

Minutes of the 24th Goa State Environment Impact Assessment Authority (Goa-SEIAA) held on 15th September 2015 at 03.30 p.m. in the Conference room of the Goa State Pollution Control Board (GSPCB), Patto.

The twenty-fourth meeting of the Goa-SEIAA (*hereinafter referred as 'Authority'*) was held on 15th September 2015 at 03.30 p.m. in the Conference room of the Goa-PCB under the Chairmanship of Dr. Pramod Pathak. The list of members is annexed (*refer Annexure – 1*).

At the outset, Chairman welcomed the Members and informed about the purpose of convening the meeting after a gap of about three months to discuss and deliberate on the proposal received from the **North Goa District Collectorate (NGDC) and South Goa District Collectorate (SGDC)** seeking prior environmental clearance (EC) for manual sand extraction proposals within the designated clusters / stretches of riverine / estuarine regions in North as well as South Goa districts respectively. These proposals were appraised by the Goa State Expert Appraisal Committee (*Goa-SEAC – hereinafter referred as "Committee"*). During the process of project appraisal, the Committee had perused – (i) **Office Memorandum (O.M.) no. J-13012/12/2013-IA-II (I) dated. 24th December 2013** notified/published by the Ministry of Environment, Forests and Climate Change (MoEF & CC) and noted that the proposal is categorized under Category-B-2 (*i.e. to be appraised based on Form-1, pre-feasibility report with relevant attachments*) and (ii) **Office Memorandum (O.M.) no. 11-83/2005/-IA-III (Vol.III) dated. 8th November 2011** notified/published by the Ministry of Environment & Forests (MoEF) on the subject matter of removal of sand in the Coastal Regulation Zone area of rivers / estuaries by manual methods by local / traditional communities. In addition, (i) EIA Notification ,2006 as amended till date (ii) **The Goa Minor Mineral Concession (Amendment) Rules, 2012** published by the State Government vide Gazette Notification (Extraordinary) series 1, no. 24 dated 17th September 2012 and (iii) **'Directions' /'Order' of the National Green Tribunal (NGT), Principal Bench, New Delhi pronounced on 5th August 2013** passed in a matter of Original Application no. 171 of 2013 (*National Green Tribunal Bar Association V/s Ministry of Environment & Forests & Ors.*), **Judgement dated 13/01/2015 passed by the Hon'ble National Green Tribunal (NGT), Principal Bench, New Delhi in the Original Application (OA) No. 123 of 2014** (in the matter of Himmat Singh Shekhawat V/s State of Rajasthan & ors) and **Judgement dated 29/05/2014 passed by the Hon'ble National Green Tribunal (NGT) (Western Zone) Bench, Pune in the Application No. 34(THC)/2013(WZ)** in the matter of *AWAAZ Foundation V/s State of Maharashtra & ors* (iv) a Model Document on **'Impacts and Methodology of systematic and Scientific mining of the river-bed material'** published by the Geological Survey of India (GSI) and

(v) **‘Order’ dated 27/02/2012 of Hon’ble Supreme Court in I.A No. 12-13 of 2011 in SLP (C) No.19628-19629 in the matter of Deepak Kumar etc V/s State of Haryana and ors** were referred by the authority.

South Goa District Collector made the project-specific presentation on 10th September 2015 and NGDC on 14th September 2015 before the Committee in the presence of officials from the O/o Directorate of Mines and Geology (DMG), Captain of Ports (CoP), Water Resources Department (WRD), Department of Fisheries and others.

Prior and during the technical presentations, the Committee sought to examine in details all the available documents in substantiation of the baseline environmental character of the proposed sites, provided by the PP for the purpose of environmental impact appraisal of the proposed activity. The Committee noted a few, though pertinent data-gaps of appraisal relevance such as (i) sand budget, (ii) sand accretion/erosion dynamics, (iii) areas of biodiversity significance and existing clam-beds if any, (iv) water-table level and its hydrochemistry in the settlement areas located within the close vicinity of proposed leases; and the same were communicated to the PP for early mandatory compliance and verification by the stakeholder departments concerned during the post-EC monitoring phase. In addition, the Committee also suggested that NGDC and SGDC should ensure mandatory compliance to the General as well as Specific conditions by the prospective lease holders (*i.e. sand extractors*) and monitor environmental impact vis-a-vis issue of excessive sand-extraction activities through already established institutional mechanism by the State Government vide **‘Order’ no. 44/1/Policy/80-Mines/Vol.VI/Part/2198 dated. 20/11/2012.**

The Authority, on detailed perusal and in agreement with the Committee’s recommendations and after referring to draft **‘Sustainable Sand Mining – Management Guidelines’** published by the Ministry of Environment, Forests and Climate Change (MoEF & CC) in September 2015, has decided to grant prior environmental clearance (EC), as mandated in the EIA Notification, 2006 (*as amended till date*) to fourteen (14 nos.) stretches / clusters identified / proposed by the NGDC (*refer Annexure - 3*) and to 10 stretches / clusters identified / proposed by the SGDC (*refer Annexure – 4(A) and (B)*). Further, Authority has rejected the following two stretches / clusters proposed / identified by SGDC for the purpose of sand/rubble extraction from the riverine portion.

- (i) **Khandepar river at Piliem in Dharbandora Taluka** (*refer sr. no. 3 in Annexure-4A*) on account of its immediate proximity to the laterite-quarry which may cause river-bank instability on account of stone removal from terrestrial end and proposed in-stream sand/gravel removal from river-bed and
- (ii) **Khushavati / Gulathi river at Sirvoi in Quepem Taluka** (*refer sr. no.8 in Annexure-4A*) on account of site inaccessibility from the nearest road to enable desired transportation of the extracted material.

Further, the Authority has decided to stipulate the conditions (*i.e. General and Specific*), for compliance to be mandated by both the District Collectors (*i.e. NGDC and SGDC*) not only during the sand-extraction activities but also during pre and post issuance of leases to prospective sand extractors. The details of these conditions are as under:-

A. General conditions

1. The Project Proponent, while granting a lease for ‘sand/pebble extraction’, should ensure that sand/pebble extraction is strictly restricted within the prescribed lease boundary / cluster only. Accordingly, lease area should be properly surveyed and mapped with the help of GPS to assign geo-coordinates and accordingly display the same appropriately on the landward side of the proposed cluster / lease so as to avoid unwarranted / unscientific extraction.
2. The PP should erect a ‘Display Board’ on both river banks along either side of the proposed lease/cluster. This board should display name and contact details of nodal person concerned to enable timely redressal of sand-extraction related complaints from general public.
3. The lease holder should adhere to traditional method of manual extraction using wooden or FRP-boat without the use of any mechanical equipments, excavator, shovel, heavy-machinery, pump, dredges, etc.
4. The lease holder should ensure proper access to enable transportation of extracted material from the lease to desired stacking at the site or elsewhere. Transportation of extracted material shall be done by covering the trucks with tarpaulin so that no spillage of material / dust takes place en route.
5. The lessee shall not create any impediments at the site of any extraction / stacking by way of erection of barricades, to enable any competent State Authority to inspect such sites for the purpose of monitoring.
6. Number of vessels deployed in sand extraction / transport in the vicinity of an Island/ Protected Area, if any, be regulated to avoid disturbance to the resident and migratory bird fauna.
7. Number of vessels deployed in sand extraction / transport in the vicinity of river banks be regulated to avoid damage to coconut/palm fringes, as and where they exist in the riparian habitat along the river banks.
8. Safety gadgets and health-care facilities should be provided to workers engaged in the extraction, on and off-board vis-a-vis maintenance of hygiene surrounding the proposed lease boundary along the banks of river/estuary.
9. It shall be ensured that restoration of riparian and in-stream habitats, restoration of river-geometry causing degradation on upstream and downstream be taken care of by the lease holder at his own cost. Various lease holders operating in a given cluster / stretch may evolve appropriate mechanism for mitigation of likely impact caused by sand extraction.
10. Due care be taken to avoid discharge of fuel / engine oil either in the river water or banks sediments during any phase of sand extraction / transportation. Any accidental discharge of a significant scale must be immediately reported to the concerned State Agency for remediation.

11. Any change (*i.e. modification / expansion / alteration*) in proposed clusters / traditional method of extraction / extraction capacity / scope of working / environment management plan (EMP) shall require re-appraisal by this Authority as per the provisions of the EIA Notification, 2006 (*as amended*).
12. Considering the probability of ecological impacts due to sand/gravel extraction of riverine ecosystem the Authority mandates that the Goa State Biodiversity Board (GSBB) periodically monitors riverine and riparian biodiversity on a sampling mode.
13. This prior Environmental Clearance (EC) is valid for a period of five years (05), or lease validity whichever is later.
14. This environmental clearance (EC) does not absolve the PP / lease holder to obtain other statutory and administrative clearances / NoCs/ Permissions, as applicable, from other statutory and administrative authorities concerned.
15. PP shall obtain Consent to Establish (NoC) before starting the activity and Consent to Operate after complying to the conditions imposed for adherence before operationalization of the lease from the **Goa State Pollution Control Board (GSPCB)** under provisions of Water and Air Acts, as applicable.
16. An appropriate mechanism be evolved to ensure an assured back-flow of share of revenue generated, to a revenue village; in whose jurisdiction sand extraction is carried out.

B. Specific Conditions

Both the District Collectors should ensure that –

1. **“Patrolling-cum-Flying Squad” – a complaint/monitoring mechanism** comprising of senior-level representatives from stakeholder departments and authorities for effective implementation and monitoring of stipulated ‘General’ and ‘Specific’ conditions vis-a-vis redressal of complaints, if any, be constituted preferably at district-level.
2. **Capping of sand-extraction** (*i.e. permissible quantity of sand extraction per year per cluster/stretch*) from these designated stretches / clusters be established in technical consultation with the Directorate of Mines and Geology (DMG), being a Nodal Department dealing with mineral resources.
3. There shall be voluntary moratorium on worked-out leases/stretches for a desired period in consultation with the Directorate of Mines and Geology (DMG) for effective sand replenishment of the extracted mineral.
4. The depth of the sand-excavation within the designated cluster in estuarine regions should be restricted to a maximum depth of 3 mts. While, for dry river-beds, the depth of excavation should not exceed 2 mts.
5. The lease holder shall undertake adequate safeguard measures during sand extraction and such activities should be limited to timings between **06.00 a.m. to 06.00 p.m. only**. No sand-extraction and allied activities be allowed during monsoon season (**1st June to 30th September**).
6. No removal/extraction be allowed/carried out within (a) the buffer zone of 25 mts. (at-least) from both the banks within the proposed riverine / estuarine cluster to control

and avoid river-bank erosion, (b) safety zone (*i.e.* 300 mts. upstream and downstream) of any bridge or any cross-drainage structures, (c) No sand-extraction related activities be allowed within the peripheral limits of 50 mts. surrounding the island area within the estuarine region.

7. It shall be ensured that sand-extraction does not disturb the turbidity, velocity and flow-pattern of the river/estuary to the extent possible. Further, sand-extraction be avoided along the concave-portion of the meandering river/estuary to prevent bank erosion.
8. PP should ensure that riverine/estuarine bottom is always higher than the bed-depth of nearby water bodies (*i.e.* well / lake / pond, etc.,) so that the river/estuary is always a recharge source.

Further, the Authority mandates that above prescriptions (*refer A(1 to 12) & (15 to 16) and B(4 to 8) above*) be mandatorily transferred and be reflected in the “**Agreement**” between the State Nodal Agency (*i.e.* the District Collectorate concerned) and the prospective Leasee and be legally binding on the latter.

Other Agenda items, could not be taken up for consideration and Authority decided to defer the same to be taken-up, during the next meeting to be scheduled shortly.

Meeting concluded with a vote of thanks to the chair.

Sd./-
Mr. Vivekanand L. Sawkar
Member, Goa-SEIAA

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

Sd./-
Mr. Srinet N. Kothwale
Member Secretary, Goa-SEIAA

Sd./-
Dr. Pramod V. Pathak
Chairman, Goa-SEIAA

Place: Patto, Panaji

Date: September 2015.

ANNEXURE – 1

List of Members who attended the 24th Goa-SEIAA meeting held on 15th September 2015

- | | |
|-----------------------------|-----------------------------|
| 1. Dr. Pramod P. Pathak | Chairman, Goa-SEIAA |
| 2. Mr. Vivekanand L. Sawkar | Member, Goa-SEIAA |
| 3. Mr. Srinet N. Kothwale | Member Secretary, Goa-SEIAA |
| 4. Dr. Mohan Girap | Secretary, Goa-SEAC |

ANNEXURE – 3

Proposed site-specific locations for traditional method of manual sand extraction (*estuarine clusters / stretches*) from North Goa

Sr. no	Taluka (North/ South)	Cluster	Area in sq.mts.	Estimated Total minable reserve (M³)	Latitude	Longitude	S.O.I Toposheet No.(s)on 1:25,000 scale	River
1	Bicholim / Tiswadi	MC-1	2,00,000	1,20,00,00	15 ⁰ 32' 39.99"	73 ⁰ 56' 30.14"	48E/14/6	Mandovi
2	Bicholim / Tiswadi	MC-2	2,00,000	1,20,00,00	15 ⁰ 32' 42.82"	73 ⁰ 57' 22.93"	48E/14/6	Mandovi
3	Bicholim / Ponda	MC-3	2,00,000	1,20,00,00	15 ⁰ 32' 6.77"	73 ⁰ 57' 59.17"	48E/14/6	Mandovi
4	Bicholim / Ponda	MC-4	2,00,000	1,20,00,00	15 ⁰ 31'27.19"	73 ⁰ 58' 27.00"	48E/14/6	Mandovi
5	Bicholim / Ponda	MC-5	2,00,000	1,20,00,00	15 ⁰ 31' 6.90"	73 ⁰ 59'18.86"	48E/14/6	Mandovi
6	Bicholim / Ponda	MC-6	2,00,000	1,20,00,00	15 ⁰ 30' 5.09"	73 ⁰ 59' 59.45"	48E/14/6	Mandovi
7	Bicholim / Ponda	MC-7	2,00,000	1,20,00,00	15 ⁰ 29' 47.95"	74 ⁰ 01' 0.50"	48I/3/1	Mandovi
8	Bicholim / Ponda	MC-8	2,00,000	1,20,00,00	15 ⁰ 28' 47.60"	74 ⁰ 01' 33.76"	48I/3/1	Mandovi
9	Pernem	TC-1	2,00,000	1,20,00,00	15 ⁰ 44' 8.41"	73 ⁰ 44'41.74"	48E/14/1	Tiracol
10	Pernem	TC-2	2,00,000	1,20,00,00	15 ⁰ 43' 32.12"	73 ⁰ 47' 7.79"	48E/14/1	Tiracol
11	Bardez / Pernem	CC-1	2,00,000	1,20,00,00	15 ⁰ 39' 9.77"	73 ⁰ 47' 0.50"	48E/14/2	Chapora
12	Bardez / Pernem	CC-2	2,00,000	1,20,00,00	15 ⁰ 39' 5.45"	73 ⁰ 49'48.52"	48E/14/2	Chapora
13	Bardez / Pernem	CC-3	2,00,000	1,20,00,00	15 ⁰ 39' 10.98"	73 ⁰ 50' 26.92"	48E/14/2	Chapora
14	Bardez / Pernem	CC-4	2,00,000	1,20,00,00	15 ⁰ 40' 48.64"	73 ⁰ 52'30.51"	48/E/14/4	Chapora
Total no of clusters 14		Total lease area - 28,00, 000 sq.mts.		Total Extraction Capacity per annum 1,68,00,000 M³				

ANNEXURE – 4

A. Proposed site-specific locations for traditional method of manual sand extraction (*riverine stretches*) from South Goa

Sr. No.	Taluka	Village	Survey nos. (along either banks of the river)	Area in sq.mts.	Estimated Total minable reserve (per annum)	Latitude (from)	Longitude (to)	S. O. I. Toposheet no. (s) on 1:25,000 scale	River
1	Dharbandora	Collem	21	8202.88	10,000 m ³	15 20'46.11"	74 14'07.10"	48I/3/SE	Dudhsagar
2	Dharbandora	Sigao	70 & 97	5598.17	10,000 m ³	15 20'16.69"	74 13'17.84"	48I/3/SE	Dudhsagar
3	Dharbandora	Piliem	32 & 40	7584.20	10,000 m³	15 23'32.72"	74 04'59.63"	48I/3/N W	Khandepar
4	Dharbandora	Aglote	56	8735.46	10,000 m ³	15 24'50.50"	74 11'16.36"	48I/3/NE	Ragada
5	Sanguem	Rivona	20 & 14	4668.74	10,000 m ³	15 10'50.89"	74 06'13.98"	48I/4/N W	Kushavati
6	Sanguem	Uguem	63	5737.76	10,000 m ³	15 13'33.70"	74 12'22.82"	48I/4/NE	Ugvem
7	Sanguem	Sanguem	81	6205.98	10,000 m ³	15 13'35.00"	74 09'49.17"	48I/4/NE	Sangem
8	Quepem	Srivoi	102	3224.84	10,000 m³	15 11'32.90"	74 05'41.93"	48I/4/N W	Kushavati / Gulati
Total clusters – 08 nos.		Total Lease – 49,958.03 sq.mts.			Total extraction capacity – 80,000 m³ per annum				

B. Proposed site-specific locations for traditional method of manual sand extraction (*estuarine stretches*) from South Goa

Sr. No.	Taluka	Village	Survey no. (along either banks of the river)	Area in sq.mts.	Estimated Total minable reserve (per annum)	Latitude (from)	Longitude (to)	S. O. I. Toposheet no. on 1:25,000 scale	River
1.	Quepem	Xelvona	62	10341.64	10,000 m ³	15 16'33.20"	74 04'44.99"	48I/3/SW	Zuari
2.	Salcete	Taulim	244	2861.53	10,000 m ³	15 13'54.04"	73 57'17.20"	48E/16/NE	Sal
3.	Salcete	Macazana	60	4387.22	10,000 m ³	15 17'44.16"	74 03'01.29"	48I/3/SW	Zuari
4.	Salcete	Loutulim	497	10933.15	10,000 m ³	15 20'49.84"	74 00'18.00"	48I/3/SW	Zuari
Total clusters – 04 nos.			Total Lease - 28, 523.54 sq.mts.		Total extraction capacity – 40,000 m³ per annum				