

SUBMITTED UNDER PROTEST

**SÁVIO J F CORREIA**

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(Tel: 9822161000 / 2531111)

7/28

July 11, 2016.

To:  
The Member Secretary,  
Goa State Pollution Control Board,  
Dempo Towers, EDC Patto Plaza,  
Panaji Goa 403 001.

Hand delivered during Environmental Public Hearing on 11<sup>th</sup> July 2016  
at Jai Kissan Club Hall, Near Airway School, Zuarinagar Goa.

Sub: Proposed 30 TPH Fertilizer Blending Unit for Customized  
NPK Production . . . at Zuarinagar Goa by Zuari Agro Chemicals  
(ZACL); Synopsis of submissions made at public hearing.

Sir,

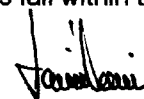
I am a resident of Mangor Hill, Vasco da Gama Goa, and am actively involved in environmental protection causes in/around Mormugao Taluka in particular and Goa in general, and happen to be Member of Goa State Environment Protection Council (GEPC) and Director of Goa Forest Development Corporation Ltd. (GFDC). I thank you for the opportunity given to put forth my concerns, views and objections to the above captioned project under scrutiny at the Environmental Public Hearing (EPH) today. I am submitting herewith a brief synopsis of my submissions for your kind consideration and necessary action.

I reside within ~~5~~ km of the project site. I have for reference soft copies of: (1) Public Hearing Notice in 'O Herald' (2) Executive Summary containing salient features of the project in English (3) Draft EIA Report and, (4) Form-I submitted by project proponent; downloaded from your website <http://goaspcb.gov.in/upcoming> (last visited on July 5, 2016).

**1. The project site falls under CRZ area. Setting up of new industries and expansion of existing industries is prohibited within CRZ.**

The project site is situated in property bearing survey nos. 157/1 and 163/1<sup>1</sup> of village Sancoale of Mormugao Taluka. Both these properties fall within the hazard line

<sup>1</sup> As per Map 2-4: Project Site Layout at page 29 of Draft EIA Report.



and 500 mts from HTL on landward side of the Arabian Sea. The fact of the said two survey numbers falling within CRZ is confirmed by Goa Coastal Zone Management Authority (GCZMA) on its website<sup>2</sup>.

Ironically, the fact that the project site lies within the 200 – 500 metre line is admitted by the project proponent itself at para 4.4 at page 27 of Appendix I Form I under “Pre-Feasibility Report”. However, the project proponent has fraudulently misrepresented this material fact at item no. 24 of Appendix I Form I at page 2 of 12. To the query “*Whether the proposal involves approval/clearance under C.R.Z Notification 2011*”; the answer given is “No”.

I submit that this fraud and misrepresentation goes to the root of the matter, since the CRZ Notification 2011<sup>3</sup> expressly prohibits *setting up of new industries and expansion of existing industries* within CRZ. Kindly see para 3 (i) of said notification. The activity proposed by the project proponent does not come within the ambit of any of the exceptions stipulated in the notification.

I submit that since construction of the proposed project is prohibited under CRZ Notification 2011, all further processes and proceedings must be dropped forthwith on this count alone.

**2. Eco-sensitive zones coming within study area have not been considered in Draft EIA Report.**

Draft EIA Report concludes at para 11.7.1 titled ‘Conclusion’ that “... *Based on the baseline studies as per TOR, there are no Protected Areas, Critically polluted areas, Eco-sensitive areas, Interstate boundaries and international boundaries located in 10km of study area*”.

At page 82 of Draft EIA Report it is stated: “*It was observed that: ... No reserve forest comes within study area.*” This observation is repeated again at page 85 and in Table 3-8.

I submit that the statement is grossly incorrect and a misrepresentation of material fact. Eco-sensitive areas such as private forests, wetlands and bio-diversity heritage sites within the study area have been deliberately ignored in the study, as will be seen below.

**Private Forests.**

There are large tracts of areas in private properties within 10 km radius of the project site that have been identified as “forests” by the Forest Department Goa under the

<sup>2</sup> Available at <http://www.dstegoa.gov.in/Open-Plots-CRZ.htm> (last visited on July 8, 2016).

<sup>3</sup> Published in Gazette of India, Extraordinary, Part-II, Section 3, Sub-Section (ii) dated 6<sup>th</sup> January, 2011.

Forest Conservation Act and in pursuance to directions of Hon'ble Supreme Court of India in the *Forest Conservation Case* as well as of National Green Tribunal, Western Zone Bench. These forest areas, popularly known as "*Private Forests*", have been identified by the Sawant Committee, Karapurkar Committee and South Goa Forest Division Committee.

Information on these eco-sensitive areas is available in the public domain. I am tabling hereinbelow the details of such private forests within the 10 km radius study area<sup>4</sup>:

Sr. no.	Taluka	Village	Survey numbers
01	Mormugao	Sancoale	69 (p), 54 (p), 13, 14, 21, 25, 26, 31, 33, 34, 44, 45, 46, 49, 50, 55, 56, 64, 67, 69/1, 71, 72, 75, 76/7, 77, 78, 79, 80, 91, 92, 94, 95, 96, 104, 105, 106, 110, 113, 114, 124, 125, 194, 200, 203, 205, 206, 210, 214, 216, 217, 218, 219, 224, 225, 226, 227, 237, 240, 243, 244, 249, 250, 255, 258, 259, 277, 278, 283, 284, 285/6.
		Dabolim	9, 10, 11, 12, 13, 14, 17, 21, 24, 25, 28, 29, 37, 38, 42, 42/7-A, 42/7-C, 42/7-C-1, 43, 43/1-A, 43/1, 43/3, 44.
		Issorcim	2, 3, 8, 11, 12, 13, 14, 17.
		Consua	142, 149, 152, 155, 163, 167, 169, 170, 179, 184, 188, 189, 190, 193, 194, 195, 203, 204, 205.
		Quelossim	3, 5, 8, 9, 10, 13, 14, 15, 17, 18, 19, 20, 21, 23, 24, 30, 31, 40, 41, 57, 58, 59, 77, 105, 106, 108, 109, 110, 111, 112, 113, 126, 127, 132, 133, 134, 136, 140, 213, 214, 215, 218.
		Cortalim	14, 16, 17, 18, 20, 21, 22, 25, 26, 32, 33, 34, 101, 102, 105, 120, 121, 122, 126, 127, 129, 218, 219, 221, 222, 223, 230, 231, 233, 234, 267, 268, 269, 270.
		Chicolna	12, 13, 14, 17, 21, 22, 23, 25.

<sup>4</sup> Source: Reply to Unstarred LAQ no. 057 answered on 14.01.2016 available at <https://eassemblygoa.in/PublicSearch.xhtml> (last visited on July 9, 2016).

Wetlands are vital part of the hydrological cycle, highly productive eco-systems that support exceptionally large bio-diversity and are part of our cultural heritage. There are several wetlands and natural water bodies like lakes etc located within the study area. These include Carambolim Lake (in Tiswadi Taluka), Ambular Lake (in Salcete Taluka).

Wetlands:

04	Ponda	Madkai	48/10
03	Tiswadi	Azossim	5, 6, 8, 61, 63, 280, 285, 281, 290, 294, 292, 288, 286, 284, 263, 281, 282, 283, & 287
02	Salcete	Verna	46, 47, 51, 52, 53, 59, 61, 63, 64, 65, 70, 71, 80, 81, 84, 85, 86, 88, 97, 98, 99, 100, 101, 103, 105, 108, 109, 110, 113, 114, 126, 145, 147, 148, 149, 151, 152, 153, 159, 161, 162, 166, 169, 171, 174, 175, 177, 178, 182, 183, 184, 187, 188, 193, 195, 196, 197, 198, 199, 200, 201, 202, 203, 204, 205, 206, 207, 208, 209, 210, 211, 212, 213
		Nagoa	12, 13, 14, 15, 16, 17, 18, 19, 21, 23, 34, 37, 38, 39, 40, 42, 43, 44, 45 & 46
		Loutolim	22 to 31, 36, 37, 40 to 46, 53, 55, 56, 57, 60, 61, 62, 63, 65, 66, 67, 68, 69, 74, 75, 76, 77, 78, 79, 80, 81, 82, 83, 84, 106, 107, 109, 118, 119, 124, 125, 136, 139, 140, 143, 144, 145, 146, 148, 151, 152, 153, 154, 158, 165, 166, 167, 168, 169, 184, 185, 186, 187, 188, 189, 190, 192, 194, 200, 206, 210, 211, 212, 213, 214, 221, 222, 223, 224, 226, 227, 228, 249, 250, 253, 254, 255, 256, 269, 270, 273, 275, 277, 278, 286, 287, 288, 289, 290, 294, 296, 297, 298, 300, 301, 303, 304, 305, 311, 312, 314, 315, 316, 317, 322, 323, 328, 329, 330, 331, 332, 333, 334

Taluka) and Maimollem Lake<sup>5</sup> (in Mormugao Taluka). There is not a whisper about these nature's bounty and gift to mankind in the Draft EIA Report, which I submit is a serious flaw.

#### Biodiversity Heritage Sites.

The Goa State Biodiversity Board has recently decided to declare Sancoale (including Chicalim) bay as a "biodiversity heritage site" and further studies are in progress.<sup>6</sup> This area is located within 2.50 kms north of the project site. A NIO study has found the Chicalim bay rich in marine biodiversity harboring more than 200 faunal and 34 phytoplankton species in addition to mangrove and macrophytes. Natural stocks of windowpane oyster *Placuna Placenta* inhabit the soft, muddy substrate of Chicalim bay and their population is in healthy condition<sup>7</sup>.

There is not a whisper of this ecologically fragile area in the Draft EIA Report, leave alone considering the impact of the proposed activity thereon and steps for mitigate such impact.

#### Natural spring and rivulet adjoining existing plant in Srv nos. 157/1 and 133 of village Sancoale.

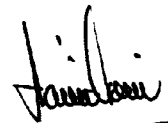
The Draft EIA Report has ignored the natural spring and rivulet that exists right next to the project proponents existing plant (towards the east) and located within

Survey no. 157/1 and partly in Survey no. 133 of village Sancoale both belonging to the project proponent. The site is locally known as "Dorval spring", and there had been complaints in the recent past of its contamination by effluents seeping through the sub-soil<sup>8</sup>. This water body is clearly shown as such in the survey records. Ironically, it is shown in Map 2-4 Project Site Layout at page 29 of Draft EIA Report.

Inspite of the "chequered" past history of this spring involving the project proponent, the Draft EIA Report has turned a blind eye to this important water body and drinking water source in the immediate vicinity of the existing plant, and the impact of the proposed activity on this natural resource.

#### Agricultural lands in vicinity.

There are agricultural lands/cultivated paddy fields in revenue village of Pale existing about 1.50 kms south-east of the project site. The Draft EIA Report has failed to consider the impact of the project operations on these lands.



<sup>5</sup> Source: Reply to Unstarred LAQ no. 118 answered on 03.08.2015 available at <https://eassemblygoa.in/PublicSearch.xhtml> (last visited on July 9, 2016).

<sup>6</sup> Sancoale bay likely to get biodiversity heritage site status, THE NAVHIND TIMES pg 1 (April 15, 2016).

<sup>7</sup> National Institute of Oceanography, Biodiversity of Chicalim Bay Goa (February 2010).

<sup>8</sup> See The Goa Foundation v. Zuari Agro Chemicals Ltd, WP no. 450 of 1988 (April 2, 1988) (Bombay High Court at Goa).

I submit that the above instances sum up the totally careless and casual approach towards eco-sensitive areas in the EIA by the project proponent and their consultants. I submit that the Draft EIA Report has no credibility at all and ought to be rejected *in limine*.

**3. Failure to incorporate adequate living conditions for construction labour.**

The EIA has adopted a very casual approach to living conditions and housing of construction labour engaged for the proposed activity. At item no. 10 at page 17 of the Draft EIA Report, to the TOR "*Details of infrastructure facilities such as sanitation, fuel, restroom, etc to be provided to the labour force during construction as well as to the casual workers including truck drivers during operational phase*",

The compliance stated is: "*Implementation of the proposed projects involves minimum temporary manpower for which necessary infrastructure and facilities are available at site and in the near vicinity. The required housing, necessary infrastructure and other facilities such as domestic water, sanitation etc., will be provided to the labour force as well as casual workers during this phase using existing facilities available. Details of facilities is given at Chapter 7, pg 241.*"

However, the Draft EIA Report is totally silent on housing of construction labour within the site and provision of necessary infrastructure such as fuel for cooking, mobile toilets, mobile STP, safe drinking water, medical health care, crèche etc. The foregoing has been declared as one of the mandatory conditions in EC<sup>9</sup>; hence it was incumbent on the project proponent to touch upon this critical aspect in the EIA.

I submit that the project proponent has been chronic defaulter on this aspect: the slum colonies on Comunidade and private lands in the vicinity of the existing plant first came up during the construction phase of the existing ZACL plant in the early 70's.

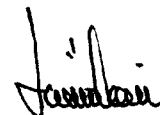
This is another major anomaly in the EIA conducted by the project proponent and their consultants and confirms the careless and nonchalant approach.

**4. Regarding disposal of construction waste.**

Item no. 4.7 at page 7 of 12 of Report Part I of Form-I (running page 10 of the document) speaks of "construction and demolition wastes". The information given is "Yes" "*Insignificant, to be used as filling up of low lying areas*".

The documents submitted by the project proponent are silent on the exact nature and quantity and nature of such construction and demolition wastes and the exact

<sup>9</sup> See MoEF Circular no. J-11013/41/2006-IA.II (I) dated 22.09.2008.



location of the so-called "low lying areas" it proposes to fill up. Filling up of low-lying areas is prohibited under the Goa Town & Country Planning Act 1974.

The Draft EIA Report is conspicuously silent on the fact that two large storage tanks (existing at the location where atmospheric ammonia storage tanks are proposed to be erected) have been surreptitiously demolished by the project proponent, the one towards the eastern side in June 2014 and the other in latter half of 2014. The manner of disposal of their waste remains a mystery.

**5. Regarding contaminated soils.**

Item no. 4.9 at page 7 of 12 of Report Part I of Form-I (running page 10 of the document) covers "contaminated soils and other materials". The information given is "Yes" "*It will be decontaminated and disposed as per rules*".

However, the Draft EIA Report is silent on how the soils became contaminated in the first place, and how and where they will be decontaminated and disposed. The information given on this critical environmental aspect is casual and in a mechanical manner.

**6. Regarding emission from production processes.**

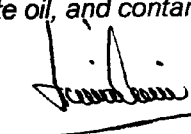
Item 5.2 at page 7 of 12 of Report Part I of Form-I (running page 10 of the document) covers "emissions from production processes". The information given is "Yes" "*Dust emission, SO<sub>2</sub>, NO<sub>x</sub>, PM, Ammonia from production process*".

However, the Draft EIA Report is silent on the cumulative impact of these projected emissions on existing pollution in the area. Impact of SO<sub>2</sub> emissions on Dr Salim Ali Bird Sanctuary located 14 km away has not been considered. This critical aspect has been given a convenient go-by by the project proponent and their consultants.

**7. Contradictions on information regarding handling of hazardous wastes during operational period.**

The project proponent in connivance with their consultants has attempted to fudge information on generation of hazardous wastes during the operational phase and thereby hoodwink and mislead the affected citizens and the concerned authorities on this critical aspect.

At item 4.3 at page 7 of 12 of Report Part I of Form-I (running page 10 of the document) on "Hazardous wastes (as per Hazardous Waste Management Rules" the information given is "Yes" "*Generation of used oil, waste oil, and contaminated*



*discarded containers will be disposed off to approved recyclers approved by GSPCB/CPCB as per existing practice".*

However, at item 8.1 at page 9 of 12 of Report Part I of Form-I (running page 12 of the document) on "From explosions, spillages, fires, etc from storage, handling, use or production of hazardous substances", the information given is "Yes" ". . . *The project does not involve any hazardous substances during construction and operational period . . .*"

**8. Existing roads grossly inadequate to cater to project demands, and will aggravate traffic congestion within Vasco city.**

The Draft EIA Report projects additional 100 trucks per day for carrying raw materials and finished products plying on the Zuarinagar - Vasco road<sup>10</sup> leading to Mormugao Port. I submit that the projections are grossly underestimated considering the magnitude of the proposed project.

Be that as it may, I wish to point out that the portion of the above route passing through Vasco city (between Chicalim Circle to Vasco Police Station) is already facing chronic traffic jams throughout the day and has seen several serious accidents involving heavy transport vehicles. On account of this, movement of heavy goods vehicles through the city has been severely restricted by District Magistrate since September 2012 and permitted for only 5 hours per day<sup>11</sup>. Any further addition to this traffic will lead to total collapse of traffic arrangements in Vasco.

Besides, during the remaining 19 hours, tens of heavy goods vehicles line up along Airport Road blocking entry/exist to internal roads and putting lives of school children and other pedestrians in danger.

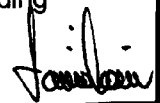
I submit that the project proponent and their consultants have dealt with this important issue in a very casual manner, and it appears that they have given their observations sitting in their living rooms without actually visiting the affected streets and locations.

To sum up, I submit that the public hearing process is inadequate and vitiated and violates the fundamental right of expression of about 4 lakh citizens within the 10km radius study area having a plausible stake in the project. I further submit that the proposed project is prohibited under CRZ Notification 2011.

The so-called EIA of the proposed project is a sham and has been done in a careless, casual and nonchalant manner; existence of eco-sensitive areas including

<sup>10</sup> See page 156 of Draft EIA Report.

<sup>11</sup> See Notification No.37/16/2012/MAG/9724 dated 27/09/2012 issued by District Magistrate (South).





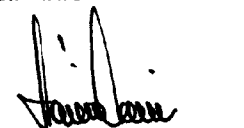
forests, wetlands and biodiversity heritage zones have been conveniently ignored in the study. It has failed to incorporate adequate living conditions for construction labour. It is replete with contradictions and bald and unsubstantiated statements and ignoring major and critical issues and concerns, some of which I have enumerated above.

Lastly, I submit that the Draft EIA Report and other documents submitted by the project proponent have no credibility at all and ought not to be considered in grant of EC.

**9. Dangers arising out of excessive use of NPK.**

Before parting, I wish to delve on the environmental threat arising out of excessive use of NPK. The project under scrutiny proposes manifold increase in NPK fertilizer production capacity to massive 30 TPH. It has been well established that excessive NPK to boost up crop causes micro-nutrient imbalance. Soils in many parts of North India of our country have become deficient of micronutrients like zinc which is affecting production of crops<sup>12</sup>. Excessive NPK fertilizers used in crops are often washed off with run-off water to water bodies and lakes causing over nourishment of lakes called *eutrophication*. Eutrophication often leads to algal blooms, which makes water unfit for consumption and kills aquatic life<sup>13</sup>.

I submit these written representation/submissions to your goodself with kind request to forward the same to the concerned authorities for their information and due consideration.

  
(Sávio J F Correia)

<sup>12</sup> Vibha Sharma, *Fertiliser overuse eating away Punjab soil nutrients: House panel report suggests crop yield has dipped drastically*, THE TRIBUNE (August 24, 2015).

<sup>13</sup> Dr J P Sharma, ENVIRONMENTAL STUDIES, 34 (2009). Also see Alan B Cobb, THE BASICS OF CHEMISTRY, 18 (2014).