Minutes of the 79th Goa State Expert Appraisal Committee (Goa-SEAC) meeting held on 8th November 2016 at 02.30 p.m. in the conference hall of EIA Goa State Secretariat, Patto.

The Seventy-ninth meeting of the Goa-SEAC was held on 8th November 2016 in the conference room of EIA Goa State Secretariat conference room from 02.30 p.m. onwards under the Chairmanship of Prof. Antonio Jaime Afonso. The list of members who attended the meeting is at "*Annexure – 1*".

At the outset, Dr. Mohan Girap, Secretary, (*Goa-SEAC*) welcomed the members and appraised the PP about the purpose of the said meeting which was convened for the purpose of the site-inspection followed by *in-situ* project appraisal of the ongoing construction activity of 3rd Mandovi bridge. At the outset, the SEAC was briefed on the technical details of design execution and the present status of the project. The PP was represented by GSIDC officials along with their team of consultants.

The Secy., SEAC explained background of the inspection and appraisal in the light of NGT Order pronounced on 27th October 2016 in a matter of Goa Foundation V/s GSIDC & Ors., (*i.e. Execution Application no. 48/2016 in Application no. 85/15*) and sought EIA-specific presentation from the PP. Given the fact that substantial construction work has already taken place on ground, the SEAC sought to lay emphasis on the current environmental scenario at the construction site and the requisite mitigation and management interventions put in place by the PP. The PP was requested to highlight the environmental impact on the marine component in particular. The PP was also informed that there have been representations against the CRZ permission granted to the said project alleging violations and procedural lapses and that the same be addressed point-wise.

The SEAC members raised the following points –

1. It was sought to be known from the PP that while conventionally pile caps are circular or elliptical in shape, why in the present case a rectangular design was preferred, and if the same was an impediment to normal hydrodynamics at the site.

   PP's engineers in a detailed technical explanation substantiated with drawings explained that the present design ensures laminar flow pattern of flowing estuarine waters devoid of

turbulent flow around the pile-caps. Further, the PP also submitted that the present design commensurate with CRZ spatial restrictions.

2. The SEAC conveyed to the PP, apprehensions on prograding of sediments into the water at certain points along the river bank on Porvorim side, adding to the sediment load/turbidity of water and that same could impact productivity of waters. However the PP contended that there was very little earth moving activity at site and that pre-casting was done at an offsite campus around 25Kms from the existing site, however the PP does admit that during the foundation stage, the excavated river bed sediments were stored at a 'dedicated site' away from the project site. As such there were no terrigenous inputs into the estuary, consequent of the constructions. However the SEAC recommended that the PP deploy the personnel to survey the estuarine banks in the vicinity of project site and identify such eroded stretches and put in place requisite banks sediment stabilizing measures.

3. The SEAC also mandated periodic and regular examinations of exposed concrete structures for fouling encrustations and to take the necessary antifouling measures to avoid weakening of the pile structures.

4. SEAC expressed its displeasure regarding scant inclusion of database of Marine Biota in the submitted EIA report, and as such has mandated that quarterly pelagic and benthic sampling be done at strategic locations in consultations with the Benthic Biology division of NIO, to assess diversity and density of Planktons and Benthic biota respectively; until completion of the project and for a period of at least 1 year thereafter. The SEAC also advised the PP to revise the listing of marine biota provided in Annexure –III A-F (Page No. 75-77) in EIA report.

5. In response to the SEAC's query on presence of labour camps on site if any, the PP replied that no such facility exists at the construction site, and the same was confirmed during site visit by SEAC. Similarly the SEAC was also informed that the waste lubrication oil is appropriately dispensed and recycled.

6. The SEAC appraised design alignments vis-à-vis conservation of Mangroves patches along the Merces strech. It was informed that though the PP has permission to cut 247 nos. of Mangrove trees, no felling have been done to uphold the conservation ethos.

7. The SEAC expressed concerns on traffic bottlenecks on the existing bridges, consequent of the construction of 3rd Mandovi Bridge and as such sought appropriate traffic density regulation until completion of the project. The PP in response agreed to approach appropriate state agencies for diversion, as also deploy traffic marshals during peak hours.

8. During the SEAC visit to the Betim site of the proposed bridge it was noted that the existing wind screen barriers do not effectively contain and control fugitive emissions. The PP was instructed to increase the frequency of water sprinkling at the site for dust suppression.

9. The SEAC also instructed the PP to explore the possibility of increasing the vegetation cover on the bank side of estuary towards the Patto side.

10. During the appraisal deliberations, the PP also tabled a report prepared by CSIR-NIO, Dona Paula on '**Study on influence of new bridge piers on bed morphology and river banks of Mandovi River'**. The SEAC noted that the despite the indemnification clause in the said report, the findings suggest that the new bridge piers are unlikely to significantly impact the local estuarine hydrodynamics and bed morphology as well as the river banks. The said report is based on simulation and modeling and is prepared by NIO, a CSIR institute of repute in the country.

11. SEAC is of a considered opinion that the reference to the debris remnants of the earlier collapsed bridge is of very little consequence if any from Environment Impact point of view of present bridge and in present times, as the said debris has been lying in place for 3 decades. The dynamism of estuarine ecology and resilience of Biota overrides such impacts in prospective time.

The SEAC in its post site visit/ technical presentation/ deliberations has considered the contemporary status of the construction and its present environmental impact/fallout. Wherein retrospective impact appraisal is not possible at this stage, the SEAC has considered the present scenario and apprehensions arising from various stakeholders. SEAC forwards above observations to the SEIAA and recommended the proposal accordingly.

However, due to time constraint other agenda items could not be taken up for discussion in the meeting.

The meeting ended with vote of thanks to the Chair.

Dr. Manoj Borkar _____*Sd./-*_____

Mrs. A.A.B. Barreto _____ *Sd./-*_____

Dr. P. K. John _____ *Sd./-*_____

Dr. Jagannath Hirkude _____ *Sd./-*_____

Dr. Purnanand Savoikar _____ *Sd./-*_____

Sd/-
Mr. Antonio Jaime C. Afonso
Chairman, Goa-SEAC

Sd/-
Dr. Mohan Girap
Secretary, Goa-SEAC

Place: Patto, Panaji
Date: November 2016.

ANNEXURE – 1

List of members present during the 79th Goa-SEAC meeting held on 8th November 2016

1. Prof. Antonio Jaime C. Afonso - ***Chairman***
2. Dr. Manoj R. Borkar - *Member*
3. Mrs. A. A. B. Barreto - *Member*
4. Dr. P. K. John - *Member*
5. Dr. Jagannath Hirkude - *Member*
6. Dr. Purnanand Savoikar - *Member*
7. Dr. Mohan Girap - *Secretary*