

**BEFORE THE HON'BLE NATIONAL GREEN TRIBUNAL, WESTERN
ZONE BENCH AT PUNE**

APPEAL NO. 03 OF 2018

IN THE MATTER OF:

Soil Conservation Division,
Directorate of Agriculture, Goa

...Appellant

Versus

Goa Coastal Zone Management
Authority & Ors.

...Respondents

COUNTER AFFIDAVIT OF MATEUS SALDANHA

[RESPONDENT NO. 5]

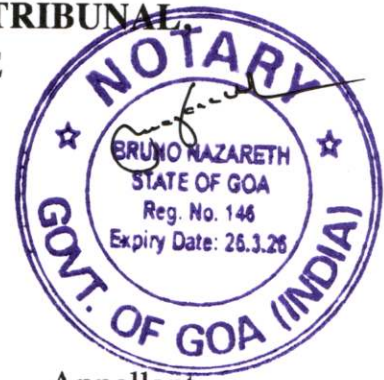
**ADVOCATE FOR THE RESPONDENT NO.5 :
SIVAGNANAM KARTHIKEYAN & OM D'COSTA**

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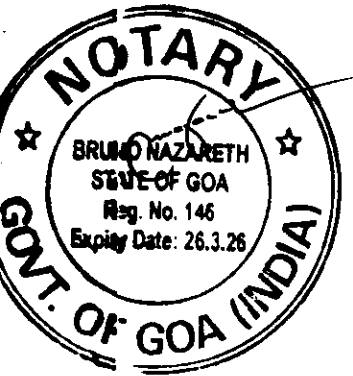
[RESPONDENT NO. 5]

I, Mateus Saldanha, S/o Jose F Saldanha, aged about 51 years, resident of H.No.12, St.Francis-Jua, Tiswadi, Ilhas, Goa-403106, the Respondent No. 5 herein, do hereby solemnly affirm and declare as under:-

1. That I am fully conversant with the facts and records of the present case and am authorised and competent to affirm this affidavit on behalf of myself (Respondent No.5), Ms. Maria Monteiro E Dias (Respondent No.6), Ms. Emitia Ana Rodrigues (Respondent No.7) and Mr. Cyril Silveria (Respondent No.8).
2. I have read a copy of the captioned Appeal filed by the Soil Conservation Division, Directorate of Agriculture, Goa and am making this Affidavit in reply to oppose admission of the Appeal. I crave leave to file a further affidavit if we are so advised or as the circumstances may require.

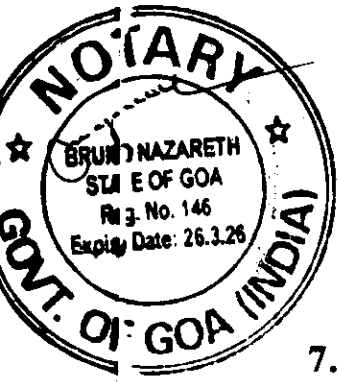
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3. Unless specifically admitted by me hereinafter, all statements and contentions contained in the Appeal should be deemed to have been denied by this Respondent as if they were set out herein and traversed seriatim.
4. The Answering Respondent No.5, along with Ms. Maria Monteiro E Dias (Respondent No.6), Ms. Emitia Ana Rodrigues (Respondent No.7) and Mr. Cyril Silveria (Respondent No.8), [hereinafter collectively referred to as the “Complainants”] are all residents of Santo Estevam island who have been adversely affected by the impugned construction activity carried out by the Appellant-Department resulting in proven ecological damage. The Complainants are recognised tenants (under the Goa Agricultural Tenancy Act, 1964) who cultivate the Khazan Lands in the same area (which are protected as eco-sensitive areas and No-Development Zones under the CRZ Notification, 2011).
5. The ‘Cauzo Cantra Bund’ in Santo Estevam is declared to be a ‘Protective Bund’ under the Goa Agricultural Tenancy Act, 1964 and was originally 2.5 meters wide. The Appellant-Department, under the guise of repairing the Bund, proceeded to carry out illegal widening of the said Bund by increasing the width to around 7-8 meters using red earth/murram, causing severe ecological damage to the surrounding Khazan Lands and the mangrove ecosystem. Aggrieved by the said action, the Complainants had filed the Original Application No.35 of 2016 before the Hon’ble NGT challenging the impugned activity and seeking directions for restoration of the Bund to its original condition.



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6. Pursuant to site inspections and expert reports indisputably proving ecological damage caused in the area, the Hon'ble NGT, vide order dated 17.03.2017, directed the Goa Coastal Zone Management Authority ["GCZMA"] to pass directions for remediation measures after hearing the parties – resulting in the GCZMA Order dated 18.07.2018 which is now sought to be challenged by the Appellant-Department (to the limited extent of the direction to maintain a width of 3.5meters by removing excess red earth from the field) before the Hon'ble NGT.



7. It is respectfully submitted that the Appellant-Department, despite accepting all the other directions on remediation of the Band in the GCZMA's Order dated 18.07.2018 (except the direction wrt maintaining width of 3.5meters), has not complied with the said other directs till date, despite the passage of 6 years since the said GCZMA Order.

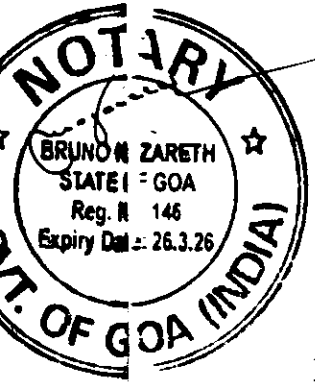
8. Importantly, the originally sanctioned plan of the Appellant-Department itself permitted a widening of the Band only upto a maximum width of 4 meters. However, the multiple Expert Reports of the GCZMA which are based on physical survey of the Band categorically show that the Appellant-Department, in complete violation of its own sanctioned plan, has illegally widened the Band to over 7 meters throughout. Therefore, there is absolutely no justification for the Appellant-Department to now contend that it ought not comply with the fair and balanced direction of the GCZMA to maintain a width of 3.5 meters by removing the excess red earth from the field.

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9. The decision of the GCZMA to maintain a width of 3.5 meters itself is based on consultations from the Water Resources Department of the State of Goa, which is the concerned authority for technical planning and execution of the impugned works. Therefore, the Appellant-Department's current attempt to evade its duty of restoration of the Band, after causing substantial damage to the eco-sensitive area, is completely unjustified.

Brief Facts

10. Before responding to the legal issues that are sought to be raised in the Appeal, I wish to place the following crucial facts on record. It is respectfully submitted that these are indisputable facts, in view of which this Appeal ought to be dismissed.
11. Santo Estevam is a picturesque island-village located in the Mandovi River, near Panaji, Goa. People travel to and fro by canoes/ferry boats and by a bridge at Tonca. The island of Santo Estevam has a delicate ecological balance, being comprised of several parcels of land interspersed with water bodies, and linked to each other by an intricate system of bunds and sluice gates which protect the agricultural fields (Khazan Lands) from sea water intrusion.
12. Khazan Lands are a peculiarity of the Goan agricultural system, which allows cultivation of paddy and other crops even in lands influenced by tidal waters. It is the bunds and sluice gates which protect these Khazan / agricultural lands. The CRZ Notification makes special mention of the Khazan Lands and Mangroves in the special section on the 'CRZ of Goa' and has prohibited development activities in the Khazan areas. . The Notification also



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requires the Khazan lands to be mapped so that they can be effectively protected. The relevant portion of the CRZ Notification, 2011 is as follows:

"3. CRZ of Goa.-

In view of the peculiar circumstances of the State Goa including past history and other developments, the specific activities shall be regulated and various measures shall be undertaken as follows:-

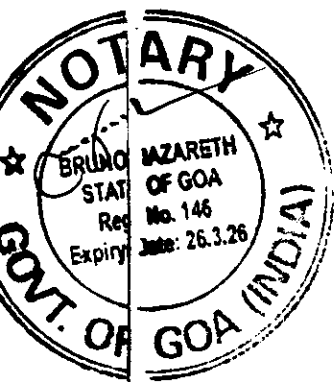
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(iv) the eco sensitive low lying areas which are influenced by tidal action known as khazan lands shall be mapped;

(v) the mangroves along such as khazan land shall be protected and a management plan for the khazan land prepared and no developmental activities shall be permitted in the khazan land;"

13. The system of setting up bunds and sluice gates to protect the Khazan lands from intrusion of sea water dates back to ancient ancestral times when the "Gaunkari" social system existed in Goa (later termed as 'Comunidade' by the colonial power). The bunds were constructed using locally available mud/clay ('chicol') from the river and the fields adjacent to the bunds and kneading it along with wet straw, to create thereby a tough hardy material that could resist the pressures of the ocean. The mangroves around the bunds further slowed down the tidal waters and gave security to the agricultural fields.

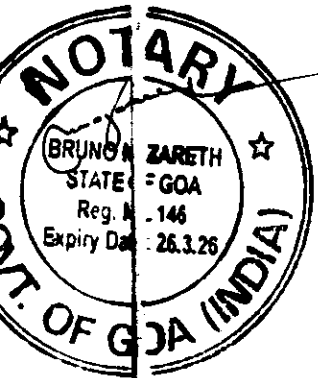
14. The bunds in Santo Estevam are more than one thousand years old. Besides protecting the Khazans, the bunds also serve as a pathway for the villagers to cross the fields, without trespassing into the cultivated areas. As the soil in the Khazans is soft and yielding,



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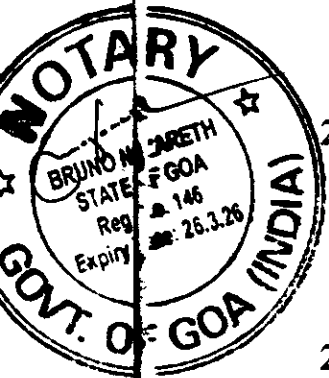
vehicles do not traverse such bunds, which are reserved only for the use of people and their livestock.

15. Post-liberation, the Goa Government, vide Notification dated 07.02.1968 issued under the Goa Agricultural Tenancy Act 1964, declared various Bunds as 'Protective Bunds'. The Cauzo Cantra bund is included in the list at Sr. No. 2 : 'Bund at Santo Estevam, Goa'. The said Government Notification dated 07.02.1968 is annexed herewith as **Annexure R-1**.
16. A site plan of Village Jua (which is the alternate name for Santo Estevam) which depicts the bund, sluice gates and the Khazan Lands is annexed as **Annexure R-2**.
17. Photographs of the Causo Cantra Bund at Santo Estevam island are annexed herewith as **Annexure R-3**.
18. In 2010, due to inadequacy of funds by the agricultural tenants to repair the Causo Cantra Bund and the sluice gate, the Causo Cantra Tenants Association wrote to the Mamlatdar of Tiswadi Taluka requesting the State Government's assistance to repair the Bund.
19. Pursuant to the said request, under the prevalent government scheme, vide order dated 31.03.2010, the Mamlatdar of Tiswadi Taluka directed the Executive Engineer, Soil Conservation Division, Directorate of Agriculture to prepare an estimate of repairing the Bund.
20. The Soil Conservation Division prepared a report dated 17.05.2012 detailing the scope of work for strengthening and restoring the Cauzo Cantra Bund. A design drawing of the Bund was also prepared by the Soil Conservation Division which clearly shows



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that the original Bund of 2.5 mts width was proposed to be extended to 4 mts only. A copy of the report dated 17.05.2012 along with the design drawing submitted by the Soil Conservation Division is attached herewith as **Annexure R-4 Colly**.



21. Pursuant to the above, the State Government sanctioned an expenditure of Rs.3,51,89,460/- for execution of the work which commenced in the year 2014.

22. The Complainants and the other villagers, under the reasonable presumption that the said works would be carried out with reasonable care and responsibility, were initially not opposed to the works being undertaken. However, over the course of the construction activity, to their shock and dismay, it was noticed by the Complainants that the Appellant was widening the Bund much beyond the approved width of 4 mts – to the extent of **7-8 mts**. It was further noticed that large scale felling of mangroves had also taken place and that, in the guise of repairing the Bund, the Appellant-Department had sought to convert the Bund into a motorable road, causing severe ecological damage to the protected Khazan area.

23. In view of the said ecological destruction which threatens the very way of life of Santo Estevam, the Complainants and the other villagers, with the help of Fr.Dominic Sequeira (Respondent No.10), wrote complaints to various authorities including the GCZMA, the Mamlatdar of Tiswadi etc. seeking immediate action to stop the impugned activity and restore the Bund to its original status to prevent further ecological destruction. Copies of the said complaint are attached herewith as **Annexure R-5 Colly**.

24. Pursuant to the complaints, the GCZMA officials headed by Dr. Antonio Mascarenhas (GCZMA Member) carried out a site inspection on 19.01.2016 and submitted a report, a copy of which is attached herewith as **Annexure R-6**.
25. Subsequently, on 03.03.2016, the Complainants (including the Answering Respondent) filed Original Application No.35 of 2016 before the Hon'ble NGT seeking directions for protection and restoration of the Cauzo Cantra Bund. A true copy of the Original Application No.35 of 2016 which was filed before the Hon'ble NGT is attached herewith as **Annexure R-7**.
26. The said Application No.35/2016 was taken up by the Hon'ble NGT on 04.05.2016 when, after observing *prima facie* environmental destruction, the following interim order [Exhibit A in the Appeal] was passed:

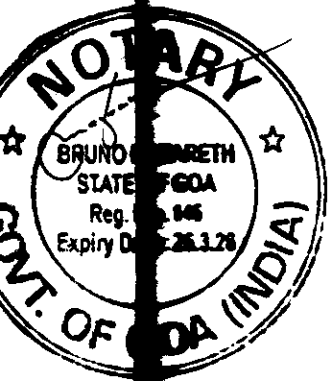
“We are dismayed because we find from the record that the Executive Engineer, Soil Conservation Division, Director of Agriculture, State of Goa has floated a tender in which first item is removing of mangroves from the area where the bund was existing and widening has been undertaken. Tender have been called for removal of mangroves which is prohibited in law. The Executive Engineer, Soil Conservation Division has with no hesitant and undoubtedly without any serious thought called for tender to remove the mangroves which is wholly impermissible. Learned Counsel representing Government enjoins with us in expressing anguish.

On merit it is seen that the Project Proponent intends widening of the bund which is detrimental to the interest of local people. It is strange that widening of the bund more than 2.5 mts is being allowed by the Government itself.



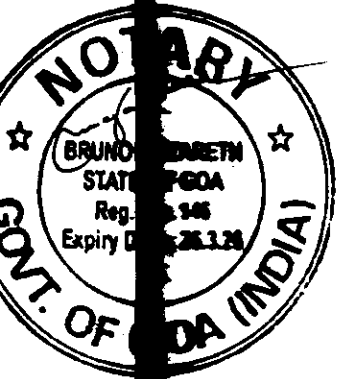
"The report of 20 January 2016 had the following salient points:

1. *The functional sluice gate at Cupa was the starting point. From here, the embankment extends in a semi-circle to the vicinity of the village temple in the east, over a total length of about 2.6 kilometres.*
2. *The entire area constitutes an intricate network of creeks, backwaters and marshy lagoons where mangroves are identified. A large water body that has a connection with the riverine system through the sluice gate at Cupa is located in the central part.*
3. *Along the outer / river side, a concrete wall now encircles the entire outer periphery of the ancient bundh, now being reclaimed. The concrete wall was apparently built earlier, probably in 2013. The necessity of this wall is not justified; it also appears that relevant approvals from concerned authorities have not been obtained.*
4. *Dense and luxuriant mangrove forests are found along the river. The width of these mangroves plantations vary from 125 metres to a maximum of about 325 metres. Its length is of the order of 550 metres on the western side and 1.5 kilometres along the eastern flank.*
5. *The entire low-lying mangrove area is tidally influenced, as such the setup can be classified under the category of CRZ I, an ecosystem that is ecologically sensitive.*
6. *Haphazard human activity was observed during the site visit on 19 January 2016. This was noted from the Cupa sluice gate northwards. Heaps of laterite boulders and road metal was lying along the bundh. The bundh is / has been reclaimed by dumping red soil on the surface of the original embankment.*



7. A retaining wall composed of boulders - concrete was being constructed from Cupa sluice gate northwards. The height of this vertical embankment would be around 2.5 metres, if completed. This would mean that the top surface of the wall will be at about 1.0-1.5 metres above the high tide level.
8. In comparison to the DSLR plan, the embankment is now being widened from 2-3 metres to about 6 to 7 meters by filling it with lateritic mud. A large number of mangroves have been cut to make place for the wall.
9. The original embankment is lined with fringing mangroves some of which can still be seen at present; further north, new trenches are made, ostensibly for the foundations of the new wall. Here again, mangroves are uprooted.
10. The Google Earth (GE) satellite images clearly indicates that the embankment has been reclaimed over a continuous distance of about 2.6 kilometres. Human activity of mud deposition along the levee started in or after December 2013.
11. The entire lagoon / creek complex is influenced by the daily tides. Being ecologically sensitive, the entire mangrove back water ecosystem thus falls under the category of CRZ I. Irrespective of the CRZ category, the entire embankment also falls in the No Development Zone (NDZ). Therefore, tampering with an ancient bank within a tidal regime (and without relevant approvals) is tantamount to gross violations of CRZ 2011 notification.

As noted above, the report of 20 January 2016 by the undersigned had interpreted the damage as observed in the field. During the recent inspection on 23 June 2016, it was observed that no further work has been done. However, some metal is still seen at the Cupa sluice gate side. In comparison, the boulders / rubble stored at the eastern

G. Any further repairs of the bundh may be done by using locally available clayey material; such work (bricks of clay) is routinely undertaken in the paddy fields of Indian coasts.

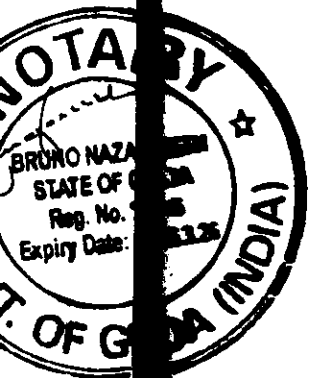
H. Such bundhs should be designated as pathways for the exclusive use of agriculture related activities only; these embankments should not / cannot be construed as roads; light four-wheeler carriers may be allowed, but heavy vehicles such as trucks need to be banned so as to guarantee the stability of the embankments.

I. The lateritic material that is removed may be stored temporarily at a convenient point; this sediment should not flow back into the adjacent paddy fields. The material removed may be used for road works / filling approved elsewhere."

28. The Complainants' Application No.35/2016 was thereafter again taken up by the Hon'ble NGT on 17.03.2017 when the following order [Exhibit-B of the Appeal] was passed:

"In substance. GCZMA is of the view that there has been environmental degradation which requires restitution and there is necessity to act in accordance with law. Parties are at consensus that there has been environmental degradation of ecosystem at Cauzo Cantra Bundh, the site in question warranting some remedial measures. However, there is no consensus as regards the remedial measures suggested in the Environmental Assessment Report dated 5.7.2016. We, therefore, pass the following directions:

1. The parties shall appear before GCZMA on 5.4.2017 at about 11.00 P.M. at Parvorim, Goa. Service of Notice is waived.



2. GCZMA shall hear the parties on remediation measures as are disclosed in the Report dated 5.7.2016 referred as Ex 'E' in the affidavit of GCZMA dated 20th September 2016 and after hearing the parties pass an appropriate directions under Section 5 of the Environment (Protection) Act, 1986 within three (3) weeks after the appearance of parties."

29. Pursuant to the said order of the Hon'ble NGT, the GCZMA carried out another site inspection and submitted a report 06.06.2017 and submitted a report. A true typed copy of the said report of the GCZMA dated 06.06.2017 is annexed herewith as **Annexure R-9**. The relevant portions of the report are extracted as follows:

3rd Site: Caujo-Cantro Bund

[...]

xvii) As shown by the complainants, this bund is widened more than 4m with red earth up to 2.6 km distance. The bund is provided with a retaining wall towards the river side, and up to about 200m distance a toe wall has been constructed towards the field side on the edge of drainage canal.

xvii) The complainants told that in the process of bund widening and by constructing a toe wall, the drainage canal is shifted towards the field side thereby reducing the field area.

[...]

xxi) Complainants told that GCZMA should order restoration of bunds by removing the red earth from the field side and reduce the width to 2.5m.

Conclusion and Recommendations

[...]



xix) Thus, it appears that the Soil Conservation Division should be instructed to maintain the width of the said bund to 3.7m as per the PWD Road Standards by removing the excess red earth from the field side.

30. It is in these circumstances that the GCZMA, after hearing all the concerned stakeholders and considering the factual and scientific reports of experts, passed its final order of 18.07.2018 [Exhibit C of the Appeal] wherein, the Appellant-Department was, *inter alia*, directed "1. To maintain the width to 3.5 mtrs for the bundh by removing the excess red earth from the field side".
31. The Appellant-Department, while accepting all the other directions passed by the GCZMA wrt restoration of the Bund, decided to challenge only the abovesaid Direction No.1 (to maintain the width to 3.5 mtrs for the bundh by removing the excess red earth from the field side) before the Hon'ble NGT vide the captioned Appeal No.3 of 2019 (WZ).

Preliminary Submissions

32. At the outset, it is respectfully submitted that the Appellant-Department has concealed and suppressed vital facts in its Appeal before this Hon'ble Tribunal, including the crucial report dated 05.07.2016 of Dr. Antonio Mascarenhas which highlights the extent of environmental degradation that has taken place at the site. The said report has been concealed intentionally with malice in order to bury the findings about the destruction caused to the Khazan fields and mangroves due to tampering with the Bundh without relevant approvals. In *Oswal Fats & Oils Ltd. v. Commr. (Admn.)*, (2010) 4 SCC 728, it was held by the Apex court that:



"20. It is settled law that a person who approaches the court for grant of relief, equitable or otherwise, is under a solemn obligation to candidly disclose all the material/important facts which have bearing on the adjudication of the issues raised in the case. In other words, he owes a duty to the court to bring out all the facts and refrain from concealing/suppressing any material fact within his knowledge or which he could have known by exercising diligence expected of a person of ordinary prudence. If he is found guilty of concealment of material facts or making an attempt to pollute the pure stream of justice, the court not only has the right but a duty to deny relief to such person."

33. Therefore, at the outset, it is respectfully submitted that the Appellant-Department ought not be granted any relief in view of the concealment of material facts in the captioned Appeal. This submission is without prejudice to the following submission on the merits of the case.

34. It is respectfully submitted that the impugned GCZMA report ought not to be interfered with as it is premised on the following indisputable facts:

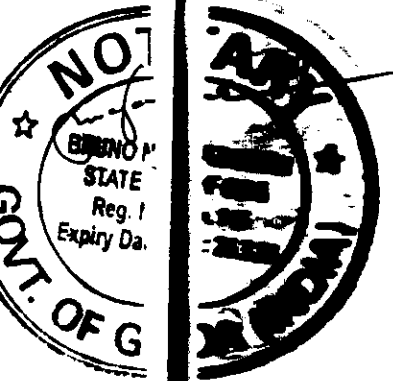
- Pursuant to the NGT's order dt. 04.05.2016, the GCZMA (Respondent No.1) furnished an Ecological and Environmental Assessment Report dated 05.07.2016 wherein it has been conclusively found that severe damage has been caused to ecosystem surrounding the Cauzo Cantra Bundh consequent to work executed by Appellant-Department.
- As per the said Expert Report dated 05.07.2016, it has been categorically found that the width of the Band has been



illegally increased to 6-7 meters from its original width of 2.5 meters, whereas even as per the sanctioned work plan of the Appellant-Department, the widening was approved only to an extent of maximum 4 meters. It was categorically recommended that the Band must be restored to its original condition.

- The NGT vide order dt. 17.03.2017 after taking into account the Environmental Assessment Report dated 05.07.2016 (which has been suppressed by the appellant before this Hon'ble Tribunal), had directed GCZMA to hear the parties on remediation measures and pass final orders.
- The GCZMA, after hearing all the concerned stakeholders and carefully balancing the interests based on factual considerations, passed orders dt. 18.07.2018 and 25.09.2018 with regards to the Cauzo Cantra Bundh and the Palni Bundh respectively and, *inter alia*, directed the Appellant-Department to reduce the width to 3.5 metres for both the Bundhs in light of another report of the Expert Members of GCZMA dt. 06.06.2017.
- The Order dt. 17.03.2017 passed by the Hon'ble NGT attained finality as it had not been challenged. However, the Appellant challenged the direction of the GCZMA to reduce the width of the concerned bundhs to 3.5 metres.

35. It is respectfully submitted that the Appellant-Department, despite accepting all the other directions on remediation of the Band in the GCZMA's Order dated 18.07.2018 (except the direction wrt maintaining width of 3.5meters), has not complied with the said

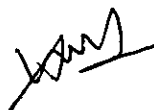


other directions till date, despite the passage of 6 years since the said GCZMA Order.

36. Importantly, the originally sanctioned plan of the Appellant-Department itself permitted a widening of the Band only upto a maximum width of 4 meters. However, the multiple Expert Reports of the GCZMA which are based on physical survey of the Band categorically show that the Appellant-Department, in complete violation of its own sanctioned plan, has illegally widened the Band to over 7 meters throughout. Therefore, there is absolutely no justification for the Appellant-Department to now contend that it ought not comply with the fair and balanced direction of the GCZMA to maintain a width of 3.5 meters by removing the excess red earth from the field.
37. The decision of the GCZMA to maintain a width of 3.5 meters itself is based on consultations from the Water Resources Department of the State of Goa, which is the concerned authority for technical planning and execution of the impugned works. Therefore, the Appellant-Department's current attempt to evade its duty of restoration of the Band, after causing substantial damage to the eco-sensitive area, is completely unjustified.

Para-Wise Reply to the Appeal

38. That the contents of Paras 1 to 7 are and matters of record and therefore, warrant no response. However, the Answering Respondent respectfully submits that However, it is respectfully submitted that the Appellant-Department has deliberately concealed and suppressed vital facts in its Appeal before this Hon'ble Tribunal, including the crucial report dated 05.07.2016 of



Dr. Antonio Mascarenhas which highlights the extent of environmental degradation that has taken place at the site. The said report has been concealed intentionally with malice in order to bury the findings about the destruction caused to the Khazan fields and mangroves due to tampering with the Bundh without relevant approvals. Therefore, the Appellant-Department is not entitled to any relief in view of this Hon'ble Court's ruling in *Oswal Fats & Oils Ltd. v. Commr. (Admn.)*, (2010) 4 SCC 728.

39. The statement made in **Para 8** of the Appeal that the "*current width of the bund is 4.5 meters*" is emphatically denied as factually incorrect and contrary to the record. The experts of the GCZMA who have physically inspected the site and submitted three reports dated 19.01.2016, 05.07.2016 and 06.06.2017 have all, in unison, found that the Bund has been widened to an illegal and unsanctioned width of over **6-7 meters** from its original width of 2.5 meters. Whereas even as per the sanctioned work plan of the Appellant-Department, the widening was approved only to an extent of maximum 4 meters. Therefore, the illegal increase in width has been correctly ordered by the GCZMA to be remedied by restricting the width to a balanced 3.5 meters.

40. That in response to **Para 9-11** and the **Grounds** including clauses a) to f) of the Appeal, it is submitted as follows:

40.1. That the multiple Report of the Expert Members of GCZMA have conclusively held, based on physical inspections of the site, that that the impugned activity of the Appellant Department has caused severe damage to the fragile Khazan Ecosystem of the area. It is in view of this that the GCZMA, in order to balance



the interests, has ordered that the Bund width ought to be maintained at 3.5 meters by removing the excess red earth at the site.

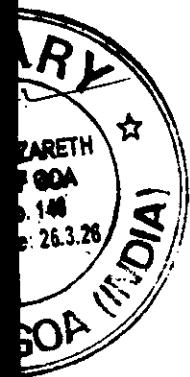
40.2. It is now conclusively found that the red earth used it detrimental to the field and organic rich soil should have been used. The Experts' recommendations on ecological remediation measures ought not to be second guessed by the Appellant-Department before this Hon'ble Tribunal.

40.3. The initial request of the tenants association was reparation of the bundhs in dilapidated conditions and not increase in width of the bundhs.

40.4. The Appellant has failed to see that the red earth used is detrimental to the ecology of the Khazan Ecosystem, it should have used the organic rich soil according to the Reports of the Expert Members of GCZMA.

40.5. The financial implications involved in the process of remediating the ecological damage caused by the Appellant-Department's own actions cannot be cited as a reason for evading its duty to restore and maintain the Natural Environment.

41. In view of the above, the answering Respondent respectfully submits that the Appellant-Department is not entitled to any relief from this Hon'ble Tribunal and that the present Appeal may be dismissed as meritless.



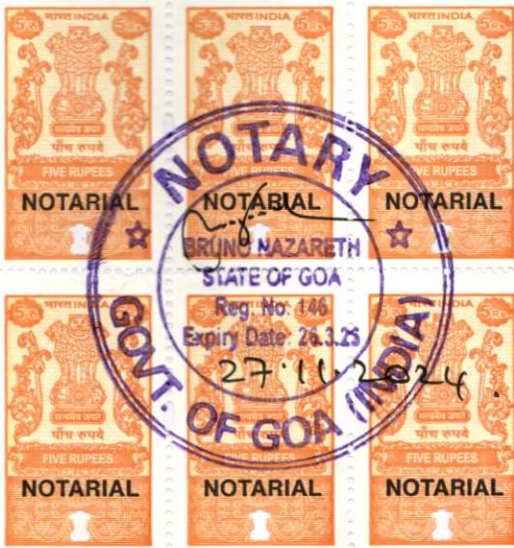
VERIFICATION

I, the deponent above-named do solemnly affirm that all that is stated in this affidavit is true to the best of my knowledge and belief, which is based on the records available in respect of the issue involved in the above-captioned Appeal. Nothing false has been stated herein.

Solemnly affirmed on this 27th day of November 2024

[Handwritten Signature]

DEPONENT



Executed before me by the Executant/s who has / have been identified by:

Mr. Mateus Saldanha holding Electoral I-Card: RNM0332197.

Place & Date Mafusa - Goa 27.11.2024

Reg. No.

3468/2024

[Handwritten Signature]
BRUNO NAZARETH
ADVOCATE & NOTARY
STATE OF GOA - INDIA
☎ : 0832-2250012 / 8010918065 / 9890010012

SERIES II No. 46

3/e

Government is pleased to direct that the terms and conditions of the deputation of Shri V. N. Kulkarni, Director of Land Survey are governed as per Government of India's letter no. F.1.33/64-Goa, dated 29-5-1965 as amended from time to time.

By order and in the name of the Administrator of Goa, Daman and Diu

W. G. Ranadive, Secretary (Revenue).

Panaji, 9th February 1968.

dições de desacompanhamento do Sr. V. N. Kulkarni, Director da Repartição de Agrimensura, serão formuladas de acordo com a nota do Governo da India n.º F.1.33/64-Goa, de 29 de Maio de 1965, alterada periodicamente.

Por ordem e em nome do Administrador de Goa, Daman e Diu.

W. G. Ranadive, Secretário (Receitas).

Panaji, 9 de Fevereiro de 1968.

Notification

RD/TNC/BND/280/67

In pursuance of the proviso to Sub-section (3) of Section 26 of the Goa, Daman and Diu Agricultural Tenancy Act, 1964, the Government hereby specifies the following bunds described in the schedule appended hereto as the protective bunds for the purposes of the said proviso.

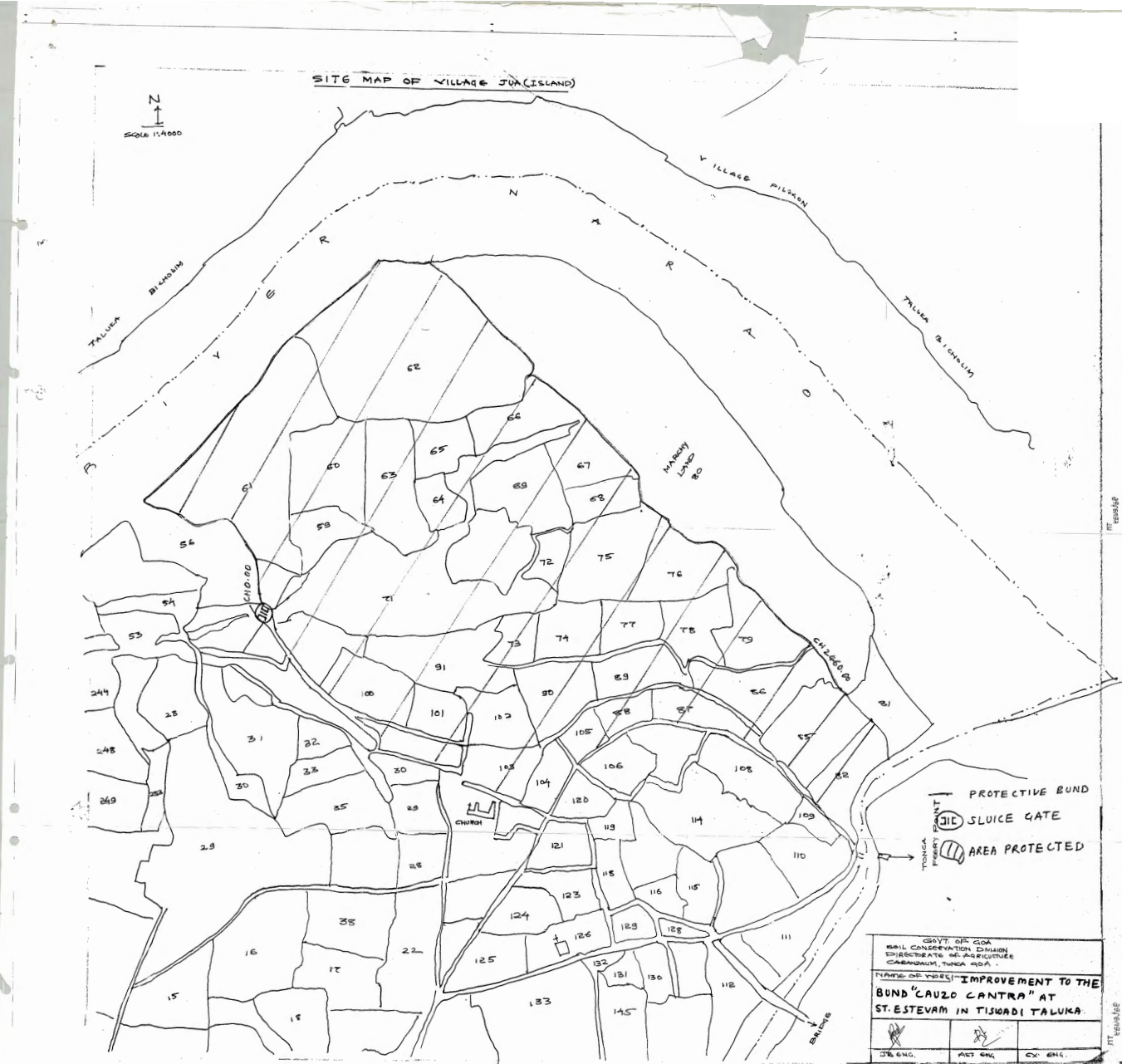
SCHEDULE — QUADRO

Name of the bund Nome do valado	Village Aldeia	Taluka Concelho	Description Descrição
1) Bund at Khorjuvem 1) Valado em Khorjuvem	Khorjuvem Khorjuvem	Bardéz Bardés	The bund starting with the paddy field belonging to Dr. Carlos at Colomb and running continuously along the bank of the canal Khorjuvem and thereafter along the bank of the canal Suco Par and ending at the paddy field called «Podval» belonging to Shri J. M. Rangel. Valado começando com a várzea pertencente ao Dr. Carlos em Colomb e correndo continuamente ao longo da margem do canal de Khorjuvem e em seguida ao longo da margem do Canal Suco Par e terminando com a várzea denominada «Podval» pertencente ao Sr. J. M. Rangel.
2) Bund at St. Estevam 2) Valado em St. Estevam	St. Estevam St. Estevam	Goa Goa	The bund starting from the paddy field called «Kausuo Cantor» belonging to the Comunidade of Jua and running along the bank of the river Mandovi and ending at the paddy field called «Babol» belonging to Smt. Odilia Freitas Fonseca. Valado começando desde a várzea denominada «Kausuo Cantor» pertencente à comunidade de Jua e correndo ao longo do rio Mandovi e terminando até a várzea denominada «Babol» pertencente à Sr. Odilia Freitas Fonseca.
3) Bund at Cavlossim 3) Valado em Cavlossim	Cavlossim Cavlossim	Salcete Salcete	The bund starting from the paddy field of Shri Serafino Mascarenhas and running along the bank of the river Sal and ending at the paddy field of Shri Serafino Mascarenhas at the island of Jua. Valado começando desde a várzea do Sr. Serafino Mascarenhas e correndo ao longo da margem do rio Sal e terminando com a várzea do Sr. Serafino Mascarenhas até a ilha de Jua.
4) Bund at Chorao 4) Valado em Chorão	Chorao Chorão	Goa Goa	The bund starting from the paddy field called «Cantorla» belonging to Shri Felix de Costa and running along the bank of the canal of Narou and ending at the paddy field called «Macasana» belonging to the Comunidade of Chorao. Valado começando desde a várzea denominada «Cantorla» pertencente ao Sr. Felix de Costa e correndo ao longo da margem do canal de Narou e terminando até a várzea denominada «Macasana» pertencente à comunidade de Chorão.
5) Bund at Khorjuem 5) Valado em Khorjuvem	Khorjuem Khorjuvem	Bardéz Bardés	The bund starting from the paddy field called «Cantorla» belonging to Shri José Rangel and running along the bank of the canal of Khorjuvem and ending at the paddy field called «Cantorla» belonging to Shri José Rangel. Valado começando desde a várzea denominada «Cantorla» pertencente ao Sr. José Rangel e correndo ao longo da margem do canal de Khorjuvem e terminando até a várzea denominada «Cantorla» pertencente ao Sr. José Rangel.
6) Bund at St. Estevam 6) Valado em St. Estevam	St. Estevam St. Estevam	Goa Goa	The bund starting from the paddy field called «Valois» belonging to the Comunidade of Jua and running continuously along the bank of the creek of river Mandovi and thereafter along the bank of the river Mandovi and finally along the bank of the canal of Acaro and ending at the paddy field called «Targem» belonging to the Comunidade of Jua. Valado começando desde a várzea denominada «Valois» pertencente à comunidade de Jua e correndo continuamente ao longo da margem do rio Mandovi e em seguida ao longo da margem do rio Mandovi e finalmente ao longo da margem do canal de Acaro e terminando até a várzea denominada «Targem» pertencente à comunidade de Jua.

"Attested"

Assistant Engineer
Soil Conservation Division
Directorate of Agriculture
TONGA BARCELONA

Annexure R-2



GOVT. OF GOA WATER CONSERVATION DIVISION DIRECTORATE OF AGRICULTURE CABANGALIM, TUNGA GOA		
NAME OF WORK: IMPROVEMENT TO THE BUND "CAUZO LANTRA" AT ST. ESTEVAM IN TISWADI TALUKA.		
J.S. ENG.	A.C. ENG.	C.V. ENG.

"Attested"
 Assistant Engineer
 Soil Conservation Division
 Directorate of Agriculture
 TUNGA, CABANGALIM

THE CAUSO CANTRA BUND PHOTOGRAPHS



Aerial picture of the intricate system of bunds & sluice gates on Santo Estevam Island which comprises agricultural khazan lands, mangroves, small and large waterbodies and village settlements. The 2,460 m Causo Cantra Bund protects around 100 hectates of khazan paddy fields. To the right is Cupa village and to the left is Tonca. The island is surrounded by the River Mandovi.



Close-up of Cupa side. The entire stretch mangroves has been destroyed all along the bund. Only few mangroves are seen alongside the bund.



The khazan lands - paddy fields



The Cupa settlement on the left. Next to it is the sluice gate from where the Causo Cantra bund starts.



Mangroves uprooted along the bund



Mangroves uprooted along the khazans



The laterite masonry base of the bund on the riverside has caused slow death of mangroves due to use of cement.



The bund slopes towards the agriculture fields



Work of constructing the base of the bund of laterite boulders commencing on the side of the agricultural fields. Material for construction brought to the site.



An old picture of the original Causo Cantra bund, 2.5 mts wide and totally made of river clay.

GOVERNMENT OF GOA
OFFICE OF THE EXECUTIVE ENGINEER
SOIL CONSERVATION DIVISION
DIRECTORATE OF AGRICULTURE
KRISHI BHAVAN, TONCA,
CARANZALEM - GOA.

No. 3/1/5/SCD/D.Agr/2012-13/161

Dated: May 14¹⁷ 2012

R E P O R T

Name of work: - Improvement to the bund 'Cauzo Cantra' at St. Estevam in Tiswadi Taluka.

Estimated Amount: - Rs. 3.90.81.610/- which includes 3% Contingencies and 7.25 % Centage charges.

Budget Head: - 4402- Capital Outlay on Soil and Water Conservation, 102- Soil Conservation, 02-Protective Works Embankment (Plan), 53-Majorworks.(Demand No.64)

History: - There is bund namely 'Cauzo Cantra' at St. Estevam, Tiswadi and the same has been notified as protective bund by Revenue Department vide notification No. No.RD/TNC/BN/280/68 dated 07.02.1968. The bund admeasures 2460.00 mts. and runs marginal to the river Mandovi and protects about 100 hactares of Khazan paddy fields. The existing bund is very narrow without rubble revetment wall on river side except at Ch. 0.00 to 200.00 mts. and also the bund is settled and overtopping by saline water at some piaces during high tides. inundating the paddy area!

The Mamlatdar of Tiswadi Taluka has issued directives as required under Agri. Ten. Act. vide order No. 6/25/AK/TA/221/10/529 dated 31/03/2010 to take up the work of strengthening to the entire bund under 90%-10% scheme of the Government, wherein 100% initial cost will be borne by the Govt. and after completion, 10% cost will be recovered from the Association in 10 yearly equal installment.

Design: - The retaining wall is designed to resist the water pressure and earth pressure by adopting suitable formula. Design details are placed in the file.

Scope: - The scope of the work is to improve 2460.00mts. long bund by constructing Laterite boulder wall in cement mortar on river side of average width 1.00 mt.x 2.00 mt depth, widening and heightening the existing bund with good quality earth/moorum.

Method of Execution: -The work will be carried out by calling competitive tenders from eligible contractors and as per C.P.W.D. procedure.

Rates: - P.W.D. Goa Schedule of Rates 2011 (buildings/roads) and Rate Analysis based on the same are adopted.

"Attested"



Assistant Engineer
Soil Conservation Division

2/N

Code:- O. R.- 17

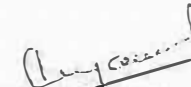
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Tools and Plants: - No special tools and plants are required.

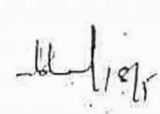
Time: - The time allowed will be 360 days excluding monsoon period.

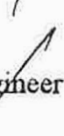
We may submit the estimate for accord of Technical Sanction by the competent authority.

Office of the M. E.
 M. E. Department
 TONCA, GARANZALEM.
 No. 273
 17/05/2012


 (B. V. Pujari)
 Executive Engineer


 Director of Agriculture


 Superintending Engineer - I (WRD)


 Chief Engineer (WRD)


SE (CPO)


 Shri. Joshi - J.E.
 406 Simulim
 22/5

C.P.O.
 Invt
 69
 Date 22/5/12

CE, Panaji - Goa
 17/05/12
 21/05/2012

"Attested"


 Assistant Engineer
 Soil Conservation Division
 Directorate of Agriculture
 TONCA, GARANZALEM

SOIL CONSERVATION DIVISION
DIRECTOR OF AGRICULTURE
KRISHI BHAVAN, TONCA,
CARANZALEM - GOA.

Name of Work:- Improvement to the bund 'Cauzo Cantra' at St. Estevam in Tiswadi Taluka.

DESIGN OF LATERITE BOULDER MASONRY WALL

- a) Weight of soil/moorum (r)- 1800 KG/M³
 b) Weight of R R masonry (r) - 2100 KG/M³
 c) Bearing capacity of soil - 10 tonnes/ M²
 d) Co-efficient of friction - 0.60
 e) Angle of repose - 30

Let P= Earth pressure per meter length of the wall

x= Distance of the resultant force from point 'A'

Check against tension and eccentricity

$$\begin{aligned} \text{Acting earth pressure} = C_p &= \frac{1 - \sin 30}{1 + \sin 30} \\ &= \frac{1 - 0.50}{1 + 0.50} \\ &= 0.333 \end{aligned}$$

$$\begin{aligned} \text{Earth pressure} = P &= C_p \times \frac{r h^2}{2} \\ &= 0.333 \times \frac{1800 \times 2.00^2}{2} \\ &= 1198.80 \text{ kg/m} \end{aligned}$$

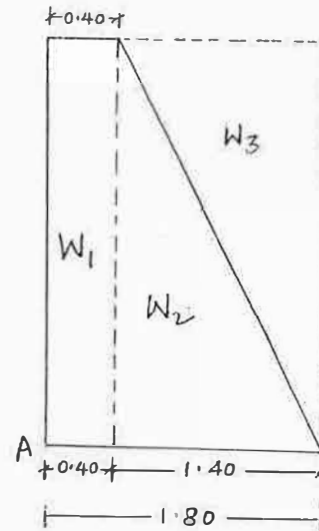
$$\begin{aligned} \text{Restoring moment} = M_r &= P \times \frac{h}{3} \\ &= 1198.80 \times \frac{2}{3} \\ &= 799.20 \text{ kg/m} \end{aligned}$$

Stability moment @ A

Sr No.	Wall section	Weight	Liner arms	moment
1	W1	0.40x2.00x1.00x2100 = 1680.00	X 0.20 =	336.00
2	W2	1/2x1.40x2.00x1.00x2100 = 2940.00	X 0.87 =	2558.00
3	W3	1/2x1.40x2.00x1.00x1800 = 2520.00	X 1.33 =	3352.00
		7140.00		6246.00

Distance of the resultant force from point A

$$\begin{aligned} X &= \frac{6246.00 - 799.20}{7140.00} \\ &= 0.76 \text{ m. from A} \end{aligned}$$



"Attested"

[Signature]
 Assistant Engineer
 Soil Conservation Division
 Directorate of Agriculture
 TONCA, CARANZALEM

22/c

$$\text{Eccentricity} = E = \frac{b}{2} - X$$

$$= \frac{1.80}{2} - 0.70 = 0.14$$

$$\text{Permissible eccentricity} = ep = b/6 = 1.80/6 = 0.30 > 0.14$$

Hence safe

Extreme stresses at the base of the wall

$$\begin{aligned} P_{\max} &= \frac{w}{b} (1 + \frac{6e}{b}) \\ &= \frac{7140}{1.80} (1 + \frac{6 \times 0.14}{1.80}) \\ &= 5817.77 \text{ kg/m}^2 \text{ say } 5.80 \text{ t/sq.m.} < 10 \text{ t/sq.m.} \end{aligned}$$

$$\begin{aligned} P_{\min} &= \frac{7140}{1.80} (1 - \frac{6 \times 0.14}{1.80}) \\ &= 2115.55 \text{ kg/m}^2 \text{ say } 2.12 \text{ t/sq.m.} < 10 \text{ t/sq.m.} \end{aligned}$$

Hence safe

Stability against over turning

$$\begin{aligned} \text{Factor of safety} &= \frac{\text{Resisting moment}}{\text{Overturning moment}} \\ &= \frac{6246.00}{799.20} = 7.81 > 1.50 \end{aligned}$$

Hence safe

Stability against sliding

$$\begin{aligned} \text{Factor of safety} &= m \times \frac{\text{Force}}{P} \\ &= 0.60 \times \frac{7140.00}{1198.80} \\ &= 3.57 > 1.50 \end{aligned}$$

Hence safe

To find depth of foundation

by Rankine's Formula

$$\begin{aligned} \text{Min depth } D &= \frac{P}{W} \times \frac{(1 - \sin O)^2}{(1 + \sin O)} \\ &= \frac{10000}{1800} \times \frac{(1 - 0.50)^2}{(1 + 0.50)} \\ &= 0.616 \text{ mt. Say } 0.80 \text{ mt.} \end{aligned}$$


Junior Engineer


Assistant Engineer

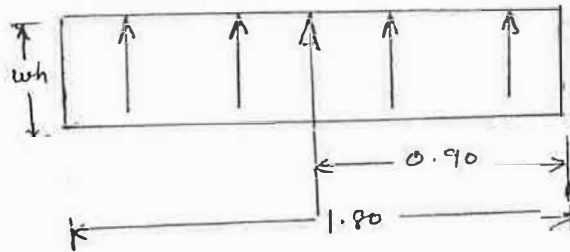
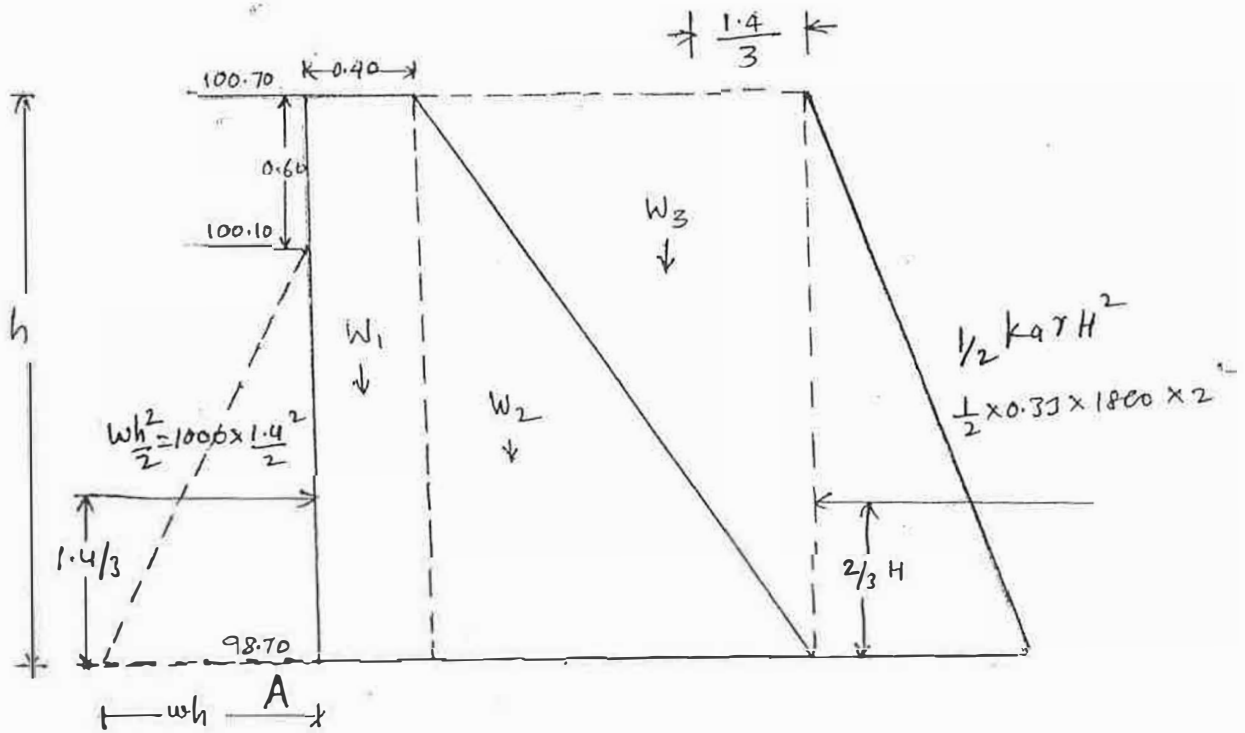

Executive Engineer

"Attended"

Assistant Engineer
Soil Conservation Division
Directorate of Agriculture
TONGA CARANZALEM

21/0

LATERITE BOULDER MASONRY WALL DESIGN DETAILS



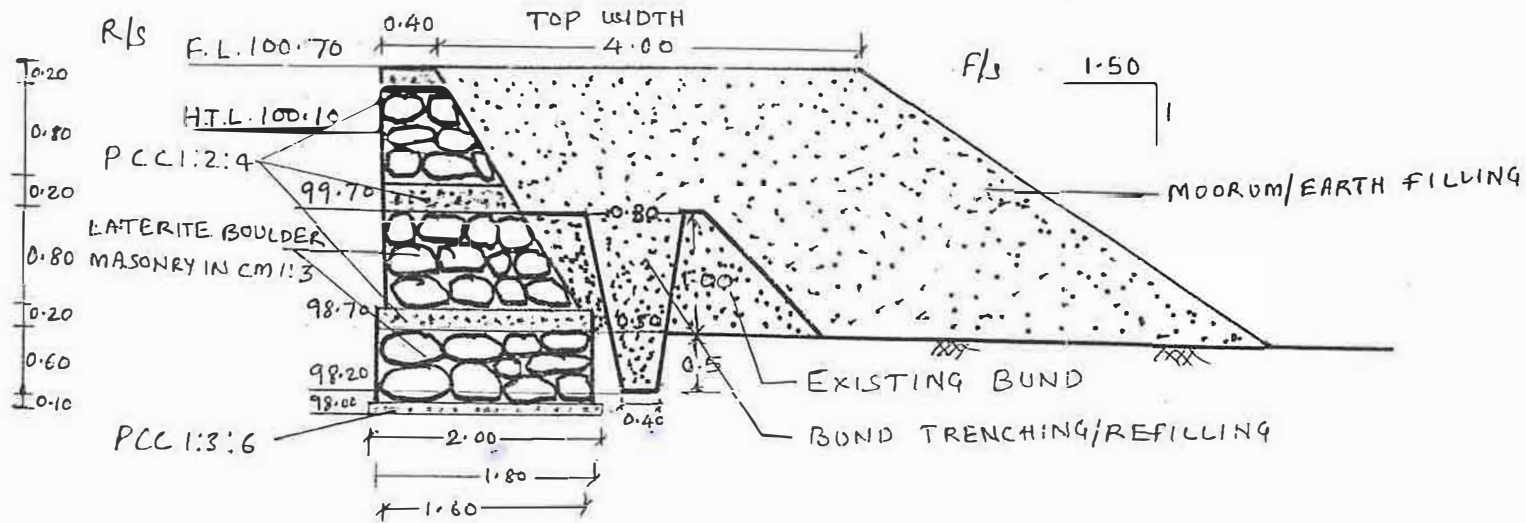
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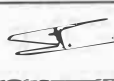
Assistant Engineer
Soil Conservation Division
Directorate of Agriculture
TONKA, C.A.P.A. 1984

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TYPICAL CROSS-SECTION OF BUND



GOVT. OF GOA			
SOIL CONSERVATION DIVISION, DIRECTORATE OF AGRICULTURE, KRISHIBHAVAN, TONCA, CARANZALEM			
NAME OF WORK:- IMPROVEMENT TO THE BUND			
CAUZO CANTRA' AT ST. ESTEVAM, TISWAD			
 JE	 AE	 EE	1/6

"Attested"

 Assistant Engineer
 Soil Conservation Division
 Directorate of Agriculture
 TONCA, CARANZALEM

**Annexure R-5
Colly**

From:
Dominic Sequeira
St.Stephen Church
Santo Estevam,
Illhas-Goa

Dated 16th Nov 2015

To,
The Member Secretary,
Goa Coastal Zone Management Authority,
3rd Floor,Dempo Tower-Patto
Panjim –Goa

Subject: Illegal widening of Palni and Cavzo Cantza bund destruction of kasan land, paddy field, Mangroves and violation of Bio-diversity and costal regulation Zone-1 undertaken recently a few months.

Ref: Letter dated 3rd Nov 2015 requesting for the classification of the CRZ notification as per 2011

Sir,

Further to the letter dated 3rd Nov 2015 to your office requesting for the classification of the survey numbers

212,210,207,208,193,191,196,165,211,192,167 that comes under the Palni bund are attracting CRZ notification 2011 at Santo Estevam, Jua Tiswadi-Goa.This Palni bund has gross violations no permission from authorities like the owner of the bund the comunidade of Jua the CRZ .It is serious of which complaint were failed to various concern offices and a case has been failed in the NGT.

Having carried out inspection on the Palni bund on 13.11.2015 we visited another site of the recently carried out bund repairs having illegal widening of the Cavzo Cantza bund Santo Estevam,Jua tiswadi-Goa has been undertaken without relevant permission from some important authority the owner of the bund the comunidade of Jua the CRZ .It is a serious violation of the costal Regulation Zone notification as it falls in the NDZ and the destruction of the environment under the Environment protection Act.

Requesting for the classification of the survey numbers

57,56,58,61,60,63,62,65,66,67,68,80,75,76,79,81,82,85,86 which forms the part of the Cavzo Cantza bund that this numbers attracts CRZ notification 2011



O/o. Member Secretary
Goa Coastal Zone Management Authority
Dempo Towers, 3rd Floor,
Patto Panaji Goa 403001
Ph : 2438511

40

Please rectify immediately the bunds which have gone beyond 4 meters which clearly indicate the hidden agenda of converting these bunds into road .hence requesting your authority too immediately, stop illegal activity and encroachments in the paddy field and Kazan land carried by the Government of Goa, Panchayat or any other private body and institution.
You are requested to urgently identify the violation of the act and to restore the bund to its original state and prevent further destruction of the environment.

Thanking you
Yours truly

D. J.
Dominic Sequera

From:

Dated 19th Nov 2015

Dominic Sequeira
St.Stephen Church
Santo Estevam,
Illhas-Goa

To,

The Member Secretary,
Goa Coastal Zone Management Authority,
3rd Floor,Dempo Tower-Patto
Panjim -Goa

- Subject: Illegal widening of Cavzo Cantza bund destruction of kasan land, paddy field, Mangroves and violation of Bio-diversity and costal regulation Zone-1 undertaken recently a few months.
Ref: Letter dated 3rd Nov 2015 requesting for the classification of the CRZ notification as per 2011

Sir,

Further to the letter dated 3rd Nov 2015 to your office requesting for the classification of the survey numbers coming under Palni bund.

- Your office has carried out the inspection on the Palni bund on 13.11.2015 after which inspection was done of the recently carried out bund repairs having illegal widening of the Cavzo Cantza bund Santo Estevam,Jua tiswadi-Goa has been undertaken without relevant permission from some important authority the owner of the bund the comunidade of Jua the CRZ. It is a serious violation of the costal Regulation Zone notification as it falls in the NDZ and the destruction of the environment under the Environment protection Act.
-

Ames
19/11/15
O/o. Member Secretary
Goa Coastal Zone Management Authority
Dempo Towers, 3rd Floor,
Patto Panaji Goa 403001
Ph : 2438511

Requesting for the classification of the survey numbers
57,56,58,61,60,63,62,65,66,67,68,80,75,76,79,81,82,85,86 which forms the
part of the Cavzo Cantza bund that this numbers attracts CRZ notification 2011

Please rectify immediately the bunds which have gone beyond 4 meters which
clearly indicate the hidden agenda of converting these bunds into road .hence
requesting your authority too immediately, stop illegal activity and
encroachments in the paddy field and Kazan land carried by the Government of
Goa, Panchayat or any other private body and institution.


You are requested to urgently identify the violation of the act and to restore the
bund to its original state and prevent further destruction of the environment.

Please find attachment of

Photocopy taken on 31/5/2015.

CD copy of the recording.

Photocopy of Bund 31/5/ Nov 2015.


Yours truly

From:
Dominic Sequeira
St.Stephen Church
Santo Estevam,
Illhas-Goa

Dated 19th Nov 2015

To,
The Chairman,
Goa State Pollution Control Board,
3rd Floor,Dempo Tower-Patto
Panjim -Goa

Subject: Illegal widening of Palni bund and Cavzo Cantra Destruction of kasan land, paddy field, Mangroves and violation of Bio-diversity and costal regulation Zone-1 undertaken recently a few months.

Sir,

It is to bring to your notice that the Goa Coastal Zone Management Authority has already carried out inspection of both this bunds on 13/11/2015 . this survey numbers 212,210,207,208,193,191,196,165,211,192,167 that comes under the Palni bund and this survey numbers 57,56,58,61,60,63,62,65,66,67,68,80,75,76,79,81,82,85,86 which forms the part of the Cavzo Cantza bund this numbers all attracts CRZ notification 2011 at Santo Estevam, Jua Tiswadi-Goa.This Palni and Cavzo Cantza has gross violations no permission from authorities like the owner of the bund the comunidade of Jua the CRZ .It is serious of which complaint were failed to various concern officers and a case has been failed in the NGT of Palni bund and Cavza Cantza will follow also.

19/11/15
Goa State Pollution Control Board
EPC, Patto Plaza
Panaji, Goa - 403-001

Both this bunds has serious violation of the Coastal Regulation Zone notification as it falls in the NDZ and the destruction of the environment under the Environment Protection Act

Please rectify immediately the bunds which have gone beyond 4 meters which clearly indicate the hidden agenda of converting these bunds into road .hence requesting your authority too immediately, stop illegal activity and encroachments in the paddy field and Kazan land carried by the Government of Goa, Panchayat or any other private body and institution.

You are requested to urgently identify the violation of the act and to restore the bund to its original state and prevent further destruction of the environment.

Please find attachment of

Photocopy taken on 16th Feb 2015 of Palni Bund

Photocopy of Cavzo Cantra Bund 31/5/2015.

Yours truly



Dominic Sequeira

GOA STATE POLLUTION CONTROL BOARD

गोंय राज्य प्रदुशण नियंत्रण मंडळ

(An ISO 9001-2008 Certified Board)

Phone Nos : 91-832-2438567, 2438528
2438563, 2438550

Tel / Fax No. : 0832-2438528



Speed Post

Email id's :

Member Secretary, GSPCB - ms-gspcb.goa@nic.in
Environment Engineer, GSPCB - ee-gspcb.goa@nic.in
Scientist, GSPCB - scientist-gspcb.goa@nic.in
Asst. Env Engineer, GSPCB - aee-gspcb.goa@nic.in
Asst. Law Officer, GSPCB - alo-gspcb.goa@nic.in

No. 1/10/14- PCB/ 2094

9/12/2015

To,
The Member Secretary,
Goa Coastal Zone Management Authority,
3rd Floor, Dempo Tower,
EDC Patto Plaza,
Panaji Goa.

Sub : Reg illegal widening of Palni bund and Cavzo cantra destruction of kasan land ,
paddy field, mangroves and violation of Bio-diversity and coastal regulation
zone-I undertaken recent a few months.

Sir,

The Board is in receipt of complaint dated 19/11/2015. from Mr. Dominic Sequeira,
St Stephen Church, Santo Estevam, Ilhas-Goa, with regard to subject cited above.

In this regard, you are requested to take appropriate action in the matter under
intimation to this office.

Yours faithfully,

(Sanjeev Joglekar)
Environmental Engineer
For Goa State pollution Control Board

Encl: As above

CC to:

1. Mr. Dominic Sequeira, St Stephen Church, Santo Estevam, Ilhas-Goa ... for information.
2. Office file.
3. Guard file.

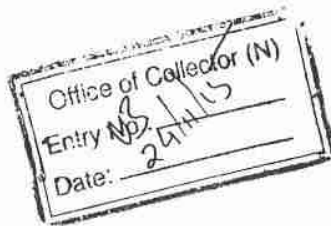
31st Nov 2015

From:

Dominio Sequeira
St. Stephen Church
Santo Estevam,
Illhas-Goa

To,

The Collectorate north,
Tiswadi-Taluka,
Panjim-Goa



Subject: Illegal widening of Cavzo Cantza bund destruction of kasan land, paddy field, Mangroves and violation of Bio-diversity and costal regulation Zone-1 undertaken recently a few months.

Sir,

The recently carried out bund repairs having illegal widening of the Cavzo Cantza bund Santo Estevam, Jua tiswadi-Goa has been undertaken without relevant permission from some important authority the owner of the bund the comunidade of Jua the CRZ and the Bio-Diversity Board has a number of serious violation of the costal Regulation Zone notification as it falls in the NDZ and the destruction of the environment under the Environment protection Act.

Please rectify immediately the bunds which have gone beyond 4 meters which clearly indicate the hidden agenda of converting these bunds into road .hence requesting your authority too immediately, stop illegal activity and encroachments in the paddy field and Kazan land carried by the Government of Goa, Panchayat or any other private body and institution.

You are requested to urgently identify the violation of the act and to restore the bund to its original state and prevent further destruction of the environment or face legal action

The document of the widening of Cavzo Cantor bund.

The photocopy attached behind as on 31/5/2015

The Signature of Villagers at attached behind

Yours truly

D.S.
Dominio Sequeira

From:

Dated 24th Nov 2015

Dominic Sequeira
St. Stephen Church
Santo Estevam,
Illhas-Goa

To,

The Mamlatdar,
Tiswadi-Taluka,
Panjim -Goa

Subject: Illegal widening of Cavzo Cantza bund destruction of kasan land, paddy field, Mangroves and violation of Bio-diversity and costal regulation Zone-1 undertaken recently a few months.

Sir,

The recently carried out bund repairs having illegal widening of the Cavzo Cantza bund Santo Estevam Jua tiswadi-Goa has been undertaken without relevant permission from some important authority the owner of the bund the comunidade of Jua the CRZ and the Bio-Diversity Board has a number of serious violation of the costal Regulation Zone notification as it falls in the NDZ and the destruction of the environment under the Environment protection Act.

Please rectify immediately the bunds which have gone beyond 4 meters which clearly indicate the hidden agenda of converting these bunds into road .hence requesting your authority too immediately, stop illegal activity and encroachments in the paddy field and Kazan land carried by the Government of Goa, Panchayat or any other private body and institution.

You are requested to urgently identify the violation of the act and to restore the bund to its original state and prevent further destruction of the environment.

The document of the widening of Cavzo Cantor bund.

The photocopy attached behind as on 31/5/2015

The Signature of Villyans attested behind

Yours truly

DS
Dominic Sequeira





OFFICE OF THE MAMLATDAR OF TISWADI TALUKA PANAJI – GOA

Collectorate Building, Ground Floor, Panaji – Goa.

Phone No. 832 2425533

e-mail id: mam-tiswadi.goa@nic.in

No. 6/AK/25/Ten-Asso/9615/2015/2861

Date: 30.11.2015.

To,
The Executive Engineer,
Soil Conservation Division,
Directorate of Agriculture,
Tonca - Caranzalem.

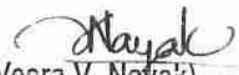
Sub: Illegal widening of Cauzo Cantra bund, destruction of Khazan land, paddy field, mangroves, violation of Bio-diversity and Coastal Regulation Zone – I undertaken recently for few months.

Sir,

Please find enclosed herewith a copy of letter dated 24.11.2015 received from Mr. Dominic Sequeira, r/o St. Stephen Church, St. Estevam, Ilhas – Goa on the subject cited above.

In this context, you are requested to depute your technical officials to inspect the said bund and submit the inquiry report to this office, within 7 days from the receipt of this letter.

Yours faithfully,


(Veera V. Nayak)

Mamlatdar of Tiswadi Taluka,
Panaji - Goa.

Encl: As above.

Copy to:

Mr. Dominic Sequeira, r/o St. Stephen Church, St. Estevam, Ilhas – Goa for information.

Through the Talathi of St. Estevam for service and return.

From-

Dated 21st Nov 2015

Dominic Sequeira
St. Stephen Church
Santo Estevam,
Illhas-Goa

To,
The Soil Conservation Division,
Directorate of Agriculture,
Krishi-Bhavan, Tonca-Caranzalem,

Subject. Illegal widening of Cavzo Cantza bund destruction of kasan land, paddy field, Mangroves and violation of Bio-diversity and costal regulation Zone-1 undertaken recently a few months.

Sir,

The recently carried out bund repairs by your office having illegal widening of the Cavzo Cantza bund Santo Estevam Jua tiswadi-Goa has been undertaken without relevant permission from some important authority the owner of the bund the comunidade of Jua the CRZ and the Bio-Diversity Board has a number of serious violation of the costal Regulation Zone notification as it falls in the NDZ and the destruction of the environment under the Environment protection Act The recently carried inspection show that this entire bund falls in the CRZ -1 and NDZ.

Please rectify immediately the bunds which have gone beyond 4 meters which clearly indicate the hidden agenda of converting these bunds into road .hence requesting your authority too immediately, stop illegal activity and encroachments in the paddy field and Kazan land carried by the Government of Goa, Panchayat or any other private body and institution.

You are requested to urgently identify the violation of the act and to restore the bund to its original state and prevent further destruction of the environment or face the legal action.

The document of the widening of Cavzo Cantor bund.

The photocopy attached behind as on 31/5/2015

The signature of villager's attached behind .

Yours truly

D.Sey
Dominic Sequeira

21/11/15
DESPATCH CLERK
DIRECTORATE OF AGRICULTURE
(KRISHI BHAVAN)

Signature for the cause in saving Cavzo Cantra bund

Alino F. Ferras

Doreen Ferrao

Jose Alfonso

Elitha Saldanha

Hilda D'Souza

Santana Rodrigues

Sheryl Devi

Ann. Vaila

Jesusina Silveira

Emy. Atonso

Aurora Fernandes

Rosy Gomes

Jenica Rodrigues

Mira Ferrandes

Eva Ferras

Anna Coelho

Limola Alfonso

Josephine Menezes

JOE GOMES

DEAN SARDANHO

Ferras
D Ferras

Alfonso

Saldanha

D'Souza

Rodrigues

Devi

Vaila

Silveira

E. Atonso

Fernandes

Gomes

Rodrigues

Mira

Ferras

Coelho

L. Alfonso

Menezes

Gomes

Sardanha

Signature for the cause in saving Cavzo Cantra bund

Bernadette Cortez

Harrison

X. Gomes L. da Gama

Alfonso

Josefine Afonso

Alfonso S. Afonso

Botelho

Maria Saldanha

M. Saldanha

Cabral

Mendes

Martha Mayer

Bellara Afonso

Afonso

Josephina Dias

Dias

Ganda Dias

Dias

Maria Alphonso

Alphonso

B. Saldanha P. S. L. S. L.

Belencina

Maria R. C. Fernandes

Fernandes

Gloria Alphonso

Alphonso

Vera Dias

Dias

Jenely Fernandes Fernandes

Duple Dias

Dias

Concine Farias

Farias

Saldanha Botelho

Botelho

Paulo Lourenco

Lourenco

Claudia Botelho

Botelho

Saldanha

Saldanha

M. Afonso

Mrs. Shariel Afonso	Afonso
Georgy Afonso	Afonso
Joshua Afonso	Josh
Denís Dias	Dias
Zina Dias	<u>Dias</u>
Maria Travasso	<u>Travasso</u>
MATHIAS TRAVASSO	A
Domingos X. Monteiro	Monteiro
Annie Margus	Margus
Isabel Lobo	Lobo
Mr. MATHW C. MARCHON	Marchon
Jose Lobo	Lobo
Jessie Fernandes	Fernandes
Lilka Fernandes	Fernandes
Maria Ferrão	Ferrão
MARIO PEREIRA	Pereira
Anna Pereira	Pereira

Signature for the cause in saving Cavzo Cantra bund.

Perpetua D' Cunha

Eddy Lobo

Supriana D. Silva

Gladys Luvao.

Lourdimia Riburo

Aguina Lobo

Mary Pereira

Francaisca R. Pereira

Sandra D'mello

○ Fatima Gomes

Angelica Afonso

Selzita S. Vieira

Marineta Menezes

Flegy Mattos

Francis X. Ribeiro

Tommy Mattos

Suzucarina Mascarenhas

Joaquim Rodrigues

Karine Menezes

Quency Monserrate

Teozinha Monterio

Meloiza Silveira

Mylin Silveira

Delisha Fernandes

Jonas Afonso

Ruby G. Fernandes

~~D' Cunha~~

~~Lobo~~

~~S. D. Silva~~

~~Luvao~~

~~Riburo~~

~~Lobo~~

~~Pereira~~

~~Pereira~~

~~D'mello~~

~~Gomes~~

~~Afonso~~

~~Vieira~~

~~Menezes~~

~~Mattos~~

~~Ribeiro~~

~~Mascarenhas~~

~~Rodrigues~~

~~Menezes~~

~~Monserrate~~

~~Monterio~~

~~Silveira~~

~~Silveira~~

~~Fernandes~~

~~Afonso~~

~~Fernandes~~

Signature for the cause in saving Cayzo Cantra bund

- 1- Chiara Gomes 
- 2. WILFRED  WILFRED
- 3. Joao Beliano Dias  Beliano Dias
- 4. Felix Ferrao  Ferrao
- 5. Rifa Dmello  Dmello
- 6. Alifa Dmello  Dmello
- 7. Tony Fernandes  Fernandes
- 8. SAINORA FERNANDES.  FERNANDES.
- 9. RYAN ALFONSO  ALFONSO
- 10) ANSON GOMES  GOMES
- 11) AERON SILVEIRA  SILVEIRA
- 12. Stephen F. Fernandes  Fernandes
- 13. Nifa Menezes  Menezes
- 14. JOEL DMELLO  DMELLO
- 15. JASON ALPHONSO  ALPHONSO
- 16. IREYON ALPHONSO  ALPHONSO
- 17. FRADEM GOMES  GOMES
- 18. Calvin Alfonso  ALFONSO
- 19. Princy deas Nelson  ALFONSO
- 20. Selner Silveira  Silveira
- 21. Klayna Marques  Marques
- 22. BERTINI MONTEIRO  Monteiro
- 23. Selwyn Alfonso  ALFONSO
- 24. Ana. M. Dias  Dias
- 25. Royela D'agosta  Dagosta
- 26. Glinda Saldaña  Saldaña

Signature for the cause in saving Cavzo Cantra bund

~~APPEY~~
 Hemenes
 Gerakina Ribeiro
 Priscilla Menezes
 Marissa Roberto
 Esmiliana Torres
 Nelinha Dias
 Apolonia Afonso
 Martinha Dias
 Joanita Liabo

Cneilda Silveira

Milagrosa Monteiro

Joanita D'Costa

Marita D'Costa

Esja Dias

Bozene Silveira

Merciana Silveira

Ama Cleia

Ravina

Jenifer Afonso

-Merida Varela

Eusebio Menezes

Brenda Menezes

Hazel Marques

Menezes

~~Ribeiro~~

~~Boys~~

~~Dias~~

~~Afonso~~

~~Dias~~

Joanita

Olivia

Monteiro

~~Joana~~

D'Costa

~~Dias~~

~~Silveira~~

~~Silveira~~

~~Afonso~~

~~Rias~~

~~Afonso~~

Moreira

~~Joana~~

~~Menezes~~

Marques

Signature for the cause in saving Cavzo Cantra bund

Blossom Afonso
 Celilia Menezes
 Maria Monteiro
 Remediano Dias
 Valanky Botelho
 Maria V. Gomes
 Fiona Afonso
 Joanita Lobo
 Nancy Godinho
 Aneta Ribeiro
 Helena Pereira
 Nelly Fernandes
 Laura Rodrigues
 Maria G. Menezes
 Maria Estelade Botelho
 Marikim Afonso
 Rosa. Silveira
 Flávia Lopes
 Meliza Silveira
 Fida Rebelo
 Felizinho Ferrão
 Thereza Nunes
 Nina Dias
 Gjustino Marques
 Ramia Colaco

Safema
 CM
 Marlene
 Dias
 Botelho
 Afonso
 Lobo
 Godinho
 Ribeiro
 Fernandes
 N. F. Dias
 Lobo
 Menezes
 Botelho
 MAfonso
 R. Lobo
 F. Lopes
 R. Lobo
 F. Rebelo
 Afonso
 Menezes
 Dias
 G. Marques

Signature for the cause in saving Cavzo Cantra bund

Glynis Alphonso
 Senta Rodrigues
 Emerico Rodrigues
 Lenita Dias
 Nila Saldanha
 Patricia Ferreira
 Greta Silveira
 Luzia de Melo
 Ave Dias
 Nisha Monteiro
 Babra Colaco
 Milagrina Dsa
 Chur.elle #101
 Evelyn
 Candalina Vaz
 Yuccurina Marques
 Lydia Rodrigues
 Lurcina Ferreira
 Socorro Aupa
 Siena Antao
 Janette Ferreira
 Cynthia Rodrigues
 Ana Afonso
 Nelson Silveira
 Savia Silveira
 MANUELA DSA

Alphonso
 Rodrigues
 Rodrigues
 Dias
 Saldanha
 Ferreira
 Silveira
 L. de Melo
 ADias
 Monteiro
 Colaco
 Dsa
 Evelyn
 Vaz
 Rodrigues
 Ferreira
 Aupa
 Antao
 Ferreira
 Rodrigues
 Afonso
 Silveira

Signature for the cause in saving Cavzo Cantra bund

Artemisia Rangel
Maria Botelho
Nadira Varela

Rangel
MBotelho
Varela
PR

Ana Lúcia Rodrigues
Rosa M. Gomes
Emett Dias
Prepatina Silveira
Vivian Afonso
Celzita Marques

Gomes
Dias
Silveira
Afonso
Marques

Andrea Marques
Alicia Matos
Eubemena Rodrigues
Flávia Silveira
Olga Silveira
Ana Ribeiro
Santa Rodrigues
JONAS VARELA

Marques
Matos
Rodrigues
Silveira
Silveira
Ribeiro
Rodrigues
Varela
Varela

Alicia Di Cole

Neola Varela
Francis Varela
Swirel Fernandes
Shannon Saldanha
Ashwin Varela
Aneyl Gonçalves

NMVarela Varela
Fernandes
Saldanha
Varela
Gonçalves

Signature for the cause in saving Cavzo Cantra bund

- | | |
|---------------------------|--------------------|
| 1) Caetano Varela | <i>[Signature]</i> |
| 2 Miguel Zor | <i>[Signature]</i> |
| 3) José A. F. Pereira | <i>[Signature]</i> |
| 4) Savia Costa e Monteiro | <i>[Signature]</i> |
| 5. Alvaro Seleceira | <i>[Signature]</i> |
| 6 Apolinario Haezuo | <i>[Signature]</i> |
| 7 Albert D'Costa | <i>[Signature]</i> |
| 8. Ambrosio Gomes | <i>[Signature]</i> |
| 9 Marcus A. Raquel | <i>[Signature]</i> |
| 10 Francisco Ribeiro | <i>[Signature]</i> |
| 11 Domestino Ferrao | <i>[Signature]</i> |
| 12 Louis J. Afonso | <i>[Signature]</i> |
| 13 Milagros Lopes | <i>[Signature]</i> |
| 14 Elvira Silveira | <i>[Signature]</i> |
| 15 Pedro Anttonio Gomes | <i>[Signature]</i> |
| 16 Devo Ferrao | <i>[Signature]</i> |
| 17 Sellina Gomes | <i>[Signature]</i> |
| 18 Bernardeta Afonso | <i>[Signature]</i> |
| 19 Ana V. Mello | <i>[Signature]</i> |
| 20 Gvenetl Gouschis | <i>[Signature]</i> |
| 21 Severina Fernandes | <i>[Signature]</i> |
| 22 Victoria Pina | <i>[Signature]</i> |
| 23. Tommy Mattis | <i>[Signature]</i> |
| 24 Constante C. Varela | <i>[Signature]</i> |
| 25 Francis Marque | <i>[Signature]</i> |
| 26 | <i>[Signature]</i> |

Signature for the cause in saving Cavzo Cantra bund

T. naci La Gomes

Olivia Gomes

Azra Gomes

Rifa Rodrigues

Magdalena Monteiro

Luiza Gomes

Joyline Monteiro

Elsa Fernandes

Grieta Fernandes

Dna Elfrida Ferreira

Maria Selvadour Ferreira

Adeli A. Pereira

Maria Luiza P. Torres

Elizabeth Dias

Romana Dias

Alva Monteiro

Lolita Gomes

Antonieta Monteiro

Valeria Pereira

Vanessa Pereira

Melissa Pereira

Esmeralda Gomes

Janaica Fernandes

Perpetua Ferreira

Ana Rita Lobo

Abigail Mary

Sarita Mary

Carolina Ribeiro

Rita Almeida

Vera Almeida

Te...
P...

v. Pe...
vau...
Melissa...

E. Gomes
J...
P. Ferreira
A. Rita
Mary
S. Mary

Signature for the cause in saving Cavzo Cantra bund

Fátima Pereira
 Basilisa Gomes,
 Verónica Rodrigues
 Perpétua Fonseca
 Evelyn Monteiro
 Jayset Gomes
 Amelina Rodrigues
 Anabela Menezes
 Perpétua Menezes,
 Nicolau V. Afonso
 Asantxa Rangel
 Senda Ribeiro
 Philomena Afonso
 Terma Dias
 Eleny Costa
 Elvira Costa
 Lucinda Dias
 Nesele Afonso
 Rheana Botelho
 Aletta Silveira
 Estívia Silveira
 Suseirina Rangel
 Jovane Paredes
 Kolina Marques
 Nífa Silveira

L. Pereira
 B. Gomes
 V. Rodrigues
 A. Fonseca
 E. Monteiro
 J. Gomes
 R. Rodrigues
 A. Menezes
 P. Menezes
 N. V. Afonso
 A. Rangel
 S. Ribeiro
 P. Afonso
 T. Dias
 E. Costa
 E. Costa
 L. Dias
 N. Afonso
 R. Botelho
 A. Silveira
 E. Silveira
 S. Rangel
 J. Paredes
 K. Marques
 N. Silveira

Jaylyn Fereao

Ana Pires

Delcy Menezes

Edula Afonso

Larissa Pires

Julio Pires

Leison Pires

Olysamme Pires

Geisoldir Ribeiro

John W. Fernandes

Edna Mensewente

Luizine

Bertha Mensewente

Elida Afonso

Maria Antoneta Menezes

~~Lucas~~

~~Alves~~

~~Menezes~~

E. Afonso

~~Lucas~~

~~Alves~~

~~Menezes~~

~~Lucas~~

~~Alves~~

~~Menezes~~

~~Lucas~~

~~Alves~~

~~Menezes~~

~~Afonso~~

AMenezes

Signature for the cause in saving Cavzo Cantra bund

- | | |
|-------------------------|------------|
| 1) Elizabeth Mattos | E Mattos |
| 2) Sebastian Marques | S Marques |
| 3) Bunny De Sa | Bdel |
| 4) Naemia De Sa | |
| 5) Felicidade Rodripis | F Rodripis |
| 6) Silvana Gomes | S Gomes |
| 7) Vai Lankani Funes | Juno |
| 8) Otacilio Ferraz | O Ferraz |
| 9) Agneta Ferraz | A Ferraz |
| 10) Ceuilhermina Mattos | C Mattos |
| 11) Rosalia Vaz | R Vaz |
| 12) Theopista Fds | T Fds |
| 13) Celina Lina Fds | C Lina Fds |
| 14) Rita | R |
| 15) Fatima Ferraz | F Ferraz |
| 16) Flavina Ribeiro | F Ribeiro |
| 17) Ana Afonso | A Afonso |
| 18) Suenirina Gomes | S Gomes |
| 19) Leopoldina Dias | L Dias |
| 20) Ihu Vank | Ihu |
| 21) Iwan Vank | Iwan |
| 22) Belinda Afonso | B Afonso |
| 23) Josefina Afonso | J Afonso |
| 24) Mrs Santa Ribeiro | S Ribeiro |

Signature for the cause in saving Cavzo Cantra bund

Esmeralda Afonso
Matilde Rodrigues

M. E. Afonso
M. E. V. Rodry
M. E. Afonso

Louly Fernandes
Idalina Pereira
Tezibel Teriandis

I. Perie
M. E. C.

Filomena Gomes
Bertrudes Gomes

Gomes

Charlotte Tenao
Melita Paup.d

Tenao
W. Paup.d

○ Astrida D. Costa
Eliana menezes

A. Costa
E. menezes

Francy Afonso
Aurelia M. Roubes

Afonso

Albertina Pereira
Nelli Fernandes

Afonso

Benta Rodrigues
Matilda Tenao

Pereira
Rodry

Diana Monteiro
Maria Fernandes

M. T.
Tenao

Monteiro

Vera Tenao
Tia Rodriguez

M. F.

Tenao
R. C.

Therеза Gomes

Gomes

Luana Da
Rosa

Da
Rosa

Bella Dias

M. Dias

Carolina D'Costa

Dias

C.

Signature for the cause in saving Cavzo Cantra bund

Ivan Dia

Verita Kato

Jose Manal

Matias Saldanha

Melina Dire

Veronica Pires

Glady's Alfarero

Erica Maria S. Dantes

Bernardita Dias

Florencia

Cristina Din

Thais

Jizelle

Alina

Vass

Fatima Marques

Anthony Marques

Louretta Varella

Erica Ferrao

Lydia Ferrao

Norberto Silva

Signature for the cause in saving Cavzo Cantra-bund

Lupitina Varela	
Jaime Varela	EK
Michelle Silveira	Silveira
Perpetua Ferreira	P.F.
Acklin Fernandes	Acklin
Tresslyn Fernandes	Tresslyn
Eliza Silveira	Silveira
Alva Magalhães	Magalhães
Rita Almeida	
Matalina Ferreira	Ferreira
Rosaria Costa	Costa
Bertha Costa	Bertha
Evel Afonso	Afonso
Elvino Afonso	Afonso
Molina Dias	M. Dias
Brita Gomes	Gomes
Filomena Dias	F. Dias
Olvy Dias	O. Dias
Hendry Dias	H. Dias
Sena Dias	S. Dias
Cililia Dias	C. Dias
Wesley Dias	W. Dias
Sopeçosa Dias	S. Dias

Signature for the cause in saving Cavzo Cantra bund

Sonilla Dias
 Gloray Afonso
 José Marques
 Filomena Almeida
 Alexia Silveira
 Linda Sanfrancisco
 Anísta Sanfrancisco
 Susuine Dinello
 Maria Fernandes
 Diggie Roduim
 Emercio Motos
 Maria Gale
 Jamesi Mung
 Antoni Rui
 Thomas Dias
 Beate J. Louis
 Santelina - P. Godinho
 Fiona Monteiro
 Matias Meys
 J. A. Crest
 Jac/Us. i. by
 Estevan Godinho
 Savana Dias
 Paraj Afonso
 Ana Pereira

Dias
 Marques
 Almeida
 Silveira
 Sanfrancisco
 Dinello
 M. Foles
 Roduim
 Motos
 Gale
 Mung
 Rui
 T. Dias

J. Louis
 Godinho
 Monteiro
 Meys
 Crest
 Godinho
 Dias
 Afonso
 Pereira

Signature for the cause in saving Cavzo Cantra bund

Silivana Afonso
 Irina Dias
 Sucarra Fernandes
 Merician Afonso
 Ana Magalhaes
 Sushila Silveira
 Thureza Menezes
 Mena Peleice
 Collin Dias
 Thomas Silveira
 Nazareth Afonso
 Irene Afonso
 Rosita Saldanha
 Rosmin Rego
 Romina Rego
 Lourdes Dias
 Kennedy Dias
 Rachel Dias
 Anna Ferraz
 Joao Aires
 Felix Monteiro
 Jennifer Co Monteiro
 Edwin Rodrigues
 Berlina Rodrigues

Silveira
 Dias
 Fernandes
 merces
 Magalhaes
 Silveira
 Menezes
 M. Peleice
 Dias
 Silveira
 Afonso
 Afonso
 Saldanha
 R. Rego
 R. Rego
 Dias
 K. Dias
 R. Dias
 Ferraz
 Joao Aires
 Monteiro
 Monteiro
 Rodrigues
 Rodrigues

Signature for the cause in saving Cavzo Cantra bund

Santa Mas Arenhas	<u>V. Vale</u>
Conchita Mas Arenhas	<u>Conchita</u>
Cindy Mas Arenhas	<u>Cindy</u>
Mina Afonso	<u>Mina Afonso</u>
Luiza Lobo	<u>Luiza</u>
Margarida Vg	<u>Margarida</u>
Mayzel Dias	<u>Mayzel</u>
Yvette Meneses	<u>Yvette</u>
Rena Silveira	<u>Rena</u>
Jennifer Fernandes	<u>Jennifer</u>
Cecilia Crasto	<u>Crasto</u>
Brenda Saldanha	<u>B. Saldanha</u>
Robinson D'Mello	<u>D'Mello</u>
ARONNY SILVA	<u>ARONNY</u>
Claudia Coelho	<u>Coelho</u>
Johns Fernandes	<u>Johns</u>
Rosalina D'Mello	<u>R. D'Mello</u>
Silomena Dicio	<u>Silomena</u>
Manisha Gaonkar	<u>Manisha</u>
Agatha Fernandes	<u>Agatha</u>

Signature for the cause in saving Cavzo Cantra bund

Shalita D'Mello -

Maria Dias
Sandra Fernandes

Joyce silveira
~~JOHN SILVEIRA~~

Siona Aguiar
Benadeth Lobo

D'Mello
Dias
Fernandes

Shalita
Aguiar
Lobo

INFORMATION ISSUED UNDER RTI ACT, 2005

76

St Estevam wetlands: reclamation of embankment - Cavso Cantor bundh

The site at St Estevam Cavso Cantor bundh was inspected on 19 January 2016. The purpose was the classification of Survey nos. 56, 57, 58, 60, 61, 62, 63, 65, 66, 67, 68, 75, 76, 79, 80, 81, 82, 85, 86 in St Estevam, Jua, Tiswadi, Goa. The inspection was conducted based on a request by Fr Domnic Sequeira from St Estevam.

1. The inspection was started at the sluice gate at Cupa. From this point, the embankment extends northwards, then turns towards east, then prolongs south-east, and ends in the vicinity of the village temple in the east. The total length of the bundh is about 2.6 kilometres.

2. The entire area constitutes an intricate network of creeks, backwaters and marshy lagoons where mangroves are identified. The ancient embankment runs across this ecosystem, but encircles a large expanse of paddy fields, now lying fallow. A water body is located within this embankment; it has a connection with the riverine system through a sluice gate at Cupa in the west.

3. Outside the embankment, some saline water bodies are identified on the west, north and east. Dense and luxuriant mangrove forests can also be observed. The width of these mangrove stretches vary from 125 metres to about 325 metres. Its length is of the order of 550 metres on the western side and 1.5 kilometres along the eastern flank.

4. The entire low-lying mangrove area is tidally influenced; as such, the setup can be classified under the category of CRZ I, an ecosystem that is ecologically sensitive.

5. The DSLR plan confirms the above observation. The entire area is low-lying and was used for paddy cultivation in the past. The lowlands are prone to inundation by saline water; however the Cavso Cantor bundh that surrounds the lowlands kept the river water away. The original / pre-existing embankment (bundh) that has withstood the test of time is around 2 meters wide, shown on the DSLR plan.

6. Haphazard human activity was observed during the site visit on 19 January 2016. This was noted from the Cupa sluice gate northwards. Heaps of laterite boulders and road metal was lying along the bundh. The bundh is / has been reclaimed by dumping red soil on the surface of the original embankment.

7. A retaining wall composed of boulders – concrete is being constructed from Cupa sluice gate northwards. The height of this vertical embankment would be around 2.5 metres, if completed. This would mean that the top surface of the wall will be at about 1.0 – 1.5 metres above the high tide level.

8. In comparison to the DSLR plan, the embankment is now being widened to a minimum of 6 to 7 meters by filling it with laterite mud. A large number of mangroves have been cut to make place for the wall.

Public Information Officer
(CCZMA)

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9. The original embankment is lined with fringing mangroves some of which can still be seen at present; further north, new trenches are made, ostensibly for the foundations of the new wall. Here again, mangroves are uprooted.

10. The Google Earth (GE) satellite images can be used for comparisons. The GE image of December 2013 reveals that the entire area is by and large natural and where the embankment can barely be seen; a mangrove fringe is identified. In comparison, the GE image of April 2015 clearly indicates that the embankment has been reclaimed over a continuous distance of about 2.6 kilometres. This exercise also shows that the human activity of mud deposition along the levee started in or after December 2013.

11. The comparative descriptions of GE images are given on page 3. The relevant photographs depicting various scenarios and human interference at the site inspected are given on pages 4 and 5.

In summary,

(1) The entire lagoon / creek complex is influenced by the daily tides; saline water bodies are inhabited by a variety of fringing and scattered mangroves; dense mangroves forests are located west and east of the area, along the Mandovi River.

(2) Being ecologically sensitive, the entire mangrove back water ecosystem thus falls under the category of CRZ I.

(3) Unwarranted human interference in these backwaters is not permitted in such ecosystems; further, building activity that is underway lacks scientific validity.

(4) Irrespective of the CRZ category, the entire embankment also falls in the No Development Zone (NDZ).

(5) Therefore, tampering with an ancient bank within a tidal regime (and without approvals) is tantamount to gross violations of CRZ 2011 notification.

A. Mascarenhas

(Dr Antonio Mascarenhas, Member GCZMA)
20 January 2016

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Public Information Officer
(GCZMA)

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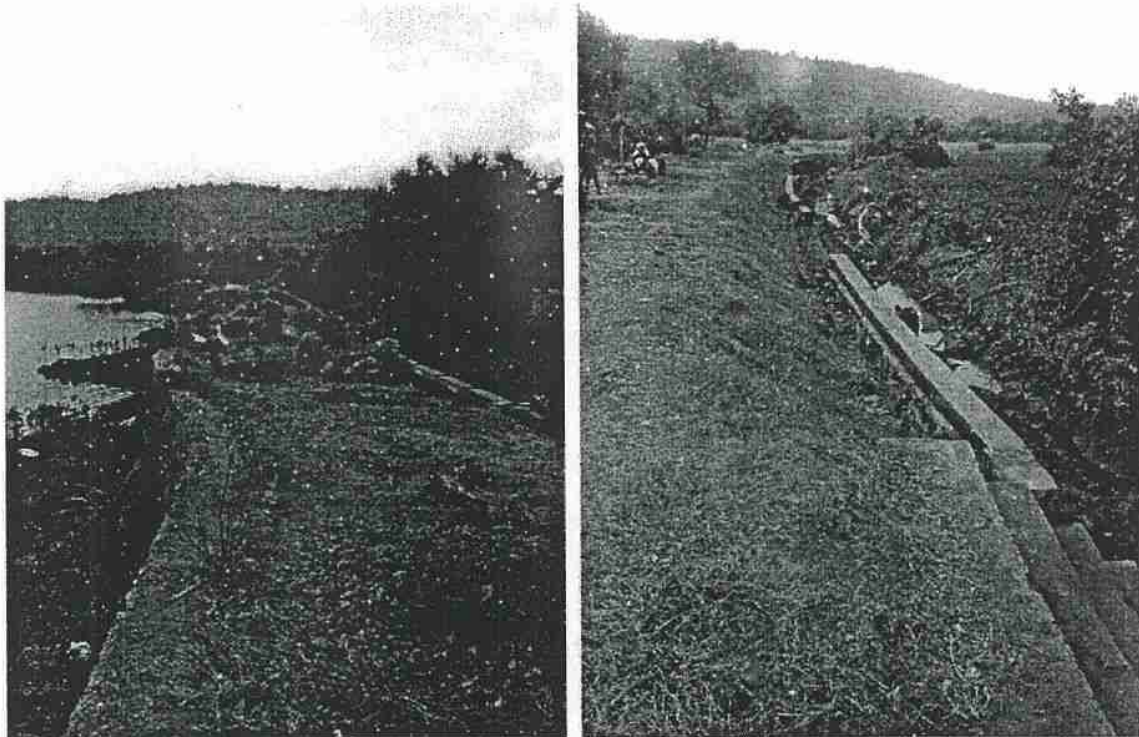


GE image 03/2015: Human interference along the Cavso Cantor embankment; the entire 2.6 km long 'bundh' has been reclaimed / filled with fresh lateritic mud (shown by arrows in yellow); dense mangrove strip along the Mandovi River is seen in the East and North.

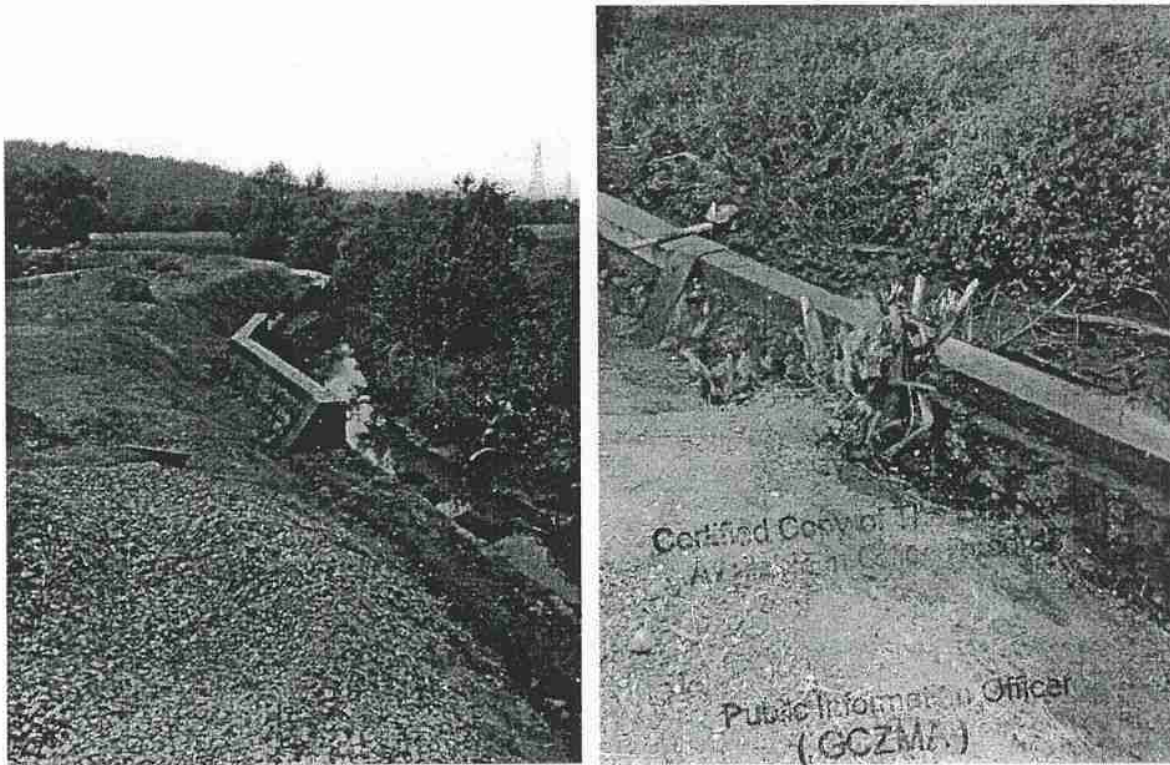


GE image 12/2013: The Cavso Cantor bundh as it appeared before the embankment was reclaimed; the entire wetland complex presents a natural landscape; the embankment marked by a continuous mangrove fringe can be faintly seen (shown by arrows in yellow).

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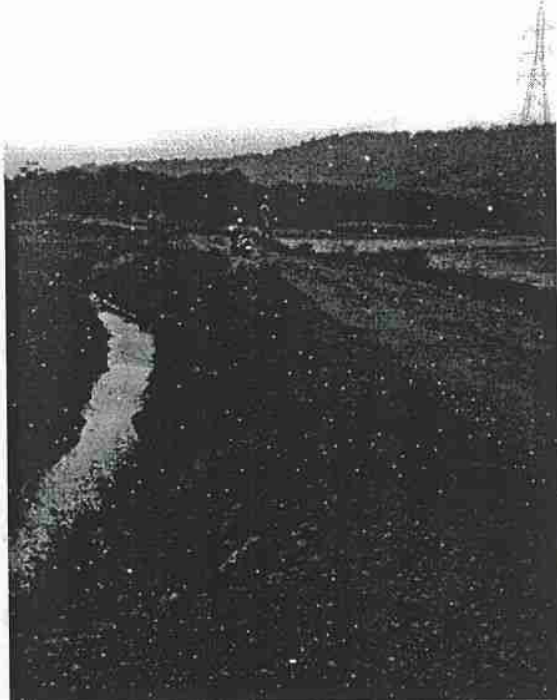


Left: A view from Cupa sluice gate; large boulders seen dumped for the on-going reclamation work. Right: Starting point of the new wall; smaller mangroves seen in the background; Mandovi River lies in the far background.

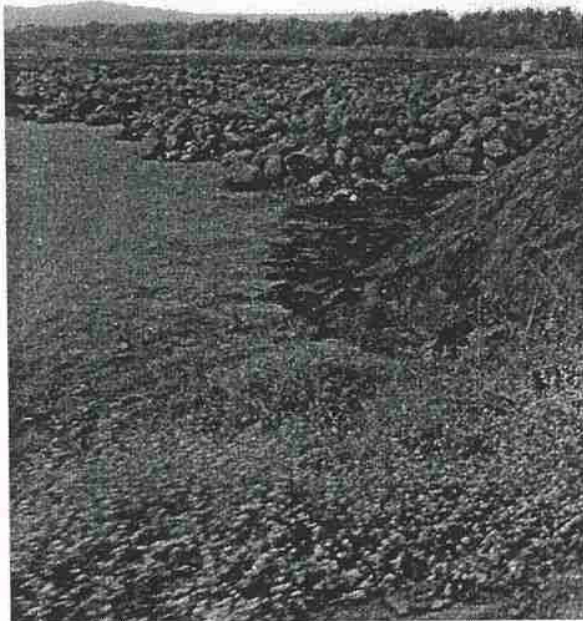


Left: About 100 metres from Cupa sluice gate; work on the rubble – concrete wall along the widened embankment; here, the embankment would be 6-7 metres wide, and about one metre above high tide level; mangrove fringe is still seen. Right: The trunk of a mangrove that is cut; smaller mangroves seen in the background.

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Left: Northern part of the embankment closer to the river; the wall all along the outer periphery of Cavso Cantor bundh is already built some years back. Right: The trench is dug for the foundation of the proposed works; the original embankment is completely buried by red mud.



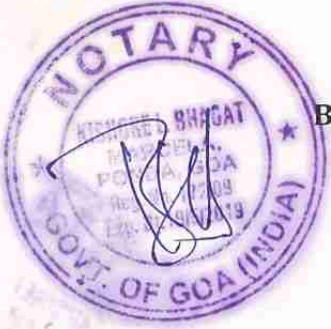
Large laterite boulders seen stocked at the eastern extremity of the Cavso Cantor bundh, about 100 metres from the village temple (along the main road); this material is transported to the site, about 2.6 km from here, via the new embankment.

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Public Information Officer
(GCZMA)

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Annexure R-7



BEFORE THE NATIONAL GREEN TRIBUNAL (WZ)

AT PUNE

APPLICATION NO. 35 OF 2016

Between

MATEUS SURESH SALDANHA & ORSAPPLICANTS

and

GOA COASTAL ZONE MANAGEMENT
AUTHORITY & ORSRESPONDENTSCompilation - I

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Place: St. Estevan, Goa

Date: 3.3.2016
Advocate for applicant

BEFORE THE NATIONAL GREEN TRIBUNAL(WZ)

AT PUNE

APPLICATION NO. ____ OF 2016

(under Section 14 and 15 of the National Green Tribunal Act 2010)

BETWEEN:

1. MATEUS SURESH SALDANHA, of
major age, Indian National,
resident of House No.12,
St.Francis-Jua, Tiswadi,
Goa. Ilhas-Goa 403106

2. MARIA MONTEIRO E DIAS, of
major age, Indian National,
resident of House No.561,
Palmar-Jua, Tiswadi,
Goa. Ilhas-Goa 403106

*Monteiro
Maria Monteiro e Dias*

3. EMITIA ANA RODRIGUES, of
major age, Indian National,
resident of House No.425,
Foro-Jua, Tiswadi,
Goa. Ilhas-Goa 403106

Emilia Ana Rodrigues

4. CYRIL SILVEIRA, of
major age, Indian National,
resident of House No.843,,
Palmar-Jua, Tiswadi,
Goa. Ilhas-Goa 403106

Cyril Silveira

..... ..APPLICANTS

AND

1. GOA COASTAL ZONE MANAGEMENT AUTHORITY

Through its Member Secretary
3rd Floor, Dempo Towers
Patto, Panaji, Goa 403 001

2. STATE OF GOA

Through its Chief Secretary
Government of Goa
Secretariat, Porvorim, Goa 403 001

Saldanha



NRD

3. **MAMLATDAR OF TISWADI TALUKA**
Government of Goa
Having office at Collectorate
Building, Panaji-Goa
4. **SOIL CONSERVATION DIVISION**
DIRECTORATE OF AGRICULTURE
Through Executive Engineer having office
At Krishi Bhavan, Caranzalem, Panaji, Goa
5. **THE COLLECTOR (NORTH)**
having office at Collectorate Building,
Panaji, Goa.
6. **DEPARTMENT OF FORESTS,**
Government of Goa,
Through the Chief Conservator of Forests,
Swami Vivekananda Road,
Panaji, 403 001 Goa
7. **CAUZO CANTRA TENANTS ASSOCIATION**
Through its Chairperson Smt. Otilia Silveira
Having office at St. Estevam, Tiswadi, Goa
8. **VILLAGE PANCHAYAT OF ST. ESTEVAM**
Through its Seretary having office at
Jua, Tiswadi, Goa 403 106
9. **COMMUNIDADE OF JUA**
through its Attorney, Shri Gustavo X Silveira
Santo Estevam, Tiswadi, Goa
10. **M/S. D.K. BHOMKAR**
Bhoma, Ponda,
Goa

.....RESPONDENTS

(Above are registered addresses of parties)

THIS APPLICATION MOST RESPECTFULLY SHOWETH:-


1. The address of the Applicant's counsel is given below for the service of notices of this Application.
2. The addresses of the Respondents are given above for the service of notices of this Application.
3. This application deals with a substantial environment matter, namely the re-construction (repairs and improvement) of the Cauzo Cantra bund which is under construction in Santo Estevam

island, also known as Jua Island. The area where the bund is located, being mangrove and khazan lands, falls in CRZ I category, where no development is permissible, except for repairs of existing authorized structures. The reconstruction of the bund has not been approved by the Goa Coastal Zone Management Authority (GCZMA). No approval has also been taken of the Comunidade of Jua, even though the Comunidade is the owner of the bund. Further, the bund has been illegally extended, in some parts, to more than twice what was originally approved by the State authorities.


4. The re-construction activity has already substantially damaged the extensive mangroves in this area and the Khazan lands are also in danger of being destroyed. The width of the Cauzo Cantra bund was originally around 2.5 meters only. The Government approved a reconstruction plan for the bund having width of 4 metres. However, the contractor is illegally extending the bund's width to around 7 - 8 meters. Applicants are apprehensive that the motive to widen the bund is to construct a road over the bund to enable development of properties and destroy the Khazan areas.
5. The applicants are seeking a halt to the present development work which is destroying this eco-sensitive area. Applicant seek the restoration of the bund to its original width. In any case, the bund may not proceed beyond the approved plan of 4 metres width and only after consideration of the matter by the GCZMA (Resp.No.1). Applicants also plead for rehabilitation of the mangroves which have been destroyed by the re-construction of the bund. Applicants' sole objective in filing this application is to protect the identity of the bund as a 'Protective Bund', as has been notified by the Government of Goa and to protect the environment and the ecology of the Santo Estevam island.

ISSUES BEFORE THE HON'BLE TRIBUNAL

6. The issues raised before this Hon'ble Tribunal are the following and they fall within the jurisdiction of this Hon'ble Tribunal under both Sections 14 and 15 of the NGT Act:

- 
- a) Whether the repairs and reconstruction work of the Cauzo Cantra bund could be carried out in the CRZ I area, where mangroves and Khazan lands abound without the NOC of the GCZMA;
- b) Whether the Cauzo Cantra bund which was originally 2.5 metres wide only could be extended by the Government to have 4 metres width while approving reconstruction of the bund, when the area falls under CRZ I and development activities (except for repairs of existing authorized structures) are prohibited by the CRZ Notification, 2011.
- c) Whether the contractor can further extend the width of the bund to 7 - 8 metres and construct a laterite boulder cement concrete wall on the side of the fields as well, which is contrary to the approved plan and against the mode of construction of bunds.
- d) Whether the authorities should not be made to pay compensation costs for not taking adequate precaution to protect the mangroves and have instead ruthlessly felled and uprooted mangrove trees which are protected by the CRZ Notification.

BRIEF FACTS



7. The applicants are all residents of Santo Estevam island. They are also tenants in possession of the Khazan lands in the same area. The Resp. No 10 is the contractor who has been awarded the tender for construction of the Causo Cantra bund.
8. Santo Estevam is a picturesque village located in the Mandovi River, near to Panaji. People travel to and fro by canoes / ferry boats and by a bridge at Tonca. The island of Santo Estevam has a delicate ecological balance, being comprised of several parcels of land interspersed with water bodies, and linked to each other by an intricate system of bunds and sluice gates which protects the agricultural fields (Khazan lands) from sea water intrusion.
- 

Khazans are a peculiarity of the Goan agricultural system, which allows cultivation of paddy and other crops in the Khazan lands, even though they are influenced by tidal waters. It is the bunds and sluice gates which protect these Khazan / agricultural lands. The CRZ Notification makes special mention of the Khazans and mangroves in the special section on the CRZ of Goa and has prohibited development activities in the Khazan areas. The Notification also requires the Khazan lands to be mapped so that they can be effectively protected.

- count of bunds*
9. The system of setting up bunds and sluice gates to protect the Khazan lands from intrusion of sea water dates back to ancient ancestral times when the "Gaunkari" social system existed in Goa (later termed as Comunidade by the colonial power). The bunds were constructed using locally available mud/clay (chicol) from the river and the fields adjacent to the bunds and kneading it along with wet straw, to create thereby a tough hardy material that could resist the pressures of the ocean. The mangroves around the bunds further slowed down the tidal waters and gave security to the agricultural fields. The bunds in Santo Estevam are more than one thousand years old. Besides protecting the Khazans, the bunds also serve as a pathway for the villagers to cross the fields, without trespassing into the cultivated areas. As the soil in the Khazans is soft and yielding, vehicles do not traverse such bunds, which are reserved only for the use of people and their livestock.
 10. In 1968, post-liberation, the Goa Government declared these bunds as 'Protective Bunds'. Annexed at **Exhibit A** is a copy of Notification dated 7.2.1968 issued under the Goa, Daman and Diu Agricultural Tenancy Act 1964 listing the bunds described in the Schedule appended to the notification as Protective Bunds. The Cauzo Cantra bund is included in the list at Sr. No. 2: Bund at Santo Estevam, Goa. The site plan of Village Jua which depicts the bund, sluice gates and the agricultural fields (Khazan lands) is annexed as **Exhibit B**.
 11. Since the Cauzo Cantra bund needed to be repaired and properly maintained, which expense the agricultural tenants have found

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hard to bear, it appears that the Chairperson of the Cauzo Cantra Tenants Association wrote to the Mamlatdar of Tiswadi Taluka in the year 2010 (letter is dated 29.3.2010) informing that the bund and sluice gate of Cauzo Cantra at Santo Estevam is in dilapidated condition and needs repairs and that the Tenants Association is not having funds to repair the bund and sluice gate. She therefore requested the Mamlatdar to repair the bund under the Goa Government scheme for carrying out such works.

- 
12. By his order dated 31.3.2010 the Mamlatdar of Tiswadi Taluka directed the Executive Engineer, Soil Conservation Division, Directorate of Agriculture to inspect the site of the bund and sluice gate of Cauzo Cantra at St. Estevam Tiswadi and prepare an estimate for repair of bund and sluice gate with the objective of taking up the said repair work by tendering process, on urgent basis, under the new government scheme wherein 90% of the cost will be borne by the government and 10% has to be borne by the Tenants Association payable in 10 equal installments. Annexed hereto as **Exhibit C** is a copy of the order dated 31.3.2010.
 13. By letter dated 11.2.2011, the Chairperson of the Cauzo Cantra Tenants Association supplied to the Soil Conservation Division the list of tenants of the Cauzo Cantra Tenants Association to enable the authority to prepare the estimate for improvement of the Cauzo Cantra bund. At **Exhibit D** is the list of the tenants of Cauzo Cantra Tenants Association which was submitted by the Chairperson of the Tenants Association to the authorities.
 14. On the same day, that is 11.2.2011, the Chairperson of the Cauzo Cantra Tenants Association also informed the Executive Engineer, Soil Conservation Division that she has obtained the consent of all the tenants whose fields are bordering or near the bund of the repair work and that the Association has no objection if the width of the bund is widened by about 3-4 mts on the field side of the bund during the repair works conducted on the bund. The said letter is annexed hereto as **Exhibit E**.
- 

15. Applicants submit that no resolution of the Tenants Association was attached to the said letter. It is also doubtful whether, in fact, the tenants gave approval for widening of the bund during repair works, which would curtail their field areas.
16. The authorities thereafter proceeded to consider the improvement of the Cauzo Cantra bund. In year 2012, pursuant to site inspection of the bund, the Soil Conservation Division prepared a report dated 17.5.2012 annexed hereto as **Exhibit E**, endorsing the necessity for carrying out the repair works.
17. The report gives the following details of the Cauzo Cantra bund:

“There is a bund namely “Cauzo Cantra” at Santo Estevam, Tiswadi and the same has been notified as protective bund by Revenue Department vide notification No. RD/TNC/BND/280/68 dated 7.2.1968. The bund admeasures 2460.00 mts and runs marginal to the river Mandovi and protects about 100 hectares of Khazan paddy fields. The existing bund is very narrow, without rubble revetment wall on river side, except at Ch. 0.00 to 200.00 mts. Also the bund has settled and overtopping by saline water at some places during high tides, inundating the paddy areas.”

“Design: The retaining wall is designed to resist the water pressure and earth pressure by adopting suitable formula. Design details are placed in the file.”

“Scope: The scope of the work is to improve 2460.00 mts long bund by constructing laterite boulder wall in cement mortar on river side of average width 1.00 mt x 2.00 mt depths, widening and heightening the existing bund with good quality earth /moorum.”

18. The design drawings of the bund prepared by the Soil Conservation Division are annexed as **Exhibit G**. It may be observed that the typical cross section of the bund shows that the existing bund was approximately 2.5 mts wide only and that the width was proposed



to be extended to 4 mts, with the side facing the river being made of laterite masonry boulders and the side towards the fields being of moorum/earth filling and sloping towards the fields.

19. On 11.3.2013 the Director of Agriculture gave administrative approval of the government for the work of improvement of the Cauzo Cantra bund on an estimated cost of Rs. 3,74,34,500/- (Rupees Three crore Seventy Four lakhs Thirty Four thousand and Five hundred only). The order stated that the work would be executed through the Soil Conservation Division of the Directorate of Agriculture. Annexed at **Exhibit H** is a copy of the administrative approval order dated 11.3.2013.
20. On 6.1.2014 the Directorate of Agriculture sanctioned expenditure of Rs. 3,51,89,460/- (Rupees Three crore Seventy Four lakhs, Thirty Four thousand and Five hundred) for the execution of the improvement to Cauzo Cantra bund. Annexed at **Exhibit I** is a copy of the Directorate of Agriculture's order dated 6.1.2014.
21. On 8.1.2014 the Executive Engineer, Soil Conservation Division, Directorate of Agriculture informed the successful tenderer, M/s B.K. Bhomkar, from Bhoma, Ponda, Goa that his tender was accepted for carrying out the improvement to the Cauzo Cantra bund. Annexed at **Exhibit J** is a copy of the Soil Conservation Division letter dated 8.1.2014.
22. The re-construction of Causo Cantra bund started thereafter. Mud and stones were brought from other areas and dumped along the original bund and the building of laterite masonry boulder wall commenced. The villagers living nearby were aware that the bund was being repaired. However, they had no knowledge of the details of the works to be executed. The various permissions and orders annexed to this application have all been recently obtained under the provisions of the RTI Act. At that time, the villagers naturally assumed since the Govt was repairing the bund, it had taken all the necessary approvals from the relevant authorities.



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23. The Cauzo Cantra bund was under construction during the year 2014 and early 2015. It may be pointed that the width of the Cauzo Cantra bund towards the village settlement at Cupa was around 4 mts but unknown to the village the bund had widened substantially in the area beyond. Since people do not walk down the bund unnecessarily as there are no activities or houses beyond the fields, the villagers were unaware that beyond the view from their houses, the bund had extended much beyond the approved width of 4 mts.
24. It is only a year later, around March-April 2015, when the villagers noticed the destructive activity of another bund in Santo Estevam, namely the Palni bund, that they decided to examine closely the work being done on the Cauzo Cantra bund. To their shock they found that in some areas, the Causo Cantra bund was around 7 metres wide. Large scale felling of mangroves had also taken place and the green of the area had been totally destroyed during the construction of the bund.
25. Around this time the contract workers started bringing material to extend the width of the bund near to the village settlement as well. Large boulders and other material generally used for constructing roads have been brought from elsewhere and dumped at one end of the bund which is near the settlement. The onset of the monsoons halted all further work.
26. Applicants state that the villagers have no objection to the repairs being undertaken for improvement of the bund but the bund should retain its identity as a bund and not be converted into a road. Applicants submit that the Causo Cantra bund with its width of 2.5 metres had served the community for generations and, in fact, there was no need for the bund to have been approved with 4 metres width. Further, as per the approved plan, only one side (i.e., towards the river) was to be constructed of laterite boulder masonry. The other side was to slope towards the fields in the age-old manner of construction of bunds. Applicants strongly object to the manner in which the bund is presently being constructed, with laterite walls on both sides and width of 7 - 8 meters, which will

going beyond work on the

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enable the authorities to subsequently build a motorable road on top of the bund. Hence the villagers are protesting the construction of the bund and have approached the Hon'ble NGT for relief.

27. Soon after the monsoons were over, anticipating that work on the bund would resume, some of the villagers approached the assistant parish priest of Santo Estevam church, Fr. Dominic Sequeira, around November 2015, requesting him to assist them to obtain the necessary information about the bund and to help them to lodge their protests with the relevant authorities.

28. On behalf of the villagers, Fr. Dominic Sequeira has addressed letters to all the authorities in the month of November 2015, including the GCZMA, the Mamlatdar of Tiswadi taluka, the Collector (North), the State Pollution Control Board, the Soil Conservation Division of the Directorate of Agriculture and the Goa State Biodiversity Board, drawing to their attention that there is serious violation of the CRZ Notification in Jua island due to the construction of the bund. The letters state that the mangroves which were growing in profusion around the original bund have been ruthlessly hacked away and uprooted, leaving large areas totally cleared of mangrove trees and thereby exposing the land to the sea, that the khazan lands have been encroached upon for widening the bund, that the width of the bund has greatly exceeded the repair works that were approved and commissioned by the authorities in the year 2014, and that no permission has been taken from the GCZMA for the bund improvement work as required by law. As the khazan and mangrove areas are CRZ I area and hence No-Development Zone, the villagers have requested the authorities to stop the activity of "improvement of bund" and to restore the bund to its original status to prevent further destruction of the environment. Each letter that was sent was accompanied by the signatures of the resident villagers on whose behalf these letters were written. Reminder letters were also sent to the authorities. Annexed as Exhibit K colly are copies of the letters written to the

authorities in November 2015 on behalf of the villagers who have appended their signatures to the letters.

29. No response was received from the authorities. Neither was any work done on the bund, post-monsoon. However, on 1st January 2016 the contractor resumed work of extending the width of the bund in earnest by laying the base foundation of the extension area. The villagers now started agitating and on 15.1.2016 they requested the police to stop the work as it violates the CRZ Notification. Annexed at **Exhibit L** is a copy of letter dated 15.1.2016 addressed to the Police Inspector, Old Goa Police Station.
30. Finally, on 18.1.2016 the GCZMA issued Notice of Site Inspection to be carried out regarding the complaint of illegal construction of activities in connection with Causo Cantra Bandh at Jua, Santo Estevam. Copy of the GCZMA notice is annexed hereto as **Exhibit M**. The inspection was carried out the very next day i.e., on 19 January 2016 by Dr. Antonio Mascarenhas, GCZMA member and expert in coastal matters. Applicant annexes hereto the GCZMA Site Inspection report dated 20.1.2016 as **Exhibit N**.
31. The report concludes as follows:

"In summary

1. The entire lagoon / creek complex is influenced by the daily tides; saline water bodies are inhabited by a variety of fringing and scattered mangroves; dense mangroves forests are located west and east of the area, along the Mandovi River.
2. Being ecologically sensitive, the entire mangrove back water ecosystem thus falls under the category of CRZ I.
3. Unwarranted human interference in these backwaters is not permitted in such ecosystems; further, building activity that is underway lacks scientific validity.
4. Irrespective of the CRZ category, the entire embankment also falls in the No Development Zone (NDZ)



5. Therefore, tampering with an ancient back within a tidal regime (and without approvals) is tantamount to gross violations of CRZ 2011 notification."
32. Applicant states that since 19.1.2016, the contractor has stopped the construction work on the Causo Cantra bund. No work is presently being carried out on the bund.
33. On 5.2.2016, the Collector North has also issued a Memorandum in connection with the complaint dated 24.11.2014 of widening of Causo Cantra bund and directed the Mamlatdar to inspect the site and take appropriate action. Copy of the Collector's memorandum is annexed at **Exhibit O**.
34. At **Exhibit P** is a copy of letter dated 17.2.2016 from the Attorney, Comunidade of Jua, that it has not issued any NOC to anyone for repairs / renovation of the Causo Cantra bund.
35. Applicants annex at **Exhibit Q colly**, photographs of the Causo Cantra bund at Santo Estevam island.

GROUNDNS

36. The applicants approach this Hon'ble Tribunal on the following grounds among others:
- (i) That the authorities could not have approved widening of the bund in CRZ I area which only permits repairs of existing authorized structures.
- (ii) That the re-construction of Cauzo Cantra bund could not have been commissioned without the NOC / approval of the GCZMA as the bund is being constructed in CRZ area, which has mangroves and Khazan lands and is therefore No Development Zone.
- (iii) That no precautionary measures have been taken by the respondents to protect and preserve the mangroves in the area. Instead they have been ruthlessly uprooted and thrown away or hacked mercilessly and destroyed. This is gross violation of the CRZ



Notification and totally unacceptable behavior as far as protection of the fragile eco-system of Khazan lands is concerned.

(iv) That the destruction of the mangroves leaves the Jua village exposed to the vagaries of the ocean, since man-made walls and boulders alone can hardly withstand the tidal onslaught. The mangroves growing around the bunds dissipate the tidal waters thereby protecting the bunds which in turn protect the agricultural lands. By removing the mangroves, the respondents have this put at risk the lives of the inhabitants of the Jua village.

(v) That there is already illegal sand extraction regularly being carried out on a large scale in the Mandovi river which authorities have been unable to stop. As Santo Estevan is an island below sea level, any interference such as dumping of heavy material on the island may cause damage to the island and the island itself could sink which would render the the inhabitants of the island homeless.

(vi) That the contractor is constructing the bund in violation of the approved plan for improvement of the bund, by expanding the width of the bund and also concretizing it on both sides.

(vii) That the authorities have not acted promptly on the complaints of the citizens and have refused to intervene promptly to halt the degradation of the environment in the village.

LIMITATION:

37. The cause of action first arose on 1st January 2016, when the contractor (Resp. No. 8) resumed work on the bund and began constructing the base for extension of the bund to around 7 – 8 metres. In any case, any illegal extension of the bund beyond 4 metres is a violation of the approved plan and cannot be sustained. Applicants were unaware that GCZMA approvals for the re-construction work had not been taken by the authorities while approving the work of reconstruction of the bund. Extension of the width of bund, while re-constructing the same, violates the CRZ Notification, and is an on-going violation. The GCZMA has carried



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out inspection of the violation on 19th January 2016. The Collector has also directed site inspection on 5th February 2016. The bund is still under construction and is not completed. The application is seeking rehabilitation of the area. Hence the application is within time period prescribed u/s 14 and 15 of the NGT Act.

PRAYERS:

38. The applicants humbly pray for the following reliefs:

(A) For an order and/or direction to the Resp. Nos 1 – 5 and 10 to restore the bund to its original width of 2.5 meters.

In the alternative,

(AA) For an order and/or direction to the Resp. Nos 1 – 5 and 10 to restrict the width of the bund to the approved plan of 4 metres width and to remove all the excess mud and material that has been dumped along the bund.

(B) For an order and/or direction prohibiting the Resp Nos. 1 – 5 and 10 from constructing a road on the bund and /or permitting vehicular traffic on the Causo Cantra bund.

(C) For an order and/or direction to the Resp. No. 2 to ensure that the Causo Cantra bund maintains its identity as a notified Protected Bund.

(D) For an order and/or direction to the Resp nos. 1, 2 and 6 to replant and restore the mangrove areas that have been destroyed by the construction of the bund.

(E) For an order / direction to M/s D.K Bhomkar (Resp No. 10) to pay the costs of restoration of the mangroves to the Resp. Nos 1, 2 and 6.

(F) For an order / direction to the Resp. Nos 1 and 2 to map all the khazan lands in Goa as required under the CRZ Notification, 2011.



INTERIM RELIEFS

- (G) For an order directing that no further work is to proceed on the bund until the GCZMA examines the matter and issues an order in line with the CRZ notification.
- (H) For an order / direction to the Resp No. 1 and 6 to calculate the costs of restoration of the mangroves that have been destroyed while constructing the bund.
- (I) For an order / direction to the Mamlatdar and / or Collector North (Resp Nos. 3 and 5 respectively) to produce copy of the site visit report that is made in accordance with Collector's Memorandum directing the Mamlatdar to inspect the alleged violations.
- (J) For any other reliefs as permissible in law.

For the above reliefs the applicants are very grateful.

Dated: 3rd March 2016
St. Estevan, Goa

Applicant No.1

Applicant No. 2

Applicant No. 3

Applicant No. 4

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VERIFICATION

I, Mateus Suresh Saldanha, aged 42 years, Indian national, residing at H. No. of House No.12, St. Francis-Jua, Tiswadi, Ilhas-Goa, applicant abovenamed, hereby do verify that the contents of paras 1, 2, 7-25, 27-35 & 37 of the accompanying application are in the nature of facts which are true to my own knowledge and belief and the contents of paras 3-6, 26, 36 & 38 are my submissions, made on legal advice which I believe to be true and correct. No part of it is false and nothing material has been concealed therefrom.

Solemnly affirmed on
This the 6th day of March 2016
at Marcela, Goa

Mateus Saldanha
DEPONENT



SOLEMNLY AFFIRMED AND VERIFIED
BEFORE / ME BY... Mateus Suresh Saldanha
WHO IS IDENTIFIED BEFORE / ME
BY... Passport
WHOM I KNOW
SERIAL No... 861... DATED 06/03/2016

Kishore L. Bhagat
KISHORE L. BHAGAT
NOTARY AT MARCELA, PONDA
STATE OF GOA - INDIA

St Estevam, Cavso Cantor embankment restoration, Mascarenhas. 2016

St Estevam wetlands: Cavzo Cantor bundh, need for restoration

The Cavso Cantor bundh at St Estevam was inspected on 19 January 2016. The purpose of the site visit was the classification of Survey nos. 56, 57, 58, 60, 61, 62, 63, 65, 66, 67, 68, 75, 76, 79, 80, 81, 82, 85, 86 in St Estevam, Jua, Tiswadi, Goa. The inspection was conducted based on a request by Fr Domnic Sequeira from St Estevam. A detailed report dated 20 January 2016, which also included some relevant photographs, was then submitted to GCZMA.

Following the recent orders of the Hon NGT, Pune, the same embankment was inspected once again on 23 June 2016. An official from the Department of Survey and Land Records (DSLRL), two officials from the Department of Agriculture, and Mr F. Fernandes from GCZMA were present. The complainant Mr Mateus Saldanha along with Fr Domnic Sequeira explained the issues of concern.

This report is prepared following the orders of the Hon. NGT, Pune, Item 4 and 10. Order 1 and 9, dated 04 May 2016. In the order (and also based on an earlier order dated 08 February 2016), the Hon. NGT has noted that the Cavso Cantor bundh needs to be repaired to protect agriculture and horticulture by eco-friendly traditional methods. The order also requested the GCZMA to immediately furnish ecological and environmental assessment report to the damage caused due to human interference on the Cavso Cantor bundh.

In view of the above, the following may be noted:

The Hon. NGT desires that an ecological and environmental assessment report of the damage caused be prepared. Such an effort will need a detailed scientific data collection over time, and its subsequent analyses. This investigation will have to be done by a reputed research organization dealing with coastal issues. However, as the impacts noted and the damage caused to the Cavso Cantor bundh is not distressing, such a study may not be required at this stage and for this site. The human impacts and destruction that has been noted is almost entirely reversible.

St Estevam, Cavso Cantor embankment restoration, Mascarenhas. 2016

The report of 20 January 2016 had the following salient points:

1. The functional sluice gate at Cupa was the starting point. From here, the embankment extends in a semi-circle to the vicinity of the village temple in the east, over a total length of about 2.6 kilometres.
2. The entire area constitutes an intricate network of creeks, backwaters and marshy lagoons where mangroves are identified. A large water body that has a connection with the riverine system through the sluice gate at Cupa is located in the central part.
3. Along the outer / river side, a concrete wall now encircles the entire outer periphery of the ancient bundh, now being reclaimed. The concrete wall was apparently built earlier, probably in 2013. The necessity of this wall is not justified; it also appears that relevant approvals from concerned authorities have not been obtained.
4. Dense and luxuriant mangrove forests are found along the river. The width of these mangroves plantations vary from 125 metres to a maximum of about 325 metres. Its length is of the order of 550 metres on the western side and 1.5 kilometres along the eastern flank.
5. The entire low-lying mangrove area is tidally influenced, as such the setup can be classified under the category of CRZ I, an ecosystem that is ecologically sensitive.
6. Haphazard human activity was observed during the site visit on 19 January 2016. This was noted from the Cupa sluice gate northwards. Heaps of laterite boulders and road metal was lying along the bundh. The bundh is / has been reclaimed by dumping red soil on the surface of the original embankment.
7. A retaining wall composed of boulders - concrete was being constructed from Cupa sluice gate northwards. The height of this vertical embankment would be around 2.5 metres, if completed. This would mean that the top surface of the wall will be at about 1.0-1.5 metres above the high tide level.

St Estevam, Cavso Cantor embankment restoration, Mascarenhas. 2016

8. In comparison to the DSLR plan, the embankment is now being widened from 2-3 metres to about 6 to 7 meters by filling it with lateritic mud. A large number of mangroves have been cut to make place for the wall.
9. The original embankment is lined with fringing mangroves some of which can still be seen at present; further north, new trenches are made, ostensibly for the foundations of the new wall. Here again, mangroves are uprooted.
10. The Google Earth (GE) satellite images clearly indicates that the embankment has been reclaimed over a continuous distance of about 2.6 kilometres. Human activity of mud deposition along the levee started in or after December 2013.
11. The entire lagoon / creek complex is influenced by the daily tides. Being ecologically sensitive, the entire mangrove back water ecosystem thus falls under the category of CRZ I. Irrespective of the CRZ category, the entire embankment also falls in the No Development Zone (NDZ). Therefore, tampering with an ancient bank within a tidal regime (and without relevant approvals) is tantamount to gross violations of CRZ 2011 notification.

As noted above, the report of 20 January 2016 by the undersigned had interpreted the damage as observed in the field. During the recent inspection on 23 June 2016, it was observed that no further work has been done. However, some metal is still seen at the Cupa sluice gate side. In comparison, the boulders / rubble stored at the eastern extremity (temple side) have since been removed. Except for some patches of red mud, the erstwhile paddy field is somewhat restored. The photographs presented in the report of 20 January 2016 are still valid.

From a restoration perspective, by and large, all the impacts noted above are reversible. The erstwhile environmental and morphological status of Cavso Cantor bundh can be rejuvenated over a period of time. The restoration of the Cavso Cantor embankment I bundh may be taken up as follows:

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- A. Red lateritic mud deposited all along the bundh needs to be scooped and removed manually by using hand tools generally used for earth works.
- B. Heavy machinery / excavators should not be used under any circumstances.
- C. Dumped mud should be carefully removed in such a manner, and up to a level where the former / earlier surface of the bundh is exposed.
- D. Greater care is needed along the sides of the embankment as the earlier existing bundh should not collapse further.
- E. As desired by the complainants, the original width of the bund is to be maintained in consultation with and based on the official maps of the Land Survey Department.
- F. Once the mud is removed, the borders of the embankment may be stabilized by planting appropriate bushes or shrubs, or even coconut trees. Fringing mangroves may be planted parallel to the base of the embankment. This aspect may be fine-tuned in collaboration with the agriculture department which routinely undertakes such work in paddy fields. The Goa State Biodiversity Board may also be consulted.
- G. Any further repairs of the bundh may be done by using locally available clayey material; such work (bricks of clay) is routinely undertaken in the paddy fields of Indian coasts.
- H. Such bundhs should be designated as pathways for the exclusive use of agriculture related activities only; these embankments should not / cannot be construed as roads; light four-wheeler carriers may be allowed, but heavy vehicles such as trucks need to be banned so as to guarantee the stability of the embankments.
- I. The lateritic material that is removed may be stored temporarily at a convenient point; this sediment should not flow back into the adjacent paddy fields. The material removed may be used for road works / filling approved elsewhere.

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- J. **Note:** The complainant Fr. Sequeira also showed us another spot below the new Gaundalim road bridge where the WRD has repaired the river embankment by using eco-friendly laterite blocks / rubble, topped by a thin layer of concrete. The mangroves have however suffered. The complainants are ready to accept this restoration technique in the case of Cavso Cantor bundh, provided the ecologically friendly criteria explained above (on page 2) and below (on page 4) is accepted. It is strongly suggested that the WRD engineers discuss this issue with the complainants.

It may also be pertinent to note that the GCZMA has time and again been confronted with the issue of (re)building degraded river banks and embankments. The Water Resources Department (WRD) almost exclusively employs the use of concrete to erect I repair such walls. The adverse impacts of concrete sea walls are well established globally.

In view of the above, the Member Secretary, GCZMA, requested the undersigned to prepare a report on the pros and cons of concrete sea walls. The report dated 30 August 2015 (reference letter dated 14 August 2015) was subsequently forwarded to WRD. The fate of this document is not known.

Nevertheless. the report concluded that the idea eco-friendly procedure to repair or restore river embankments or bundhs within / along paddy fields would be as follows:

- a) Use natural laterite boulders or dressed laterite stones,
- b) Traditionally, local made dry clay blocks were routinely used, and can also be attempted,
- c) A 20 cm thick concrete base can be laid at low tide level only,
- d) A stone wall of 30- 60 cm width can be built with cement mortar,
- e) The wall should not rise more than 30 cm above the highest tide level,
- f) Adequate passages / gaps are to be provided within / along the wall to facilitate passage / flow of ground water,

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- g) Gaps / crevices within individual stones are needed to entertain marine fauna and encourage riparian zone biodiversity,
- h) A slight tilt will ensure the stability of the stone wall,
- i) A revetment with 45 degrees slope would be ideally suited,
- j) A laterite stone wall has a greater capacity to nullify wave attack in high energy settings,
- k) If the river is dredged, part of the original sediment is to be re-dumped along the bank,
- l) Plantation of fringing mangroves (along river banks) or appropriate trees (along edges of paddy fields) is to be pursued aggressively.

In view of the above, it is also felt that:

- A. The Water Resources Department (WRD) and the Agriculture Department urgently needs to form a R&D cell which should take into account the latest research in coastal management, particularly with reference to the eventual (and known) problems arising out of "fixing" river banks or embankments or coasts.
- B. The concerned authorities need to accept that coasts or river banks need to function naturally to maintain the sanctity of geomorphic features and to contribute towards eco-biological riparian diversity. Fixing of river boundaries or embankments with hard materials is no solution.
- C. Eco-biological alternatives such as plantation of appropriate vegetation along banks or embankments of rivers, (and suitable dune vegetation along open sandy coasts) are imperative. The role and functions of vegetal species in trapping sediment and stabilising banks or coasts is well studied on a global scale.
- D. Conservation and restoration thro' natural eco-friendly (and preferably) soft methods should be the endeavour of WRD.

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In summary, mud / clay embankments along and across the low-lying paddy fields of Goa are prominent features of the ancient agro-engineering of Goa. These man made dykes were constructed using mud / clay available in-situ, and were maintained by using tools manually. These levees have withstood the test of time. In general, these bundhs are lined with coconut trees along the edges. Adequate passages for the flow of rain water were made and can still be found at present. Most of these settings are functional even today. Such was the environmental management system of yesteryears. Therefore, it is strongly suggested and recommended that the restoration of ancient / traditional agrarian systems be carried out scientifically, by using locally available laterite, and preserved for posterity.

s/d

(Dr Antonio Mascarenhas, Member GCZMA)

05 July 2016

Annexure R-9

Member Secretary

8/9/17

Date 06/06/17

part of the
meeting on 15/6

Report of Joint Site Inspection for Working out Restoration Measures for
Bunds of Khazan Lands at St. Estevam, Goa as per NGT Order
(Application No. 135/2016).

Background

The Soil Conservation Division of the Department of Agriculture took up the work of repair of Bunds - Palni Bund, Causo-Cantro Bund, etc of the Wet lands/Khazan lands at St. Estevam, Tiswadi, Goa. In the process of repair of bunds, the Soil Conservation Division widened the bunds by red earth/murram and also put the retaining wall/s to considerable portions of the said bunds. Hon'le NGT while disposing the application No. 135/2016, instructed the GCZMA to take necessary steps to order restoration of bunds. In the last GCZMA meeting dt. /5/2017, a joint site inspection was planned and fixed for 17/5/2017 to work out modalities/restoration measures for bunds by removing the excess red earth/murram from the field side.

Inspection and Observation

As per the instruction of Member Secretary, the site inspection was carried out by the Expert Members Dr. Prabhakar Shirodkar and Eng. Audhoot Bhonsule along with Mr. Fletcher Fernandes, Technical Officer of the GCZMA. From the Complainant's side the members present were the applicant Mr. Mathew Saldhana, Mr. Cipriano Ribeiro- Chairman of Palni Tenants Association, Fr. Lecitisao Monteiro-Communitade President, Mr. Iver Ferreira - Communitade Attorney General, Fr. Domnic Sequeira and Mrs. Otilia Silveira. From the respondent's side, the members present were Mr. Rajesh Kenaudekar and Mr. Rajendra Verlecar, both Assistant Engineers from the Soil Conservation Division of the Department of Agriculture. Mr. Prabhu, Superintending Engineer and Mr. Kamkar, Executive Engineer, both from WRD were also present at the site. The Director of Agriculture Mr. Kakode also accompanied the joint inspection. The observations are as follows;

- i) Instead of working out restoration measures/modalities to remove excess red earth dumped for restoration of bunds as planned in the Authority meeting in the presence of the complainants and the respondents, the complainants went on to show the bund areas accusing the Soil Conservation Division of destruction caused by red earth dumping. They only suggested that the bund should be restored to its original.
- ii) In all, 4 sites were shown by the complainants, which were inspected and their details are as follows:

1st Site: Palni Bund

- iii) The Complainants first took the Expert Members to the Palni bund site behind the St. Estevam Cemetry.
- iv) Lot of laterite boulders and red earth is seen dumped on the Palni bund behind the cemetery.
- v) The complainants told that in the name of repair of the bund, the Soil Conservation Division has widened the bund with red earth which is not the native soil of the area and has destroyed the field and ecology of the area.
- vi) They demanded that the red earth and the boulders dumped at Palni bund behind the Cemetry should be ordered to be removed as early as possible.

2nd Site: Pachlai Palni Bund

- vii) Thereafter the Complainants took the inspection team to the other site of the bund which is having a sluice gate with metallic sheets put over it. The entrance to this bund is from the main road and this is called the Pachlai Palni bund.
- viii) The complainants showed the widening of the bund done by red earth. At some places laterite boulders and basaltic material is stacked by the side of the bund for construction of retaining wall.
- ix) Intersecting this Palni Panchlai bund about 100m away from the sluice gate towards the field side is another bund called Pachlai Vatso bundh which is also seen widened up to 500m distance or more with filling done by red earth.
- x) The Soil Conservation Division says that they have not done that widening but indicated that the Contractor may have done it without their knowledge.
- xi) The complainants demanded that the red earth dumped at the said bund should be removed and its width should be maintained to original width of 2.5m.
- xii) They also told that the sluice gate which has been widened should be restored and its width is reduced to only 2.5m so that no trucks and other vehicles could pass over the bund.
- xiii) Interestingly, Mr. Cipriano Ribeiro who is the Chairman of Palni Tenants Association favoured the widening of the bund and told that it is a good work being done for protection of the wet land environment. He also told that earlier the bund often used to get breached at many places and the surrounding field areas used to get flooded with saline water. Nobody used to care for it and maintain the bund that time. Now at least the Government is doing a good thing and should complete their work as per the plan.
- xiv) However, the complainants demanded that the red earth filled should be removed and width of the bund be maintained to 2.5m.
- xv) They also told that Pisci culture which is done by some people in the Khazan land should be ordered to be stopped.

3rd Site: Caujo-Cantro Bund

- xvi) Later on, the complainants took the inspection team to the third site, which is a Caujo - Cantro bund. To go to this bund there is a small bridge of laterite stones starting from the turn on the main road. Thereafter, there is a sluice gate and then the bund starts.
- xvii) As shown by the complainants, this bund is widened more than 4m with red earth up to 2.6 km distance. The bund is provided with a retaining wall towards the river side, and up to about 200m distance a toe wall has been constructed towards the field side on the edge of drainage canal.
- xviii) The complainants told that in the process of bund widening and by constructing a toe wall, the drainage canal is shifted towards the field side thereby reducing the field area.
- xix) Another interesting thing is that Mrs. Otilia Silveira, the former Chairperson of the Tenants Association also favoured the work done by the Department and told that by constructing the retaining wall and a toe wall, the Government has done a good job as it will stop the salt water intrusion into the field area. She said that earlier nobody used to do repair work of the said bunds, only she used to maintain the bund for the past 20 yrs. She said why the people are now stopping the work, it should continue.

4th Site: Last Leg of Caujo Cantro Bund

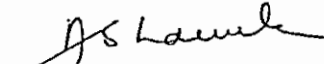
- xx) Lastly, the complainants took the inspection team to last leg of the Caujo-Cantro bund which has been filled with red earth and widened around 6m.
- xxi) Complainants told that GCZMA should order restoration of bunds by removing the red earth from the field side and reduce the width to 2.5m.
- xxii) To this Mrs. Otilia Silveira did not agree and said that if its width is maintained up to 2.5m, then it will again get damaged and salt water will enter the fields and spoil them. She recommended that at least 4 m width should be maintained.
- xxiii) One of the colleagues of the complainant (name not known) also told that if not 2.5m, the width of the bund should be restored to around 4m.
- xxiv) Complainants also told that the trenches towards the field side be restored for the excess water to get drained out.
- xxv) In the end, the Director of Agriculture as well as the Asst. Engineers of the Soil Conservation Division explained that reduction in the width of the bunds to original 2.5m will weaken the bunds, they will get breached again and the salt water intrusion will take place that will spoil the field and the surrounding environment.

Conclusion and Recommendation

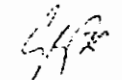
- i) Earlier in 2011, the Chairman of Palni Tenants Association Mr. Cipriano Ribeiro had submitted an application dated 10/2/2011 (Copy submitted to GCZMA) to the Mamlatdar of Tiswadi Taluka indicating that the Bund of Palni Khazan is in dilapidated condition and needs urgent repairs to avoid inundation of paddy fields with saline water.
- ii) With the said application dated 10/2/2011, the Palni Tenants Association requested the Mamlatdar of Tiswadi to issue directions under the Agricultural Tenancy Act to Soil Conservation Division of the Agricultural Department to take up the bund repair work.
- iii) Accordingly, the Soil Conservation Division of the Department of Agriculture started the work on widening of bunds at all the above mentioned 4 sites by red earth filling /murrum and boulders. It is seen that the widening of bunds on either side though is done with red earth, the original organic rich soil has not been disturbed and hence there is no possibility of bund getting breached with changing weather conditions.
- iv) They also constructed retaining walls towards river side as well as towards the field side at some places and also toe wall towards the drainage canal side.
- v) Crores of public money has been spent by the Soil Conservation Division for repair of the bunds to protect the wet land/khazan land from spoiling by intrusion of salt water into it. The work undertaken is good and is permissible under the CRZ regulation, however, the Division failed to see that the red earth used is detrimental to the field, they should have used the organic rich soil.
- vi) So also, there is no record that the Soil Conservation Division has obtained the NOC from GCZMA for the said work in CRZ area. They should have obtained NOC from GCZMA before starting the work, which was not seen, attached to the file.
- vii) Due to objection from the Complainants and NGT direction, it was decided in the GCZMA meeting conducted on /5/2017 to remove the red earth filling done from the field side leaving aside the river side filling and to reduce the width of the bund to original for which a joint site inspection was planned to work out the restoration measures/modalities for removal.
- viii) Site inspection showed that at most of the places of the bund under repair, lot of compaction of red earth has taken place over the period of years. The process of removal of red earth will unavoidably affect the fields and lead to breach of bund at many places which would further lead to intrusion of salt water into the fields.
- ix) It will also involve spending again Crores of rupees for the removal of red earth to restore the bunds to 2.5m width which the Soil Conservation Division says would again collapse/breached and can destroy the fields by salt water intrusion.

- x) However, the applicant Mr. Mathew Saldhana, Fr. Lecitiao Monteiro, Fr. Dominic Sequeira and Comunidade Attorney Mr. Iver Ferreira object to the said repair work of bunds and told to instruct the Soil Conservation Division to remove the red earth from the field side by keeping the filling done on the river side and the retaining wall that is constructed.
- xi) On the other side, Mr. Cipriano Ribeiro, Chairperson of Palni Tenants Association and Mrs. Otilia Silveira, both favoured the work done by the Department and indicated that the Government should complete the work.
- xii) So also, some of the members indicated that if 2.5m width cannot be maintained and the bund would breach anytime, its width should not be maintained more than 4m.
- xiii) The Director Mr. Kakode of the Department of Agriculture and their personnel told that by reducing the width of the bund to 2.5m, the bund will not be maintained but will get breached again during the monsoon at many locations. That will spoil the fields and the surrounding environment by inundation, so they suggested that the width should be at least 4m for a good stability to the bund.
- xiv) In a recent development, additional reply is filed by Palni Tenants Association under the Chairmanship of Mr. Cipriano Ribeiro before GCZMA on 19/5/2017 for restoration measures of Expert Members (Copy submitted to GCZMA).
- xv) In the additional reply, they indicated that there are many fields in and around the Palni bund which are still under cultivation. In the event of any work undertaken for replacing the murrum with clay, it would result in breaches of the bund that would result in inundation of paddy field with saline water.
- xvi) Besides this, due to ingress of saline water the ground water could get contaminated by salt water.
- xvii) Due to breaching of the bund, there is a possibility that the road linking to tolto ferry gets snapped off and the houses in the vicinity get submerged. Such things have happened earlier in the past.
- xviii) Forms I & XIV attached to the application submitted to GCZMA indicates that the land with Sy. Nos. 205/1, 205/2 and 205/4 belongs to Comunidade, with the names of many tenants, whereas the form with Sy. No. 205/3 shows the name of Mr. Cipriano Ribeiro and that with Sy. No. 205/5 shows the name of Basilio Monserate.
- xix) Thus, it appears that the Soil Conservation Division should be instructed to maintain the width of the said bund to 3.7m as per the PWD Road Standards by removing the excess red earth from the field side.
- xx) The original width of 2.5m was as per the standards to take the bullock carts over the bund for transporting paddy field material. However, with changing time, bullock carts are no more in operation instead small mechanized vehicles

- are used as a mode of transport. Hence, as per road standards, the width of 3.3m with 0.4m as side berm could be provided. A strict instruction should be imposed for not asphaltting the top of the bund at anytime in future.
- xxi) The Soil Conservation Division should be told to remove the retaining wall from the field side wherever it is constructed. After removing the said retaining wall, the trenches should be put as were existing earlier in the field area.
- xxii) By maintaining the retaining wall towards the river side, the wall constructed towards the field side be removed by providing a laterite boulder toe wall and the drainage canal for effective flow of excess water..
- xxiii) This will strengthen and provide stability to the bund/s and also protect the field and the surrounding environment.
- xxiv) Also, the sign boards should be put at the entrance to these bunds suggesting no trespass by vehicles. This way, the bunds and the environment can be well protected.
- xxv) If required both the parties may be called during the Authority meeting for their final say.
- xxvi) This may be deliberated in the Authority meeting for a decision.


(Eng. Audhoot Bhonsule)


(Dr. Prabhakar Shirodkar)


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