- 92. Though time was sought for making available the report, as the report was not called for at the instance of the Tribunal and the question to be settled in the application is only whether the construction is being carried out in the site for which the Environmental Clearance was

granted, such a report even if produced is not relevant. At the same time, it is pointed out by all the parties that the objection against the project raised by the people, who caused obstruction to the construction was based on the apprehension that the project may turn out to be injurious to their life and their properly. It is pertinent to note that no such case was projected by the applicants in the application. So also there was no case that Environmental Clearance was granted without considering the safety measures or that the safety measures provided are not sufficient. Hence, that aspect is not to be considered in this application.

93. Whatever it be taking note of the recommendations of the Experts in the report obtained by respondent No.5, while holding that the applicants are not entitled to the reliefs of injunction restraining the work of respondent No.5 or cancellation of the environmental clearance granted or demolition of the structure as sought for, to protect the environment and ecology, it is necessary to issue certain directions.

94. The application is disposed with the following directions:

Considering the large scale coastal erosion in the coastal stretch of Pudu Vypeen, including the land of respondent No.5, respondent No.5 shall carry out the recommendation of the Department of Ocean Engineering, Indian Institute of Technology, in their report dated

May, 2016 and produced by respondent No.5, immediately to avoid erosion of the coast in consultation with IITM. During the construction, the shore line configuration shall be closely monitored by the authorities including respondent No.3 KCZMA. Parties to bear their cost.

Miscellaneous Application Nos.264 of 2016 and 9 of 2017 :

In view of the judgement, all the Miscellaneous Applications are disposed, with no order as to cost.

Justice M.S. Nambiar Judicial Member