

Bondvoll – A Pristine Lake in Need of Sustainability

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Abstract—Natural resources are a part of our cultural landscape which indeed reflects our sustainable culture and hence needs honest conservation efforts and sustainable planning. Considering that the village planning includes many natural resources as land, bio-diversity, water, air, etc., there is a huge responsibility on our planning rules, experts, study reports, planning tools and legislators who have to be sensitive to what is sustainability.

Bondvolllake is one such natural resource. As a pristine lake it can carry water which can sustain its own village of Santa Cruz and neighbouring Panaji, the capital city of Goa. Historical records give us the proof of how the 'Communidade' utilised it for community benefits. This being the case it should have got its due of being conserved and sustained today. However in contrast experts to legislators have got themselves into converting this community asset into private gains and are causing irreversible damage to such a priceless heritage. Somehow the villagers can make sense out of what will not work for them and have endured a sustained protest along with intervention of the High Court in PIL and WRIT. Population growth is made as an excuse by the bureaucracy and the legislators who fail to stand by the villagers and not by the greed of trading these natural resources in the name of development. Across the world, history reminds us of destruction of natural resources by similar failures and it's too late by the time it sinks. Presently these layers of culture are getting deposited on the landscape of Bondvoll as it needs whatever helps possible; else our future generations have proof of how badly we handled the concepts of sustainability. Bondvoll Lake and its village community have a hope and need this attention for its sustainable process to end in a success.

1. ABOUTBONDVOLL LAKE

Bondvoll Lake comprises of area of the main tank and the submerging tank. The main tank is into two survey nos.143/1 and 144/1 both together are about 8 hectares.

The submerging tank is the area around the main tank which gets submerged with the full capacity of water and consists of the sloping land around, which is additional 22 hectares. Thus the total area spreads to about 30 hectares. The carrying capacity of the lake is about two million cubic meters of water spread over a length of 500m to a width of 300m and height of 15m. The catchment area itself spreads to another 2 square kilometres around it.

It is in the form of an axe with a prominent and distinct topographical location on the Google maps on 15° 27' 30" N latitude and 73° 50' 10" E longitude. The closest landmark is it being just behind the Dr. Shyama Prasad Mukherjee Indoor stadium, near the Goa University as shown in Figure 1. Its natural topography creates potential for collecting water through all its downstream canals and storing it within the area under submergence. The water stored can meet the irrigation needs of village farming land, drinking water needs of Santa Cruz and Panaji city and underwater recharge for the whole area. Besides the Lake has variety of Bio-diversity within, around and under it like fish, birds, animals, plants, etc. It's a priceless natural resource.



Figure 1: Aerial View of Bondvoll Lake

2. VILLAGE CONTEXT

The Tiswadi Taluka is one of the Prime and strategically located Talukas of the North Goa District. It is further divided into 20 jurisdictions of city and villages put together as shown in Figure 2.



Figure 2: Location of Santa Cruz Village on the Map of Goa

Santa Cruz village is one of the prime units of this Taluka located in close proximity to the capital city Panaji and yet it has maintained its village identity enduring the pressures of a fast urban growth.

The Santa Cruz village itself consists of 2 parts as Calapor and Cujira villages. The smaller Cujira village being mostly characterised by settlement areas and low lying fields and the bigger Calapor village characterised by more diverse topography of Hill slopes, settlement plateau, low lying field plains and water bodies.

The total population of the village is about 20,000 people with 6000 households, out of which around 2000 are farming families and are formerly organised under the Santa Cruz Tenant Association.

3. HISTORICAL CONTEXT

As per HERALDO 22 August 1908 the Communidade of Calaporin 1880 decided to build a retaining wall towards the Northern narrow side of this natural lake under the then Portuguese Governor Jose Maria De Souza Horta Da Costa so as to enhance its carrying capacity to increase village farming as an alternative source of income. The main source of income of the village then was salt and that was facing suppression of the British regime in the other parts of India. Also drinking water sufficiency meant a lot of independence of sustaining population needs. An earthen laterite wall was thus built with traditional methods and local workers. An underwater hydraulic lock within the lake was completed in 1908 with underground irrigation layout and release valves placed outside it leading up to the lower fields in the village below which exists till date.

In 1910 Joaquim Vicente Dias of Santa Cruz published a 3-page booklet on the Bondvoll project. The following year in a local newspaper reported that the contract of the retaining wall of Bondvoll was suspended as the prescribed specifications were not followed. Further on 12 September 1913 in Boletim official No.73 a meeting was scheduled to approve budget of repairs works of Bondvoll to be supervised by Communidade of Calapor and works went for 2years costing Rs.80,000/-.

Some octogenarians have even mentioned that they carried earth, stones and their parents then carried mud on their head to the construction site of the retaining wall. An overflow was built on the side so as to regulate the filling of the waters above dangerous level.

4. LAND STATUS

This study has to understand the status of all land around the Bondvolllake to understand how the dynamics are changing from local ownerships to real estate companies emerging as new stakeholders.

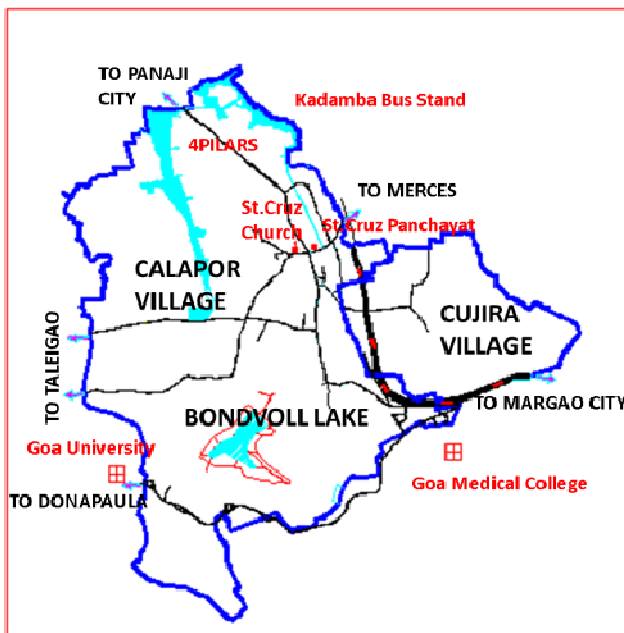


Figure 3: Santa Cruz Village Map and Landmarks

The prominent landmarks close to this village are the Main city Kadamba Bus stand, the Goa Medical College, the Goa University, Taleigao village and the City of Panaji completing a full encirclement around Santa Cruz as shown in Figure 3.

Table 1: Present status of Land ownership

No.	Survey No.	Occupant	Area in sq.m.
1	143/1	Communidade of Calapor	54,544
2	144/1	Communidade of Calapor	21,350
3	193/1	Dr. Suresh B. Shetye	41,325

4	197/1	Dr. Suresh B. Shetye	23,852
5	198/1	Dr. Suresh B. Shetye	14,456
6	199/1	10 names of Pinto family	45,699
7	131/1	Haroon Ebrahim	49,706
8	129/1	Gopal V. Porob Nachinolkar TapasyaInfotechPvt. Ltd	31,800
9	87/1	GopalV. Porob Nachinolkar Mundus Real Est. Pvt. Ltd	79,875
10	86/1	Gopal V. Porob Nachinolkar Nita Upendra Timble	10,050



Figure 4: Main Tank, Submerging Tank & Heritage zone

The Table 1, gives the status of land ownership of the Main Tank comprising of survey nos. 143/1 and 144/1 and all the submerging tank area comprising of the remaining eight survey nos. as also shown in the Figure 4. The red line marked in the said Figure indicates the insensitivity of the planning system which allows a natural resource to get sold in the hands of the real estate. The price the present and future generation has to pay for such a level of mis-management of our natural resources by the experts and legislators is unimaginable.

5. CHRONOLOGY OF DAMAGES

Thus starts the damage to this village resource. The Comunidade of Calapor village which is the local legal community entity as per the Portuguese creation is supposed to be the owner of the main tank area. But the local builder cum politician nexus makes them non-functional. With legal advice a plan is hatched to get the main tank transferred in the name of a so called tenant under the Goa Agriculture Tenancy Act which matter gets decided in favour of the tenant ex-parte or in absentia of the Comunidade for non-attendance.

Similarly with an insensitive heritage zone marking of 50 meters within the submerging tank with no regard to the catchment area nor to the feeder canals of the lake, the real estate lobby got their companies listed around for land development projects and by satisfying the greed of everyone involved they manage to get the approvals from the government departments. It is just a matter of time that the lake has to die a slow death with such gross mis-management

of our natural resources by our very own experts, bureaucrats and politicians. Subsequently the lake water retention was sabotaged slowly so that there is no collection, no retention and therefore no bio-diversity. Intention was to wipe out any existence of an ecosystem.

The Figure 5 shows the Google images as visual records of this deterioration from the year 2002 to year 2015 when the Bondvolllake went completely dry due to no water retention as systematic damage was caused.



Figure 5: Google image records of Bondvoll Lake

By the year 2017 construction activity started in and around the lake as shown in Figure 6 showing the destruction of whatever else had remained.



Figure 6: Destruction activity in the Bondvoll lake area

6. ROLE OF GOVERNMENT DEPARTMENTS

The various Government Departments which have a responsible role in such challenges are Town &Country Planning, Forest, Bio-Diversity, District Collectorate, Police, Local Village Panchayats and there are laws governing natural resources like the Forest Act, Bio-Diversity Act, Wetlands laws, Town & Country Planning Act, Buildings construction laws, Indian Penal Code, Panchayati Raj Act and even the

Constitutional protection. However even after there being so many laws and as many Departments, all of them only gave a blind eye to all the destruction even when brought to their notice and in fact issued approval orders in favour of the construction works. As many as 11 approvals are supposed to have been granted within the 200m radius of this Lake by the Town & Country Planning Department itself.

The regional land use Plan had not given consideration to the views of the villagers in protecting the Lake area. Moreover the Department of Town & Country Planning without any study or mapping notified formation of Planning & Development Authority (PDA) selectively only around the Bondvoll Lake in January 2018 as shown in the Figure 7, citing reason as growth of population in the capital city and around to accommodate the greed and short term gains of builders-politicians-bureaucrats. This insensitivity burdens a heavy price of irreversible damage to the natural resources and this has to be borne by the villagers and the future generations.

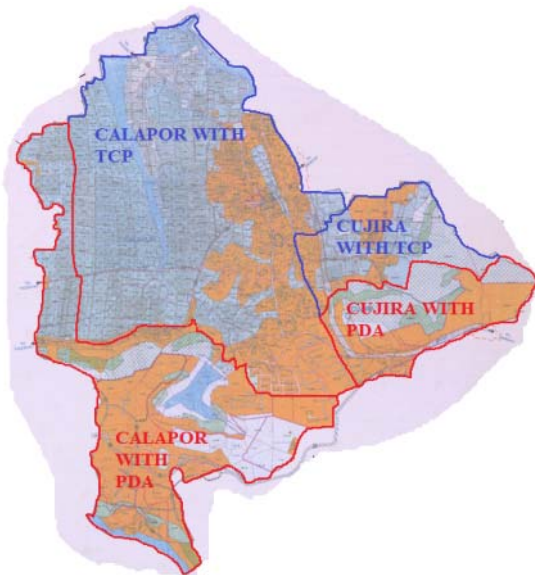


Figure 7: Regional land use map showing Lake in PDA

In fact the role of the Elected representatives have been with such hidden motives that after the villagers reposed faith in them and had joint site inspections revealing to them their interest of saving this water resource, the actions forth coming was contrary instead to include these very areas in newly formed Greater Panaji Planning and Development Area as reported in the local daily shown in Figure 8. Land resource around water bodies is considered profitable investment by all in Goa.

The pressure from the builders gets to the legislators and in turn to the bureaucrats thus ruining the sustainability concepts which our fore fathers had to maintain these community assets for the village.

Bondvol Lake’s inclusion in PDA heightens people’s angst

Details: [Herald](#) Now

In the month of May 2017, the Minister for Town and Country Planning department, Minister for Water Resources department along with officers visited the Bodvol lake in St Cruz which now falls in the Greater Panjim Planning and Development Authority (GPPDA) following a protest to save the oldest water resource of the village. They had promised to revoke all the permissions if any granted for the development around the vicinity of the lake and to make the area a No Development Zone

Figure 8: Report in Local Daily

7. SOCIAL UPRISING



Figure 9: Villagers march to the Lake in protest



Figure 10: Children stage placards display to save the Lake

All village level committees at the Panchayat, the villagers and the children as shown in Figure 9 and 10 stood in solidarity at such a time when the loss of this Lake sustainability means loss of a cultural heritage of the villagers

fore fathers. Construction approvals and residential colonies around this Lake will not work was very easily understood by even the not so educated villagers and children but pretended by the law makers and administrators. The Gram Sabha meeting resolved to get the Government to listen by making necessary representations. But time was running out as the construction approvals seemed to multiply as the Government pretended to attend to the issue but actually was buying time to grant approvals to all. Sensing this apathy of the Government meanwhile a PIL and a Writ Petition was already being heard in the High Court on protection of the Bondvoll Lake.

8. HIGH COURT INTERVENTION

All the letters written for action under various law provisions to protect the destruction of the Bondvoll Lake went unattended, thus revealing a clear nexus between the builders, legislators and the administrators. But herein there was another party with most damaging interest i.e. the so-called tenant of the main tank survey no. As per the developments under the Goa Agriculture Tenancy Act the person who was auctioned the area for growing crop under the Comunidade de Calapor land ownership got titled as tenant, though in this case the Comunidade did not even contest to protect their ownership title as it was a planned sabotage of a community asset which had potential of a handsome immediate gain for the local politicians.

So making them and all the government departments who did not perform their role as parties, a PIL 10/2017 was filed by a villager to direct the performance and stop the destruction. Also Comunidade of Calapor being the owners filed a WRIT Petition 590/2017 similarly which got clubbed together for hearing. As an interim relief a Task Force was constituted comprising of all major departments as mentioned earlier. An interim report was submitted that the Lake is a natural resource and needs protection measures urgently. Another order was passed to demarcate 200m radius around the Lake in the catchment area as a buffer and propose it for conservation. The Task Force was also directed to survey and record all the parameters of the Lake and within 200m around, also its bio-diversity and recommend measures for safeguarding any interference in future.

9. RECOMMENDATIONS OF TASK FORCE

The High Court constituted Task Force on Bondvoll Lake submitted its recommendations in February 2018.

It conducted various meetings, demarcation of 200m line around, all trees enumeration, digital elevation & contour Maps. As per its objective 9 recommendations also were made which included the restoration of the sluice valve by December 2018 to full functionality so that the primary purpose of the lake of water collection and retention is achieved. As shown in Figure 11 this works was undertaken immediately as the monsoon was soon approaching.



Figure 11: Restoration works of the Sluice Valve

The sustainable conservation of the lake as an ecosystem connected with the livelihoods of locals was also suggested to be cherished and preserved with suitable value additions. Violations were to be strictly dealt with and no individual rights were to jeopardise the existence of this community asset. It was concluded that this body is a wetland as per Wetlands notification of 2017 and to consider directing it to be declared as a No development and conservation Zone. For all its management a Lake Management Committee was recommended to be formed for protection, upkeep, scientific and sustainable revival of this water body. The High Court presently has referred this report to the State Government for plan of action and the villagers are awaiting to see a system put in place for long term management of this community asset.

10. CONCLUSION- LOOKING INTO THE FUTURE

A community asset of water in a village is threatened by consequences of population growth and is seen only as a profitable source for short term gains by the builders. Typically in all such failure cases the administration failed to uphold the protection available for such situations through existing laws primarily because of the lobbying that happens through the legislators who are manipulated by greed and thus they pressurise the administration to be inactive allowing for irreversible damage to be caused to the asset in question. Legislation is even used as a tool to further sabotage any revival plans of the such assets on pretext of population needs ignoring the fact that what we are damaging is in fact what will sustain the same population needs in the long run and therefore is not worth trading for.

In this case of Bondvoll Lake the democratic system of Executive, Legislature failed to live up to the expectations of sustaining community assets. The villagers found a saving grace in the Judiciary so far though there are attempts with money power to dilute the enforcement of the reports by experts.

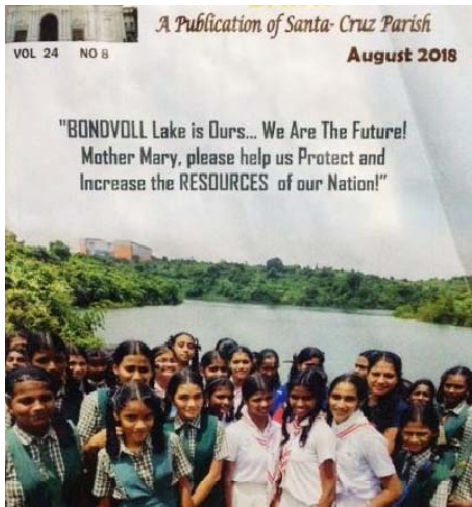


Figure 12: The Village Children asserting their resources



Figure 13: The Future of Bondvoll Lake

So in such challenges faced by the common villagers unsuspecting of the ulterior motives of the people in power the only choice left is social uprising and vigilance as shown in Figure 12 & 13. It's the people and the media who have to make their voices heard so that our future is sustainable. The duty cast on the representatives in governance is getting deteriorated to such an extent that the administration is rigged and in such situations all public causes like protection to natural resources suffers.

It is also strongly felt that if we allow such survival of the fittest theory to take charge of our sustainability concepts than we would lose half of our resources to the greed of a few. Therefore it is proposed that protection to natural resources of communities should find priority with governance at the national level and a protection mechanism should be built as an additional tool for the villagers to sustain their efforts within the administrative domain. The failure at the executive and legislation has burdened the common villager to knock the doors of the Judiciary therefore the solution is in building sensibility to sustainability at all levels so our cultural landscapes will carry these proofs to our future generations.

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