

# INTERIM REPORT REGIONAL PLAN FOR GOA – 2021

TASK FORCE

April 2008

INTERIM REPORT  
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## TASK FORCE FOR RPG-2021

The Govt. of Goa desired to prepare a broad based Regional Plan for the perspective horizon year 2021AD. To accomplish the preparation of the Regional Plan in a time bound manner the Government appointed a committee called "Task Force" for guiding the preparation of the Regional Plan for Goa, 2021AD, vide notification no. 29/8/TCP/Pt.file/Task Force/R.P. /2007 /3353 dated 4/10/07. The notification was amended vide Notification of even no. dated 26/2/08, for guiding the revision of the Regional Plan for Goa, for a period up to 2021 AD.

The Interim Report, as envisaged, is submitted herewith.

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Padma Vibhushan, Ar. Charles Correa	Vice-Chairman
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Dr. Oscar Rebello* Convenor, Goa Bachao Abhiyan	Member
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++ Dr. S.P. Deshpande was a member of the Task Force until December 2007

\*Ms. Patricia Pinto and Ar. Ritu Prasad represented the GBA in his absence, on GBA's request

## ACKNOWLEDGEMENTS

The Task Force has guided and supervised the preparation of this document.

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Shri Sanjit Rodrigues (Nodal Officer, Adm.) and Shri S.T.Puttaraju, Sr. T. P. (Nodal Officer, Tech.) headed the supporting team comprising Shri Vinod Kumar, Dy. T.P., Shri Ivo Furtado, Planning Assistant, Shri Zaidev Aldonkar, D'man Gr.I, Shri Ranjan Shirodkar, D'man Gr I, Shri Sanjay Halornekar, D'man Gr.II, Mrs Menal Vaingankar, Jr. Arch. Assistant, Mrs. Manisha Mhamal, Arch D'man Gr. III, Shri Sadashiv Tilve, Investigator, Mrs. Rachana M. Mashelkar, Jr. Steno, Shri Adil Shetye, LDC, Shri Anand Raikar, LDC, Mrs. Poonam B. Warang, LDC. Logistic support was provided by Mrs. Pratiksha Saterdekar, Shri Sharad Kerkar, Shri Prassana Kumar Naik, Shri Sanjay Chodankar.

Ar. Malini Krishnankutty, Planner, assisted in the compilation of this report and Shri Ashok D'Costa, Turbo Sketch provided necessary CAD Support towards preparation of the maps included here.

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## I. PLANNING FOR A BETTER GOA

### 1. THE MANDATE

In October 2007, the Task Force was set up by the Government of Goa for guiding the preparation of the Regional Plan 2021 AD. The Task Force was required to suggest an appropriate methodology for preparation of the RP for the horizon year – 2021 AD. (See Appendix I: Terms of Reference )

Thereafter vide an amendment to the said Notification, the Task force was entrusted with the task of preparing the Draft Regional Plan (See Appendix II: Terms of Reference)

This Task Force was constituted in the wake of public protest against RP 2011 (which was notified on 10 August 2006) and revoked, with retrospective effect, on 7 February 2007.

### 2. HOW IS RPG-21 DIFFERENT FROM PREVIOUS RPs?

For the preparation of the RPG- 21, the Task Force (TF) has adopted for the first time the following direction to-

- a) Incorporate Transparency and People's Participation.
- b) Propose that the present levels of governance of State, District, Taluka, Settlement and wards become the geographic areas for plans and planning processes under the GTCP Act '74. (Refer Map 1: Governance Jurisdictions)
- c) Synergise the top-down regional framework comprising of State, District, and Taluka plans with the down-top participatory plans comprising of settlements and wards so as to offer a mapped input to subjects mandated under the 73<sup>rd</sup>/74<sup>th</sup> Constitutional Amendment Act.

- d) Accordingly, revisit RP 2001 to upgrade it, correct its anomalies, and propose new options, so as to cover the whole state with clear implementable plans.

### 3. KEY CONCERNS OF THE REGIONAL PLAN 2021

1. Goa is currently facing a huge development pressure on its limited land resources. It is imperative to note that this pressure on land is fuelled by speculation and not a result of the natural growth of population.
2. Lack of sensitive development controls/guidelines is destroying the character of Goa's settlements, especially its villages.
3. Industries, their type and their location are determined in a very haphazard manner without evaluation of existing infrastructure, work force and local skills.
4. The coastal belt with its existing infrastructure is unable to cope with the increasing tourist and related population.
5. The sudden increase in mining over the last few years has intensified the socio-environmental problems it creates.
6. The outlook towards agriculture sector as a whole, with a thrust to make it feasible and viable needs to be looked at, urgently.
7. Inadequate governance because of poor interdepartmental coordination, weak implementation and a lack of transparency.
8. The out-migration of Goans and in-migration from surrounding States, for employment is a dilemma Goa is facing today. Also the issue of the intra-migration of Goans from the midland and the Ghats to urban centers and the coastal areas within the State, is a cause of concern.
9. The physical and social amenities available in Goa (public transport, sanitation, health, education etc) need to be upgraded.
10. The need for a balanced, well spread and all-round economic development of the State.

#### 4. STRATEGY

The Task Force having comprehended the issues has adopted a multi-pronged approach:

- a) A conservation strategy is being put in place to prevent indiscriminate environmental degradation. Accordingly, Eco-Sensitive Zones (ECO I and ECO II) have been created based on levels of vulnerability. In Eco zone I no development will be permitted. In Eco II partial development with restrictions and special controls will be permitted. (Refer Chapter VII and Map 6: Eco-Sensitive Zones )
- b) For an all-round balanced economic growth, for new and better paying jobs for the resident population, right across the State and to reduce pressure from the Coastal belt and Urban areas, new growth centers / nodes are being proposed in the midland talukas, by upgrading and strengthening the transportation routes. (Refer Map 3: Transportation System)
- c) Regional development control regulations are being re-drafted to ensure that the identity and character of Goa's settlements is not eroded. These will be overarching guidelines that will have to be strictly followed through the local level plans.
- d) At every level of envisioning the RPG- 21, there will be consultation with the stakeholders.

## 5. THE PROCESS OF PREPARATION OF RPG- 21

The Task Force has adopted the following process in preparation of the RP2021:

### a) Participation:

The Regional plan has been conceived with active citizen participation. A consultative process was initiated by inviting presentations and secondary data from various government departments and other public institutions. The TF heard representations from industry, experts, MLAs, NGOs, citizen groups, and through local papers invited inputs from the general public. (See Appendix III: Presentations to the Task Force). It also received a number of responses to its advertisement (See Appendix IV: Public Inputs Received)

### b) Data Collection:

Secondary data was collected from various state and central Government departments pertaining to existing and proposed schemes, trends and their effects.

### c) Mapping:

It was observed that data received was sectoral and uncoordinated and would be difficult to use unless it could be overlapped and centralized. Therefore one of the early steps the TF initiated was preparing detailed digitized maps of all key sectors and departments, of the State.

Currently, most of the eco-sensitive areas of the State - like forests, khazan lands, mangroves, wildlife sanctuaries etc, have been mapped, so as to clearly indicate those areas of the State that need conservation and which are out of bounds of development.

Existing settlement areas (as per RP 2001) along with gazette changes from 1988 upto 2005 are also being mapped. Further information

pertaining to existing infrastructure in terms of water, power, etc. has also been put in.

The above information is also being linked to land survey records as accurately as possible so that at the taluka level and smaller settlement-levels, it would then be possible to comprehend the actual impact of all zones, land-use, etc, which are under consideration.

d) Framework Plans:

The Task Force will propose a broad Regional Plan for Goa, (mapped at a scale of 1: 1,00,000), together with 2 District plans (mapped at a scale of 1: 50,000) and 11 Taluka plans (mapped at a scale of 1: 25,000). These Framework plans will include new proposals, update correct/modify the RP2001 as and where necessary to respond to the concerns and will incorporate suitably (in context of proper planning) planned government proposals and schemes. The underlying criteria of the Framework plan would be to make Goa an economically prosperous state, without over exploiting its natural resources.

e) Bottom-Up alongside Top-Down Planning ( Addressing the 73rd and 74th CA)

In order to ensure that the process of bottom-up planning will influence top-down planning decisions, and vice-versa, these Framework Plans will be notified for public suggestions within a period of 60 days from the date of notification. These inputs would then be synthesized by the Task Force with the Framework Plans within a period of two more months for Government to form the Final Regional Plan. i.e. RPG-21 Based on RPG-21, the Settlement Plans (at scale 1: 5000) and the Ward Plans (at scale 1: 2000) will be prepared, with the land uses and zoning detailed in conformity with the developmental controls stipulated.

(f) Time Frame

(a) RPG-21:

- |  |          |
|--|----------|
| i) Submission of Draft RPG-21 for inviting public suggestion | 30.06.08 |
| ii) Notification   | 15.07.08 |
| iii) Receipt of views from the public                        | 15.09.08 |
| iv) Synthesis of views and submission of adjusted RPG-21     | 15.11.08 |
| v) Approval of RPG-21  | 15.12.08 |
| vi) Notification (Final)                                     | 31.12.08 |

(b) Settlement Plans

- |   |                      |
|---|----------------------|
| i) Updating/preparation of Settlement Plans                     | 01.07.08             |
| ii) Finalisation of Plans for inviting objections for all plans |                      |
|   | 01.01.09 to 01.03.09 |

Trial Run: The Task Force has initiated this bottom-up participatory planning as a trial run in 3 municipal councils and 6 village panchayats. The Municipal Councils involved in this exercise are Margao, Ponda and Bicholim while the Village Panchayats involved are Terekhol-Kerim, Savoi-Verem, Mouxim-Sattari in North Goa and Benaulim, Agonda and Chandor in South Goa. It is hoped that an appropriate methodology for this bottom up-top down participatory planning exercise involving the wards will emerge from this test run for the other municipal and panchayat areas of the State (See Appendix V: Notification re: Trial Run for Six Villages and 3 Municipal Councils)

## 6. THE WAY FORWARD

The strengthening of local governance and accountability of elected members to the constituency is necessary, especially on subjects specified in the 73rd and 74<sup>th</sup> CA Act. This requires specified devolution of

accountability related powers from the elected state level to the local elected level in defined constituencies. The RP2021 will be reduced to another pointless exercise, if enforcement of the laws that govern the built environment is lax. Necessary changes will accordingly have to be made to the GTCP Act and the local Government Acts. Enforcement by the Regulatory Authorities will have to be tightened. There should also be proper and effective coordination between various departments of the Government.

The greatest endowment of the State of Goa is its natural landscape. The conservation of these and other related assets are of great concern. At the same time, it is essential that we create a more prosperous and economically vibrant Goa. Thus the interventions we make here in Goa must serve to reinforce its balanced system of towns and villages, so that it retains its uniqueness as perhaps the only part of India where citizens can enjoy the benefits of urban life, within a rural setting, without having to grapple with the problems of mega-cities like Mumbai, Bangalore, and the other large urban centres of India.

The human scale of Goa's towns and villages has other crucial consequences as well. Inhabitants are becoming increasingly aware of their responsibilities as citizens - and of their rights. This is of fundamental relevance given that the 73<sup>rd</sup> and 74<sup>th</sup> CA stipulates that citizens should participate in (and be responsible for) the decisions that affect their lives. In short: the articles 73<sup>rd</sup> and 74<sup>th</sup> of the Constitutional Amendment make certain that planning is not just a Top-Down process, but a Bottom-Up one as well. It is crucial that the people of Goa participate actively in this process. We need to find positive directions, based on the resources, as well as on the aspirations of the people of Goa. In the ultimate analysis, planning is about what we want to become.



## II. DEMOGRAPHIC TRENDS AND SPATIAL STRATEGIES

1. For Goa, the last Portuguese census was in 1960 whereas the first decadal enumeration by the Census of India was in 1971. From regular data available since then up to 2001, the basic population profile for Goa emerges as in Table 1 below:

TABLE 1 : POPULATION, DECADAL GROWTH AND SEX RATIO: GOA STATE - 2001

S.No.	Census Year	Population (in lakhs)				Sex Ratio (females for 1000 males)
		North Goa District	South Goa District	Total for State	Decadal growth rate for state (%)	
1	1960	3.50	2.40	5.90	7.77	1066
2	1971	4.58	3.37	7.95	34.77	981
3	1981	5.68	4.40	10.08	26.74	975
4	1991	6.65	5.05	11.70	16.08	967
5	2001	7.59	5.89	13.48	15.21	961

Source: Economic Survey – Govt. of Goa, 2006-07

The decadal growth in Goa has been higher than the national average in the decades 1961-71 and 1971-81, but lower than the national average in the decades 1981-91 and 1991-2001. This is due to out-migration of regular population exceeding immigration. At the same time, the sex-ratio has steadily dropped in each decade indicating that in-migration is largely from lower income groups who generally come from the adjoining states in search of livelihood before bringing in their families.

2. In terms of in-migration, the Economic survey of Goa 2006-07, states that of an estimated 1.70 lakhs migrants into Goa in the period 1991-2001, 0.77 lakhs were from Karnataka and 0.51 lakhs from Maharashtra. Only a total of 0.22 lakhs were from Kerala, U.P., A.P. and T.N. in that order. The other states contributed the remaining 0.20 lakhs between them.

Most in-migrants comprise of support population for employment through voids created by the outward bound locals.

3. The work participation rate for the State in 1991 and 2001 is as per Table 2 below:

TABLE 2 : WORK PARTICIPATION RATE – GOA STATE: 1991 AND 2001

S.No.	Census Year	Main Workers	Marginal workers	Total workers	Males	Females
		Percentage				
1	1991	32.8	2.5	35.3	49.6	20.5
2	2001	31.6	7.3	38.8	54.6	22.4

Source: Economic survey – Govt. of Goa – 2006 -07

From above it would be seen that between 1991 and 2001, there has been a marginal drop in the percentage of full time employment but a substantial increase in the percentage of marginal employment (mainly males).

4. Due to a spurt in beach tourism, catering to a 'floating population' is an important demographic component of RPG-21, especially as the related hospitality industry has a higher per capita demand on the States infrastructure. Table 3 below indicates the escalating importance of this sector.

TABLE 3: TOURIST ARRIVALS IN GOA (1986-2006)

No.	Year	Number of Tourists (in lakhs)			Quinquennial Growth (%)
		Domestic	Foreign	Total	
	1986	7.36	0.98	8.34	-
	1991	7.57	0.78	8.35	+0.09
	1996	8.89	2.37	11.26	+35.48
	2001	11.20	2.60	13.80	+22.56
	2006	20.99	3.80	24.79	+79.00

Source: Dept. of Tourism, Govt. of Goa, "Tourist Statistics 2006-07" Handbook

From the above, it would be seen that there has been a spurt in Beach tourism in the new millennium in Goa. However, the percentage of foreign tourists to

domestic tourists dropped from 23% in 2001 to 18% in 2006. As international tourists continually search for new and competing locations, it can be assumed that the percentage of foreign tourists would further taper off whereas the percentage of domestic tourists would level off to current levels particularly from non-littoral states of India.

5. Also, unlike cultural-historical tourism (average stay 3 nights), beach tourism involves an average per capita stay of 6 nights (inclusive of December bulges and monsoon lean periods) On this basis, 13.80 lakh tourists (in 2001) would be equivalent to about 0.23 lakh of the year round population (less than 2 per cent). In 2006, this equivalent population increased to 0.41 lakh (around 3 per cent of the year round population). Therefore, by 2021 the total of all floating populations due to beach, pilgrim, historical-cultural, health, adventure, and other forms of tourism as promoted by the State Department of Tourism would keep the total floating population to not more than 5 per cent of the year round population. It is however assessed that more than four-fifths of this would be in the Coastal talukas with high infrastructure demands.
6. In general, trends indicate an overall regular growth rate for the state (linear growth). For upgrading regional infrastructure, it is necessary to cater upto a 10 per cent increase on population forecasts (inclusive of a 5 percent floating population). However to achieve State level linear growth, the coastal belt should have a reduced rate of growth (other than the floating population), whereas the midland belt should have a corresponding accelerated rate of growth. The Ghats belt could maintain its sparse normal growth. This variation is substantially offset by differentials in floating population. Accordingly, an uniform linear growth is assumed in the provision of regional infrastructure.

7. Taluka level population estimates through linear growth trends for 2011 and 2021 are estimated from municipal/panchayat levels as uniformly applied are as per Table 4 below:

TABLE 4: POPULATION ESTIMATES FOR TALUKAS OF GOA STATE- 2021

DISTRICT TALUKA	EXISTING POPULATION (in Lakhs)			PROJECTED POPULATION	
	YEAR			YEAR	
	1981	1991	2001	2011	2021
North Goa					
Tiswadi	1.31	1.46	1.60	1.82	1.92
Bardez	1.54	1.89	2.28	2.89	3.31
Pernem	0.59	0.67	0.72	0.85	0.84
Bicholim	0.74	0.85	0.91	1.11	1.05
Sattari	0.41	0.49	0.59	0.73	0.83
Ponda	1.08	1.28	1.49	1.82	2.04
Sub -Total	5.67	6.64	7.59	9.22	9.99
South Goa					
Murmagao	0.99	1.21	1.45	1.96	2.11
Salcete	1.94	2.20	2.62	3.08	3.74
Quepem	0.56	0.65	0.74	0.94	0.98
Sanguem	0.56	0.59	0.64	0.73	0.75
Canacona	0.36	0.41	0.44	0.57	0.52
Sub-Total	4.41	5.06	5.89	7.28	8.10
Total	10.08	11.70	13.48	16.50	18.09

Source: Census 2001 and Projections

8. Compared to 2001 (Table 2 above), the regular work participation rate for the State is to be improved from current trends towards 35 per cent full employment by 2021. Correspondingly, the percentage of marginal workers is to drop by 2021 (from 7.3 per cent to not more than 5.00 per cent). The estimated projections for 2021 are indicated in Table 5 below:

TABLE 5: ESTIMATED WORK PARTICIPATION RATE – GOA STATE - 2021

No.	Census year	Percentage of workers			State Pop. (lakhs)	Workers (in lakhs)			Remarks
		Main	Marginal	Total (c+d)		Main (fxc/100)	Marginal (fxd/100)	Total (g+h)	
a	b	c	d	e	f	g	h	i	j
1	1991	32.80	2.50	35.30	11.70	3.80	0.29	4.09	Actual
2	2001	31.60	7.30	38.90	13.48	4.26	0.98	5.24	Actual
3	2011	33.00	6.50	39.50	16.50	5.45	1.07	6.52	Projection
4	2021	35.00	5.00	40.00	18.09	6.33	0.90	7.23	Projection

Source: Census 2001 and Projections

From above it is estimated that Goa would need about 2.00 lakh extra jobs between 2001 and 2021, mainly for an incrementally growing population. Given the State's fragile eco-system and over-stretched promotional coastal area growth, jobs for improved infrastructure – both social and physical and for the economic accretion of the settled population needs priority.

9. The fact has also to be underlined that Goa which has achieved a municipal level population of nearly 30 per cent in 2001 is likely to be 70 per cent by 2021, due to both increase of municipal jurisdictions and normal increase. In the process, the character of panchayats would not be affected through promotional built space – especially in the coastal belt. However, the number of villages that would be absorbed in the municipal fence or otherwise reclassified as municipal would be significant by 2021 in a State scenario likely to be 12.60 lakh municipal and 5.40 lakh panchayat by 2021, against about 4.00 lakh municipal and 9.48 lakh panchayat in 2001.
10. It is also inferred from the Government of Goa economic survey of March 2007 that the primary sector would continue as a buoyant sector of the economy – especially in terms of pisciculture, cash crops like cashew and improved paddy cultivation. With urbanization, the tertiary sector would also grow whereas the secondary sector would have to rely on clean industries, informatics and small units. The work force projection for 2021 through basic sectors is explained in Table 6 below:

TABLE 6: ESTIMATED WORK FORCE PERCENTAGE IN BASIC SECTORS –GOA 2021

S.No.	Census year	Percentage of work force			Remarks
		Primary sector	Secondary sector	Tertiary sector	
1	1991	32.29	21.98	45.73	Actual
2	2001	26.02	23.26	50.72	Actual
3	2011	23.00	24.20	50.80	Estimate
4	2021	21.00	25.00	54.00	Estimate

Source: Census 2001 and Projections

It is estimated that the percentage of employment in the primary sector would taper due to mechanization and reduction in the percentage of the available primary sector work force. The percentage of employment in the secondary sector could incrementally increase, especially in designated land uses within the settlement fence and where infrastructure infusion can be broadly predicted and programmed. The percentage of employment in the territory sector would increase with higher urbanization levels, bolstered by upgraded programmed infrastructure.

11. The above projections at State level are being disaggregated at district and taluka levels. At district level, the percentage projections would not vary appreciably from the State level projections. At taluka level however projections would indicate different percentage growth trends for coastal and midland talukas. Toning down the buoyancy of coastal talukas and enhancing the growth of the midland talukas would be an important input of RPG -21. Improved transport and other infrastructure, conservation of the fragile talukas and development of the midland talukas would substantially address the above objectives.
12. Demographic trends and Goa's fragile eco-system point towards an RPG-21 that takes infrastructure to the people around existing densities and not people to infrastructure, through new proposed densities and which do not address the needs of Goa's settled communities.

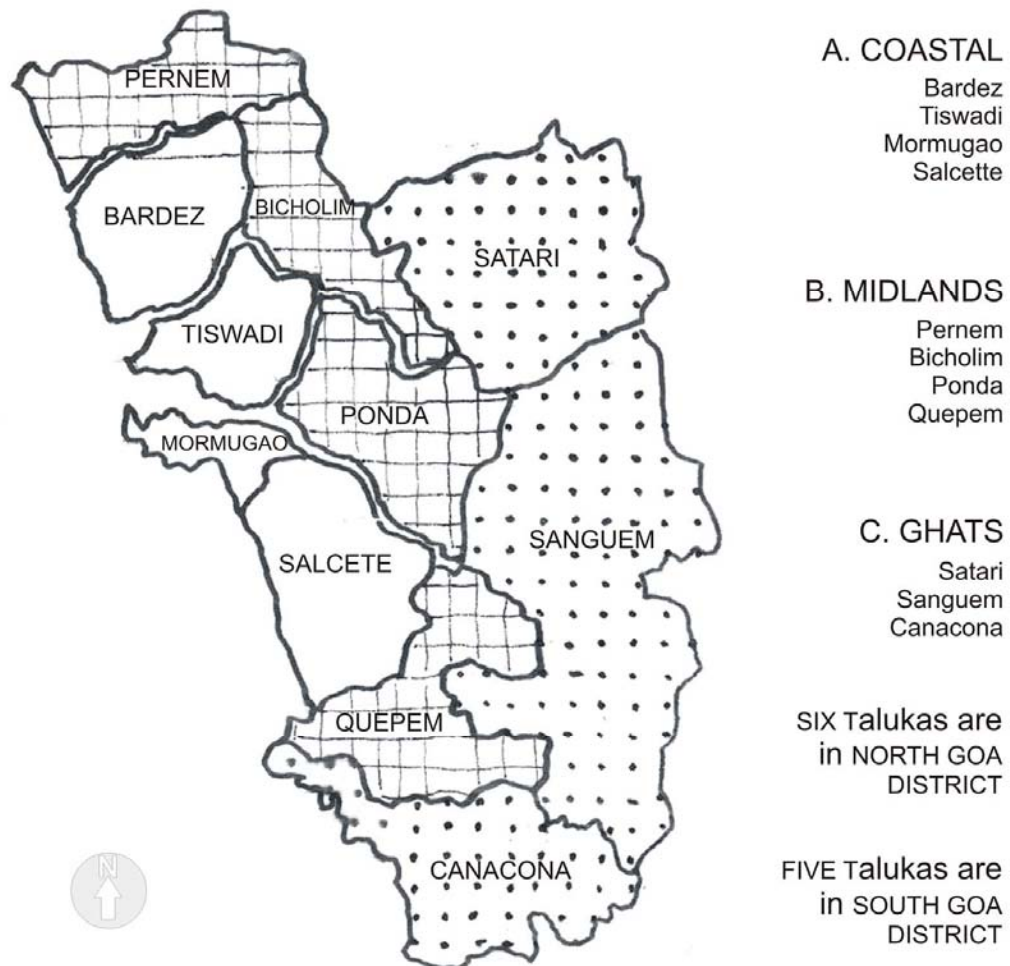
## 2.1 SETTLEMENT PATTERNS

### The Existing Situation

1. At 3,702 sq. km in area, Goa is the smallest of India's 28 states, occupying just about 0.1 per cent of the nation's land mass. The State is divided into two districts: (i) North Goa, about 1,736 sq. km. and (ii) South Goa, about 1,966 sq. km. (In comparison the average size of non-metropolitan districts of India is about 6,000 sq. km.) At the level of the Taluka, the average size in Goa is about 340 sq.km. as against 430 sq.km. in the rest of India. Thus Goa is better placed for compact down-top developmental governance than most other States of the Union.
2. Goa was under colonial rule longer than any other state of India. It became part of the Indian Union as late as 1961 as an Union Territory and soon received accelerated central funds routed largely through sectoral government programmes. It was upgraded to a State of the Union in May 1987, about 5 years before the enforcement of the 73<sup>rd</sup> CA in 1992. Due to its limited land, conservation versus development is currently under intense debate.
3. For socio-economic development the following key facts were considered by the TF for RPG – 21:
  - a) The State has the shortest coastline among the coastal states of India with many competing users: Tourism, fisheries, harbours and speculative housing.
  - b) Rivers and other water bodies and wetlands occupy a greater percentage of the State's area than any other state. More than half of the river lengths are

navigable and the area between high and low tide lines has a unique system of community based aqua-culture developed over the centuries.

## THE TALUKAS OF GOA



Map A. Talukas of Goa: Coastal, Midland and Ghats

- c) A look at the nature of settlements in Goa reveals that the density of settlements is very high in the coastal belt (comprising of four talukas-



Bardez, Tiswadi, Mormugao and Salcete). Refer Map 2: Settlement Areas (RP 2001). The coastal areas of Pernem and Canacona have largely remained underdeveloped, though, this region offers similar geographical entities. The midland belt is having a moderate density of settlements. The Ghats have a low density of settlements.

- c) Thus, three distinct land profiles emerge in the State
- (i) an overdeveloped fragile coastal belt (comprising of 4 talukas)
  - (ii) an undulating fertile midland belt (comprising of 4 talukas) and
  - (iii) an ecologically rich forested ghats belt (comprising of 3 talukas)
- (See Map A above)
- d) Overall, the small state is ecologically fragile with a majority of its settlements requiring incremental upgrading in physical and social infrastructure. However, currently Goa is subject to escalating promotional growth, particularly in terms of beach tourism, surface mining and other employment generators.

#### Issues

- The character of the towns and villages is changing rapidly and it is essential to have broad guidelines in place to prevent this sudden change.
- Currently there is a second boom in the construction industry and several apartment complexes are coming up. They often are situated along natural edges and on hill slopes (often in rural settings and in peri-urban situations) so as to enjoy the view. Due to their larger ground coverage and increased heights they tower over the landscape and diminish the very landscape they consume. Norms

need to be laid down regarding all developments in villages and towns so as to preserve the character of Goan towns and villages.

- Goa, with 359 villages and 14 towns, has a strong poly-nucleated structure which is being eroded by the growing strip developments/ribbon development that is now the norm along all the major roads in Goa.
- Nearly three-fourths of Goa's population is in the coastal belt. This is also the hub of all tourist activity. As a result this coastal belt is being rapidly transformed both by tourism and by the current speculative boom in real estate. There is an urgent need to restrict haphazard development in this area while consciously upgrading the infrastructure of this belt to prevent environmental fallouts.
- In the coastal belt Goa has so far managed to keep a unique balance of the 'rural' and the 'urban' i.e. access to an urban lifestyle in a rural setting. Can we enhance and extend this quality by offering good amenities in all 359 villages of Goa (especially water, sanitation, public transport, medical and educational facilities)?
- One of the biggest dangers that Goa faces is the threat of conurbation – i.e. the kind of urban sprawl that is being generated on the roads that connect the various towns and villages. Parameters need to be specified that control such development.

## 2.2 DENSITIES AND BUILT FORM

In order to understand the nature of Goa's settlements, understanding the density of the settlements and the nature of their typology, scale and footprint of the built form is important.

An analysis of Goa's settlements reveals that

- a) The emerging density in 2021 is 1.45 households per hectare in North Goa District and 1.02 households per hectare in South Goa District (assuming 4.5 persons/household)
- b) Population densities are highest in the coastal talukas, moderate in the midland talukas and sparse in the Ghat talukas. Among coastal talukas, the density is highest in Mormugao taluka followed by Salcete in South Goa District. In North Goa district density is evenly spread between the talukas of Tiswadi and Bardez.
- c) Further it is seen that coastal talukas in 2001 had urban densities of between 4 to 8 households per hectare. By 2021 this would increase to between 7 to 11 households per hectare. In the meantime village panchayat densities in the coastal talukas would increase marginally from between 1 to 2 households per hectare in 2001 to between 2 to 3 households per hectare in 2021. Interestingly in Bardez taluka, the Panchayat density is higher than the municipal density.
- d) In the midland talukas , the households densities are a lot lower and have scope for increase, whereas in the Ghats talukas they are insignificant . Even if we take compact settlements zones rather than the entire municipal or panchayat jurisdiction into account, the densities in the coastal talukas would not range more than 14 to 22 households per hectare in municipalities and not range more than 4 to 6 households per hectare in village panchayat

areas. In Bardez panchayat areas this density may be upto 10 households per hectare at the most. The above density details are at Appendix VI: Study of Densities.

### Policies and Spatial Controls

1. To maintain the character and scale close to the existing housing form in the villages of Goa, it is essential that the building footprint be defined, so as to avoid large blocks of buildings. Therefore, in the case of large tracts of land which are plotted, the amalgamation of these into single entities should be discouraged.
2. Large developments need to be governed by good planning standards so as to create greater levels of open space and public amenities. In the case of group housing, the present practice of using FAR of the whole plot without deducting for roads, open space, amenities should be stopped as this leads to overbuilding and sudden increase in density in the village where they are located.
3. In general, densities are low to modest for which infrastructure can be incrementally upgraded. Therefore, there is no need for accelerated densities in village panchayat areas as this would disrupt the provision of infrastructure.
4. The emerging residential FAR's therefore
  - a) in residential use zones is retained at 100, 80, 60 and 40 (in place of 50) in urban areas – S1, S2, S3 and S4 respectively.
  - b) However, in village panchayats the FARs in residential zones need to be reconsidered. In panchayat areas it may be preferable to have a preponderance of houses (upto 2 storeys) rather than flats or group housing and which are more suited to municipal areas. In the process paddy fields and cashew plantations and slopes of 25 percent and above are being protected against promotional development. In municipal areas, higher densities may be justified in limited S1 and S2 zones.
  - c) In panchayat areas, S1 zones are in any event not allowed. Even S2 zones have to be carefully considered in a limited way in a few fast growing panchayats. Until settlement plans are prepared, only S 4 zones be permitted provided height does not exceed 9 m, 6 m R/w access is available and parking norms are complied with.

### Follow-up work to be done

1. Alternate policies may be considered like limited land bank or land reconstitution in order to create access to land. Access to land is generally a complicated issue in Goa (due to the earlier Portuguese laws creeping into the system).
2. One of the systems suggested to the TF is as below:  
LAND CREDIT SYSTEM could be considered in relation to plot conversion. When an applicant wants to convert a plot of land he must buy some orchard land and hand it to a specially created land bank. The ratio etc can be decided. The land bank holds the land and it will not get converted at least till 2021. An advantage of this system is that the owners of such land have marketable titles and thus will not work hard to get the same converted. Once the land is in the land bank it will be safe. Nothing should be allowed to come up on such land which is in the custody of the land bank.
3. The TF also felt that it is important that the Land Acquisition Act 1894 should be strictly used for Govt. projects. If not required by Govt, the land should ideally revert back to owners. (Refer Annexure X)

### III. ECONOMIC SECTORS AND LAND USE

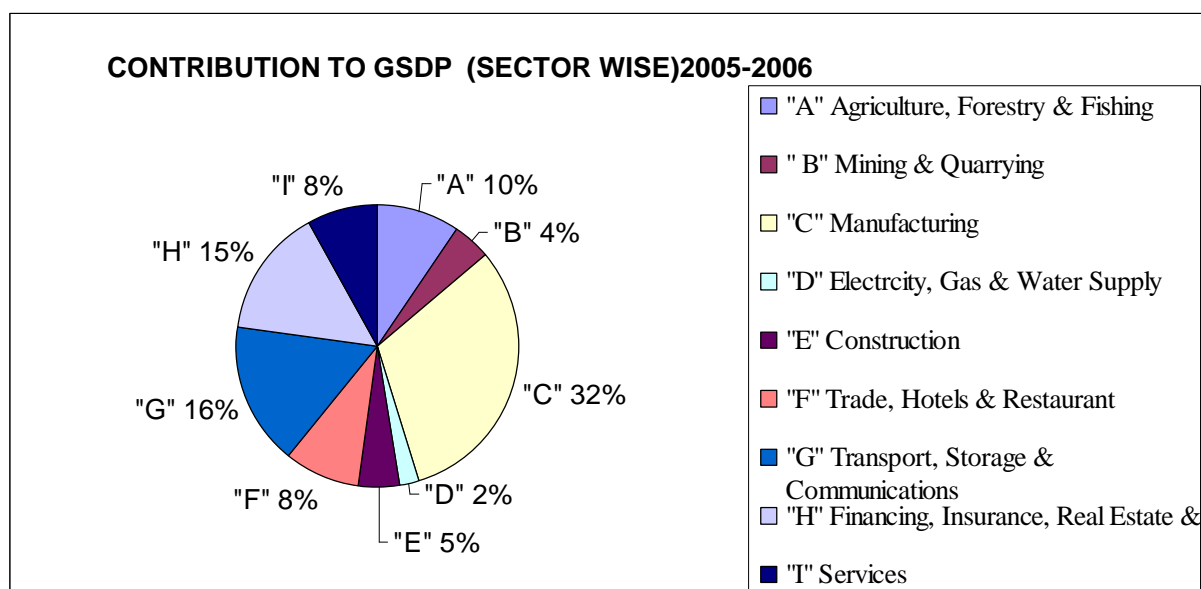
A quick glance at the various economic sectors and their contribution to the State's economy in 2005-06, reveals that:

The primary sector (involving agriculture, fishing, forestry and mining) contributed 14% to the Gross State Domestic Product;

The secondary sector (involving Manufacturing, construction, Electricity, gas and water supply) contributed 39% to the GSDP and

The tertiary sector (involving trade, hotels, restaurants, transport and communication, finance and real estate and other services) contributed 47% to the GSDP.

However, in terms of land use, the economic generating land uses in the secondary and tertiary sector occupy very little land, mainly within or near settlements.



The detailed existing scenarios for each economic sector, issues in each sector that need to be addressed and possible policies/spatial controls are outlined in the chapters that follow.

### 3.1 AGRICULTURE

#### The Existing Situation

Agriculture has been a dominant economic activity of the state. As per the Economic Survey report 2005-06, the Agriculture sector contributes 5.6% of GDP to the states economy. Over the last few decades, although the net area sown seems to be shrinking, as compared to other economic sectors, it continues to occupy the largest amount of land in the state (1367.81 sq.kms in 2005-06). As per the 2001 Census, out of the total work force, 9.64% are cultivators and 6.85% are agricultural labourers.

TABLE 7 : Area under Agriculture-Staple crops

No	Items	Reference period	North Goa	South Goa	Total
1	Total reporting area (Sq.kms)	2000-01	1674.36	1936.77	3611.13
2	Net area sown (Sq. kms)	2000-01	837.41	574.60	1412.01
3	Area sown more than once (Sq.kms)	2000-01	223.64	77.91	301.55
4	Gross cropped area (sq.kms)	2000-01	1061.05	652.51	1713.56
5	Area under paddy (sq.kms)	2000-01	339.85	232.22	572.07
6	Area under other cereals millets/pulses & oil seeds (sq.kms)	2000-01	95.49	37.03	132.52
7	Area irrigated (sq.kms)	1999-2000	N/A	N/A	344.91
8	a) Average yield of rice per hectare (In Kgs.)				
	i) Kharif	2000-01	2,321	2341	2331
	ii) Rabi	2000-01	2,778	2,657	2,726
	b) Average yield of ragi per hectare (in kgs.)				
	i) Kharif	2000-01	1,207	953	1,082

Source : Directorate of Planning, Statistics and Evaluation Panaji-Goa, 2006-07

There are 3 types of agricultural land where paddy is sown: khazan, ker and morod.

- i) Khazan lands: Saline alluvial soil in low lying areas near rivers which are the most productive
- ii) Ker lands: Well drained high textured sandy soil in mottled lateritic substratum

- iii) Morod land: High lying or terraced lands along the foothills or on top of hills

TABLE 8: Area under agricultural uses other than staple crops

No.	Items	Reference period	North Goa	South Goa	Total
1	Area under sugarcane (Sq.kms)	2000-01	2.59	9.91	12.50
2	Area under coconuts (Sq.kms)	2000-01	110.25	140.00	250.25
3	Area under Arecanuts (Sq.kms)	2000-01	13.87	2.13	16.00
4	Area under cashewnuts (Sq.kms)	2000-01	392.91	144.76	537.67
5	Area under Vegetables (Sq.kms)	2000-01	56.25	19.75	76.00
6	Area under Garden crops (Sq.kms)	2000-01	44.34	60.28	104.62
7	Permanent pastures and other grazing lands (Sq.kms)	2000-01	6.29	6.76	13.05
8	Land under miscellaneous tree crops & groves not included in the net area sown (Sq.kms)	2000-01	5.70	0.10	5.80
9	Cultivable waste land including fallow land (Sq.kms)	2000-01	269.35	284.82	554.17

Source : Directorate of Planning, Statistics and Evaluation Panaji-Goa, 2006-07

The staple produce of the state is rice, followed by coconut. Coconut groves are present all along the coastal stretch often interspersed with horticultural plantations. Hilly places and inferior soils are used for cultivation of cereals and pulses, fruit trees, oil and fibrous plants and vegetables. Cash crops like coconut, cashew nut, areca nut, mango, banana, jackfruit, pineapple, are grown in abundance. Recently sugarcane cultivation has been taken up.

Cashew was introduced in Goa as a soil conservation measure. Current area under cashew plantations is about 540 sq. kms. Arecanut cultivation is restricted to areas called 'kullagars'. These are located in talukas like Ponda, Sanguem and Sattari talukas. These need to be protected.



## Issues

- The cultivation of paddy has become unviable for the following reasons:
  - i. Historically paddy cultivation was done by the family members including women from the family of landowners. Land owners especially younger generation and women are now reluctant to do manual labour in the fields. They depend exclusively on agricultural labourers. The heavy burden of their wages has disturbed viability of paddy cultivation.
  - ii. Given small size of the farms it is not possible to adopt to mechanized farming techniques including use of tractors. Unlike cash crops, the price of rice has not risen considerably to make paddy cultivation attractive.
  - iii. On the contrary the prices of land have risen significantly. Therefore there is temptation on the part of landlords to keep paddy fields fallow for few years and subsequently change the zone to settlement. From stake holder meetings what emerged was that, today at a good section of the labor force is moving towards white collar jobs; tourism offers better and faster remuneration. Orchard and dry crop land to being divided to the real-estate market especially in the coastal belt. The introduction of the Agriculture Tenancy Act, though initially it served its purpose of bringing more land into cultivation is now being misused by tenants with negative declaration of tenancy and subsequent sale for other uses.
- Currently, paddy fields adjoining urban areas are constantly being converted into settlement areas, Communal lands are increasingly lying fallow or being put to developmental or economic use.
- Khazan lands under paddy cultivation are increasingly being used for pisciculture. These khazans are often subject to inundation with salt water by breaking the embankments protecting these lands or by entering water

through the sluice gate by damaging the doors thereby practicing illegal fish breeding. As per Agricultural Tenancy Act in force the maintenance of the embankments is the prime duty of the beneficiaries. However, practical experience has shown that since the Tenancy Act came into force, the comunidade system itself has been eroded and as a result the beneficiaries are not maintaining it properly.

- The situation in the highland talukas is different and the pressures in these areas facing the agricultural communities also differ. Here the threat to agriculture is from the mining industry with lands being degraded due to deposits from mining rejects and also water shortages.
- Traditional Horticultural cultivation such as coconut, Mango, arecanut, cashew and pineapple cultivation have been ignored by Goan landlords on the grounds of rising cost of labour and non-remunerative prices.
- The Goans have earlier been self sufficient, growing their own food crops, while fishing was another primary occupation. Today ironically, Goa depends on the neighbouring states for rice, vegetables and even fruit. This turn of events is unfortunate for Goa which for years has had agriculture as the main occupation of the people and the backbone of the Goan economy.

#### POLICIES AND SPATIAL CONTROLS

The Government of Goa should constitute a special task force to suggest an action plan for integrated agricultural development of Goa with proper forward linkages so that its multiple effect spills over rural Goa's economy. This may be done keeping in view the following considerations:

1. Recommendations contained in the Agricultural Land Development Panel (ALDP) Report need to be looked at. The ALDP states that
  - a) an "integrated Estuarine and Khazan Area Development Plan' is essential to any attempt at saving, rehabilitating and developing the khazans.
  - b) an "Agency for Planning and Management of Estuarine and Khazan Areas" be constituted to evolve the plan and oversee its implementation.
  - c) Scrapping of the Tenancy Act and replacing it with a new legislation.
  - d) Responsibility for maintenance and repair of the bunds should be transferred to the village panchayats etc.
2. Agricultural department needs to give substantial technological inputs for farmers cultivating paddy to increase the yield through better seeds and farming techniques.
3. The cultivators who cultivate paddy during kharif season need to be encouraged to grow vegetables, groundnuts and beans in rabi season.
4. Most Comunidade lands are tenanted. A number of these Comunidade lands are lying fallow. As per the Agriculture Tenancy Act, fallow agricultural land has to revert back to the Government or the Comunidades. This provision should be implemented and Government can get such land cultivated through cooperatives or contract farming groups. Fallow comunidade orchard land/hill slopes and plateaus could have social forestry/horticulture development.
5. The Government should create Special purpose vehicle of Agricultural Development Corporation to develop and cultivate all lands which revert back to Government through agriculture cooperatives or contract cultivation.

6. Profits of the farmers could increase if they switched to organic farming, floriculture and horticulture. Cooperative farming could also be encouraged especially on comunidade lands that are lying fallow.
7. In Goa's midland belt where agricultural land is not facing intense developmental pressure unlike the agricultural land in the coastal belt, agro-industry and horticulture need to be given a boost so that the villages and towns in this region can pursue agriculture as a real economic option. Horticulture through fruit bearing trees like cashew, mango needs to be encouraged in the midland belt. Kullagar type farming predominant in the area needs to be protected and encouraged. Agricultural department has to formulate a well thought Government scheme for systematic cultivation of Coconut, Cashew, Mango and cashew cultivations. The option of introducing intra crop including spice in coconut / areca nut cultivation could be thought of.
8. In the high land belt Goa has a rich bio-diversity of the forest and the traditional occupation of farming that is in sync with the adjoining forest needs to be preserved and encouraged (while simultaneously strictly regulating/stopping environmentally damaging mining). These farms, both large and small, if allowed to regenerate, could address the shortage of farm produce in the state and the unnecessary need to bring it from neighboring states at the moment.
9. The farmers growing traditional vegetables such as brinjal, tambdi bhaji, need to be supported otherwise they will be wiped out. Creation of self help groups especially of rural women to encourage growing of traditional fruits and vegetables is also a good move. The long ignored need of self help groups for permanent shops in cities to sell traditional fruits and vegetables should be satisfied.

10. The Governments proposal of Agricultural support price of Rs. 4/- per unit for coconut is welcome and such support price for other crops could be thought of to make agriculture and horticulture viable.
11. The possibility of co-operative farming should be explored. Successful experiments like the one in Saligao can be benchmarked and this model can be replicated.
12. The possibility of promoting organic farming and specialize in organic products which command a high price among health conscious consumers, needs to be explored. In fact Goan cashew plantation is organic by default and Goan cashews are marketed as organic in Japan. Conscious efforts could be made to promote organic farming on large scale in cashew, coconut, arecanut, mango, pineapple, kokum and other horticultural crops.
13. There seems to be tremendous scope for development of floriculture in Goa considering that the State imports flowers worth lakhs of rupees from neighboring states.
14. Further, the proper harvesting of forest produce could also provide economic alternatives to employment by mining for the people in the area.
15. Social Forestry areas are redefined in this RPG-21 as only those areas where afforestation schemes have been undertaken.

RPG-21 has therefore demarcated

- a) All Khazan lands as ESZ-I
- b) All other agricultural lands (which are waterborne) under ESZ- II
- c) All lands under irrigation command area (minus all contiguous lands under current settlement fence and any contiguous areas that in future come under settlement fence) as ESZ- II
- d) Cashew plantations as ESZ-II (these have been erroneously marked under social forestry in the earlier plan)
- e) All other plantations, fruit orchards and coconut groves are to be encouraged and protected. These are marked as ESZ-II.

Follow-up work to be done

1. Agricultural lands under cultivation need to be identified as per khazan, ker, morod lands. Accurate survey to ascertain cultivated land, coconut, cashew and arecanut plantations needs to be done.
2. Experts should study the experiment of contract farming in other states to see if it would work for Goa.

### 3.2. ANIMAL HUSBANDRY

#### The Existing Situation

Animal Husbandry plays an important role in the state's rural economy. Cows and buffaloes along with pigs and poultry are reared in large numbers while goats and sheep are in small numbers.

As per the Table 9 below, cattle, poultry and pigs are the main livestock of the people.

TABLE 9: LIVESTOCK and POULTRY (2005)

Taluka	Cattle	Buffaloes	Pigs	Goats	Poultry
Coastal					
Bardez	6287	3254	7415	1704	33977
Tiswadi	2174	1904	13188	676	43286
Mormugao	1193	438	6766	382	8399
Salcete	4796	3679	40357	1018	74684
Midland					
Pernem	9005	5071	3955	1837	23883
Bicholim	7082	5305	78	1023	28935
Ponda	6999	5327	3720	930	96230
Quepem	8553	3107	4751	1381	58843
Ghats					
Sattari	10622	3580	100	773	48079
Sanguem	9591	4242	3136	572	121195
Canacona	10014	1902	4813	795	23395

Source: Goa at a Glance, 2006, Dir. Of Planning, Statistics & Evaluation

#### Animal Health

There are 21 veterinary dispensaries and 5 veterinary hospitals in the State.

#### ISSUES

- Goa is milk deficient and imports hundreds of litres of milk per day.
- Pasturelands and wastelands are probably shrinking due to developmental pressures and grazing rights never being enforceable.
- Slaughterhouses and slaughter waste needs to be addressed and methods prescribed and strictly enforced.

#### POLICIES AND SPATIAL CONTROLS

1. Pasturelands need to be mapped and common grazing rights should be established at the village level.
2. Full fledged efforts have to be made to increase milk yield in Goa through innovative schemes of dairy development. An exercise should be undertaken to ascertain the present and future requirements of pasture lands/waste lands for supporting the necessary livestock to make Goa self sufficient in milk.
3. Marginal farmers should be encouraged to opt for complementary economic activities such as poultry and piggery.



### 3.3 FORESTRY

#### The Existing Situation

The state of Goa has more than 33% of its geographic area under Government forests, of which about 62% are under the Protected areas of Wildlife Sanctuaries and National Park.

#### Forest Lands

As per the Forest Department, the notified forests of Goa are as under:

Table 10: Area under Notified Forests

a)	Area notified as Wild Life Sanctuaries and National Park	754.95 sq.km
b)	Reserved Forest (notified u/s 20)	99.03 sq. km
c)	Proposed reserved forests (u/s 4)	230.63 sq. km
d)	Proposed reserved forest (notification under process)	107.13 sq. km
e)	Forest area to be notified	32.72 sq. km
	Total	1224.46 sq. km

Source: Department of Forests, 2006-07

#### Private Forests

The Sawant and Karapurkar Committee Reports identified 67 sq kms as private forests. A further 200 odd sq kms of private forests are still to be mapped. Currently a survey is on to ascertain this remaining area of private forests in Goa. The areas indicated under the private forests are based on the Sawant and Karapurkar Committee Reports. The map of private forests will be completed once the detailed survey for confirming the status and content of forest land is finished subject to approval by the Government.

#### Mangrove Forests

As per Forest Department, the total mangrove area works out as follows:

1. On private land	29.05. sq.kms
2. Mangrove plantation	10.78 sq.kms
3. Dr. Salim Ali Sanctuary, Chorao	<u>1.78 sq. kms</u>
TOTAL	41.61 sq kms

## Forest Produce

The main objective of the Forest department is the conservation of forests and wildlife and to regulate the felling of trees in private lands. The department also takes up plantation of blank areas and degraded forests so as to stock them with important indigenous species including medicinal plants under various schemes. The major forest produce includes timber, poles and firewood, and minor produce like bamboos, rubber etc. Apart from these there are medicinal herbs, grasses, fruits etc. As per the Table below, all forest produce seems to be on a decline except for firewood.

TABLE11: Forest Produce 2003-06

No.	Item	Year		
		2003-04	2004-05	2005-06
1	Timber M3 (Govt)	413.91	625.7	452.96
2	Firewood M3 (Govt)	1805.4	1066.77	2440.84
3	Bamboo Nos. (Pvt)	116144	82645	71933
4	Poles (Nos.) Govt.	968	279	2504
5	Canes (Nos.)	4385	1140	325

Source: Forest Dept. Govt. of Goa

Goa's forest cover is 82% over hilly areas, hence management of forests is primarily guided by principles of soil conservation and improvement of tree cover. The Forest Department is involved in

- a) Afforestation of Degraded Forests
- b) Soil and Water conservation
- c) Protection of Forests
- d) Meeting demands of local people
- e) Social Forestry on Comunidade lands

## Issues

1. The Western Ghats region is one of the most bio-diverse spots in the country. This biodiversity is threatened by the afforestation schemes undertaken since these schemes usually promote monoculture.

2. A number of mines are located around the boundaries of national parks/sanctuaries. Deforestation due to mining is a significant threat to the forests. Mining rejects further encroach on forest land.
3. Endemic laterite plateaus are supposedly bio-rich habitats (the higher the altitude the greater the bio-diversity). However, in Goa plateaus are the first casualty of a lot of planned development, largely due to lack of knowledge of their real value.
4. The State-level committee set up to create eco-fragile zones around sanctuaries has submitted a report recommending a buffer zone that ranges between 0-3 kms depending on the location. This needs to be reviewed as it impacts Eco Sensitive Zones.
5. Regulatory conditions governing the buffer zones around wildlife sanctuaries laid down by the State committee for creating eco-fragile zones prescribed needs to be reviewed. Currently as per the regulations “no mining activities between sunset and sunrise” is allowed. This effectively allows mining in the buffer zones throughout the day.

#### POLICIES AND SPATIAL CONTROLS

1. All forest lands will be under ESZ-I
2. Private forests once mapped would be zoned as ESZ-I
3. Social forestry options need to be explored and encouraged on a larger scale.

### 3.4. FISHERIES

#### The Existing Situation

Fishing is a traditional activity that is also an important economic activity of the State. Goa has a 105 km long coastline and inland waterways of about 555 kms (as per 1991 census). The coastal waters and the inland waters are very rich in prawns, (a foreign exchange earner), mackerels and sardines. Traditionally fish, prawns and shell-fish were harvested.

TABLE 12: Trend in Fish Catch 1999-2006

Year	Annual Fish Catch in tonnes		
	Marine	Inland	Total
1999	60075	3365	63440
2000	64563	3570	68133
2001	69386	3749	73135
2002	67563	3684	71247
2003	83756	4283	88039
2004	89932	4396	94328
2005	103091	4196	107287
2006	98643	3903	102546

Source: Economic survey 2006-2007

Due to international demand, there is now an over exploitation of water resources for prawns.

TABLE 13: Export of Marine Products

Year	Quantity (in tonnes)	Value (Rs.in lakh)
1999	9054	3491
2000	10732	3357
2001	7714	3007
2002	15594	5620
2003	10288	3273
2004	8856	3909
2005	11001	6178
2006	8472	6438

Source: Economic survey 2006-2007

## Issues

1. As per the Coastal Aquaculture Act, 2005, mangroves, agriculture land, salt pan lands, ecologically sensitive areas like sanctuaries, marine parks should not be used for shrimp farming. Therefore lands available for aquaculture need to be assigned as per the Act.
2. As per the Fisheries Department, the following need to be upgraded:
  - a. Fish handling centres are not adequate since the fishermen are going for larger size of vessels in order to exploit farther away fishing grounds for longer duration of fishing over five days.
  - b. The landing jetties are not equipped to handle the resultant catch and the length of the jetties are also not sufficient to land the catch at one time resulting in handling losses and waste.
  - c. Auction sheds at the jetties also need to be upgraded to international standards, so that the catch can be properly handled and sent for further processing.
  - d. Net mending sheds
  - e. Workshops
  - f. Slip ways
  - g. Cold storage and Ice plants
3. Suitable land for sun drying of fish in the North as well as South Goa needs to be identified. Fisheries department has chosen Colva Plateau and Nagueri Plateau of Betul for the purpose. TF needs to review this.
4. Overexploitation of fishing resources resulting in poor catch.
5. Monsoon ban on fishing for 2.5 months is being relaxed to 2 months that is leading to overfishing.

## POLICIES AND SPATIAL CONTROL

1. Future proposals of the Fisheries Department include the following:
  - a)At Malim, Cortalim and Cutbona: Jetty with workshop, net mending shed, auction shed and auxiliary facilities in phases.
  - b)At Chapora fish landing centre, upgrading of facilities to include a 50 m jetty, workshop, net mending shed, auction shed, and ice plant in phases
2. A 0.5 to 1 km wide strip of beach needs to be set aside on all beaches for the needs of traditional fisherfolk to bring in their fishing crafts and other related needs. Their traditional spaces are encroached upon by tourism. This needs to be marked in consultation with the fisherfolk in each area.
3. Regulation of size of mesh in catching fish is needed, so as to allow juvenile catch to go free.
4. Gelatin sticks used to breach bunds for fishing in khazan lands- should be banned.

### 3.5 MINING

#### The Existing Scenario

Mining is an important activity in Goa and the state is rich in deposits of iron ore, ferro manganese, manganese, bauxite, limestone, silica, clays, etc. In 2006-2007, 265.32 lakh metric tons of iron ore and 1.33 lakh metric tons of iron ore pellets were exported from Goa. (Source: Environmental Atlas-2007)

Goa is a major iron-ore exporting state and is responsible for foreign exchange earnings of nearly Rs.1000 crores per annum. From 2001-02 Goa's mineral exports has nearly doubled to reach 30.89 million tonnes in 2006-07, due to a sudden demand from China for low grade iron-ore. With this sudden boom, there is a rush to open and work on dormant leases.<sup>1</sup>

It is important to note that while mining occupies over 8% of Goa's land area, its contribution constitutes only 4.2 % of the State GDP.<sup>2</sup>

The mining belt of Goa covers approximately 700 sq kms and is concentrated in 4 talukas of Bicholim, Sattari, Sanquem, and Quepem. Iron ore is the main mineral resource. The mining industry provides employment to about 11,000 persons directly and about 10,000 persons indirectly.<sup>3</sup> As per the Department of Mines, the number of working mines is 108 as against a total number of 700 odd mining leases.

Almost 10,000 trucks are used by industry to transport ore to the jetties. From there about 260 barges are used to transport the ore to the ports (for export)

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<sup>1</sup> Goan Mineral Ore Exports, Goa Mineral Ore Exporters' Association

<sup>2</sup> Centre for Science and Environment's State of India's Environment Report, (2008) warns that if all the applications for leases under various stages of processing are cleared, as much as one-fourth of Goa will be under mining.

<sup>3</sup> Source: Environmental Atlas 2007

through inland waterways using the Mandovi and Zuari Rivers and the Cumbarjua Canal. There are 31 loading jetties on R. Mandovi and 14 on R. Zuari, that are under the administrative control by various mine owners

Quarries: In addition to the mines, there are 228 quarries covering a total area of 6.52 sq.kms. They are responsible for extraction of minor minerals especially laterite stones. (as per PCB's Environmental Atlas 2007)

#### Issues

- The Environmental costs of mining are very high.

As per TERI study (1997)<sup>4</sup> the major environmental impacts are as under:

#### Land:

- a) A major part of the mines are within forest area. Out of 12.45 sq.kms of Govt forest, 5.00 sq.kms are affected by mining. Area under private forests has almost been reduced to half from 387.33 sq.kms to 200.00 sq.kms.
- b) Enormous amount of mining waste is piled up in heaps as high as 50 m and slopes of 30 degrees.
- c) Agricultural fields at the foothills of the dumps and mining areas have suffered tremendously due to siltation from mining.

#### Air quality:

- a) Mineral dust is the chief air pollutant in the mining belt and dust pollution also affects the transportation routes through which the trucks carry ores from the mines to the loading points.

#### Water quality:

The water quality of rivers and streams, as well as irrigation levels are affected due to

- a) the discharge of the mines pit water
- b) Waste water from benefaction plants

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<sup>4</sup> TERI AEQM Plan for the Mining Belt of Goa (1997)



c) Rainwater run off from the dumps

d) Barge movement

- As per the Environmental Atlas of Goa, (2007) mining industrial wastelands cover an area of 110.73 sq kms.
- Most mining leases are located in and around sanctuaries and forest areas. As a result there is a complete incompatibility of uses. In recent years there has been a growing realization of the great value of the forest areas, both environmental and economic (with new species of plants and animals being discovered constantly and the potential to harvest this for the drug industry) and the steady degradation of the area due to mining, with miserable economic benefit in return.
- There is a massive movement of minerals through road (as much as 8000 trucks!) as well as rail from neighbouring state to Goa for the purpose of blending with local ore for its upgradation as well as export by miners through MPT. It is observed that they have been using NH4A and transporting it upto Usgao to access further shipment through barges to MPT. This has been creating enormous traffic problems as well as environmental hazards along its route. Though the government has introduced a cess for trucks transporting minerals, it is not going to take care of the major impacts on various fronts.
- Agriculture has also been severely affected in the area due to extraction of staggering quantities of ground water, vast areas being covered by siltation and mining dust, thus destroying farms and livelihood and has led to, at times violent conflicts between those involved in agriculture and mining in the area. A case in point is the village of Columb in Sanguem taluka, where 22 mining leases are awaiting revival. These will cover 14.00 sq.kms out of the total village area of 19.00 sq.kms! In other words this agricultural village is under the shadow of being completely consumed by mines. Unfortunately, current laws offer only some

paltry compensation instead of any real relief for those whose land and livelihood are taken away by mining.

- The loading jetties of the barges are right on the river bank and this results in surface water pollution during loading and unloading operations.
- The speed of the barges is currently not regulated by the Captain of Ports and it causes damage to the khazan land embankments when over 7 knots.
- Though mining has regulatory mechanisms in place, they are rarely enforced. Enforcement of existing regulations is the key to ensure mitigation of environmental and social costs.

#### Policies and Spatial Controls

Given the huge economic pressure that is currently driving the opening up of more and more mines in the State, at huge social and environmental costs, the TF recommends that a high power task force be immediately constituted to arrive at a mining policy.

This committee should also review all the recommendations of the TERI AEQM Plan for the Mining Belt of Goa (1997) and take into consideration the following concerns:

- a) Urgent stocktaking of areas affected by mining needs to be done
- b) Mining activities not to be permitted in areas declared as forests. In future new leases not to be opened up within existing forest areas, existing settlement and cultivable agricultural lands.
- c) Open cast mining not to be permitted within catchment areas of irrigation projects

- d) After closure of mines each mining site to be rehabilitated through vegetation, plantation of fuel wood and forest species.
- e) Appropriate environmental degradation control measures to be an integral part of all mining activity.
- f) Ore traffic to not pass through villages. There is an urgent necessity to minimize the impact by using alternate methods or imposing higher cess as a deterrent.
- g) Social conditions of the people in the mining villages to be improved and the mining companies to upgrade existing water supply, sanitation facilities and provide up-to-date health facilities in the mining belt.

#### SPATIAL CONTROL

RPG – 21 has demarcated all active mines. Further as regards mining the following shall apply:

- i. No mining activities shall be permitted within ESZ-I areas without the approval of Environment and Forest Departments.
- ii. In future no mines shall be opened up within the ESZ-I areas without the approval of Environment and Forest Departments.
- iii. Unloading points of ore on river banks shall be beyond CRZ line or they need approval from the GCZMA.
- iv. All abandoned pits in ESZ-I, II or elsewhere have to be rehabilitated through revegetation of appropriate forest species, and wherever possible mine pits should be used as reservoirs of water for irrigation.

Note: Mining wherever it is carried out has to follow stringent regulations for environmental health and these have to be strictly enforced as per various regulations already in place.

### 3.6 INDUSTRY

#### The Existing Situation

1. Post liberation, in 1961, Goa has moved steadily from agriculture and trading economy with few natural resource-based industries like agro-processing and mining to a manufacturing and service economy.
2. Goa has an industrial base of its own spread across 20 odd industrial estates & few major industries of chemical & fertilizers, pig Iron plant, food & beverages product & pharmaceuticals in addition to the traditional small & medium & cottage industries. There are about 130 major industries already established in Goa. In the manufacturing industry, there were about 140 large and medium scale units and 6,714 small scale registered units in Goa (as of March 2003) The contribution of manufacturing industry to the GSDP is estimated to be 32% as per the Economic Survey 2006-07.
3. The Government Industrial Policy (2003) envisages establishment of “only non-polluting and non-hazardous units having potential for employment generation” so as to promote sustainable growth. The thrust areas identified are :
  - a) Pharmaceuticals, Drugs and Biotech industries
  - b) Food-processing and Agro-based industries
  - c) IT and IT enabled services
  - d) Eco-tourism/Heritage tourism/event-tourism/Medical –tourism
  - e) Entertainment industry
4. In order to ensure that these thrust areas receive focused attention, the Government further wanted to encourage the setting up of the following:
  - a) Pharma Park
  - b) Food Park including wine Park

- c) Software Technology Park(STP)
- d) Agro Economic Zone
- e) Biotech Park
- f) Apparel Park
- g) Special Economic Zone
- h) Film City

However a number of proposals based on this policy were proposed in RPG-2011. However they were opposed by the people since they were seen as developments that were conceived without taking into account the ground reality, in terms of infrastructure required and projected, in terms of existing skill sets of the local population etc.. The withdrawal of the RPG-2011 and the SEZ proposals by the government was in response to public sentiment on this issue.

#### 6. SEZs

The TF was opposed to the formation of SEZs since they were largely land-guzzling and resource-guzzling entities that did not cater to the needs of the local populace. (See Appendix VII: Views by TF to Government on SEZs)

#### Issues

- 1) There seems to be a mismatch between jobs on offer and skill sets of locals because the educational set up does not cater directly to the industries in Goa. As a result available jobs are then taken up by migrants rather than locals.
- 2) All industrial estates should also have a provision for housing their workers. If this is not mandated, all Goan villages in the industrial belt are inundated with the pressures of accommodating the 'migrant labour force' that comes to work in these industries.

- 3) There is a huge water shortfall experienced by industry. They end up overexploiting the ground water reserves and there are constant water conflicts with surrounding villages.
- 4) The entire transport system of the state has to be conceived as one entity considering that the size of the State is very small and so is the population it caters to. Most people crisscross the State on a daily basis and the daily commutes are quite strenuous. This needs to change and a good efficient public transport system that effectively links the jobs and the people is critical to ensure productivity and well-being of the citizens.
- 5) Scrap Yards  
The issue of scrap Yards should be taken up, with limited areas identified for such units and scrap yards should not be permitted in any other areas. This could be within the Industrial Estates, with 10% area in each estate reserved for such service sectors & “by product” handling. Each Industrial Estate should also have a mandatory reserved green belt of 50 to 100 meters along the entire periphery of the Estate.
- 6) Existing Iron and Steel Rolling units in the industrial estates of Cuncolim, Madkai and Kundaim epitomize industries that do not work for Goa. These should be phased out.
  - a) They consume 30-40% of the state power supply
  - b) They are polluting in nature.
  - c) They also depend on an almost 100% migrant work force.
- 7) Shipbuilding is an activity that has grown to cater to the mining industry. 240 barges (transporting 42 million tones of iron ore annually) need annual maintenance (as per Shipyards Association of Goa) 72 yards exist (80% on R. Zuari and the rest on R. Mandovi) All yards employ about 6500 workers (skilled and non-skilled)

## Policies and Spatial Controls

1. Since locals are not attuned to jobs involving manual labour, it is important to encourage industrial sectors that match the local skill sets of the population like health, pharma, education etc. which are also relatively “clean”.
2. Potential industries that can be recommended are:
  - a) Industries that are non-polluting, clean, non-power guzzling industries.
  - b) Industries that offer jobs that match the skills of local population in areas like health. education sectors etc. should be encouraged
  - c) Natural resource based industries: Agro-based fruit and food processing, live-stock based units like dairy and meat products, cattle feed, marine-based units, forest-based units like paper and wood products. However mineral based industries have to be carefully chosen on the basis of environmental impact before deciding on any of them.
  - d) Green technology industries
  - e) Cottage and rural industries
  - f) Handicrafts industries
2. Indigenous industries can be promoted as cluster industries as under:
  - a) Cashew processing industry
  - b) Terracotta Industry in Bicholim
  - c) Artisans working with Gold
  - d) Pharma Industry
3. Industries should be sited according to the Guidelines for Siting of Industries issued by the Goa State Pollution Control Board. These new locations should also be located considering existing and newly proposed infrastructure-perhaps in the nodal centres that are planned to come into being along the new 4-lane NH-4A by-pass from Thivim to Bali via Darbandora, Usgao, Tisk and Curchorem.

4. For the IT Sector to flourish in a manner that employs locals, we must considerably increase the level of education available in the state, as well as provide specialized training and increase seats in engineering colleges. Otherwise firms will perforce have to hire people from elsewhere in the country.
5. Raw untreated water can be supplied separately to industrial estates at different rates. Raw water requirements of industry can also be addressed through water harvesting schemes or boosting supply. Treatment plants can be set up in industrial estates.
6. Area within each industrial estate to be set aside for garbage collection and treatment for its own units as well as handle the waste of surrounding settlements of that taluka. This is to include area for recycling dry industrial waste as well as an area to handle wet waste composting. Taking waste from the surrounding villages into the industrial estates and processing them there will solve the need for the government to identify land for sorting and processing solid waste. Hazardous waste has to be sent out to a hazardous waste centre at Darbandora.
7. A negative list of industries needs to be created eg. Steel smelting/rolling units, those that import 100% labour, those that steal power, excise, sales tax. In such cases a system of disincentives needs to be set up so that they do not come to Goa, for eg. the power for such industries could be twice the normal rate/ all fees could be double and no tax benefits.
8. Ship building: Rather than have ship building along the entire river front, which disturbs the Eco Sensitive zone, we could create marine parks that have an entry into some area which leads landwards, i.e. away from the river and have the



shipbuilding yards within the parks, so as to minimize the effect of the shipbuilding industry on the ES Zones.

Follow-up work to be done

1. Getting details from Pollution Control Board about actual handling of hazardous waste from industries, non-conforming industries.
2. Survey of sick industrial units and vacant plots within industrial estates needs to be done.

### 3.7 TOURISM

#### The Existing Situation

Tourism is now a dominant industry in Goa that records increasing numbers of tourists ever year. It accounts for almost 15 % of India's annual foreign exchange earnings of around 1500 crores from tourism. In 2006, the number of domestic tourists was nearly 21 lakh while that of the foreign tourists was nearly 3.8 lakhs. Refer Table 3 earlier.

It is clear that the maximum tourist traffic is in the beaches of North Goa in Bardez where the maximum hotels are located. The entire coastline of Goa is affected by tourism today. All talukas from Pernem in the North to Canacona in the South show significant tourism accommodation availability.

Tables 14 and 15 that follow reveal the nature of accommodation available. It is significant that little over 2/3<sup>rd</sup> of all the accommodation available is of very poor quality and does not fall even into a 1-Star category.

TABLE 14: Number of Hotels, Lodging Houses, Paying Guest Accommodation including Star Category Hotels (2007)

Category	No. of Hotels	No. of Rooms	No. of Beds
A	43	4103	7138
B	148	5091	10134
C	330	5008	9102
D	1801	6642	12961
TOTAL	2322	20844	39335

Source: Tourist Statistics 2006 & 2007, Dept. of Tourism

#### Issues

- Tourism has the potential to destroy the very destination it consumes with increase in numbers. Can tourism really be seen as a long-term economic driver for the State given that it is unreliable, reduces the skill sets of the population, and comes with inherent social, cultural and environmental costs?

TABLE 15: Number of Star Category Hotels with Rooms & Bed Capacity

Category	No. of Hotels	No. of Rooms	No. of Beds
5 Star Deluxe	9	1627	2955
5 Star	6	811	1646
4 Star	5	545	1038
3 Star	18	1075	2209
2 Star	24	1271	2551
1 Star	19	743	1514
Heritage	2	20	36
TOTAL	83	6092	11949

Source: Tourist Statistics 2006 & 2007, Dept. of Tourism

- The beaches of Goa are being destroyed by the growing pressures of tourism. The entire beach front is filled with beach shacks (both licensed and illegal) and beach-beds. At the famed Baga beach, in North Goa, for instance, it is an ordeal to reach the beach strip which is made almost inaccessible with encroachments by the shacks and the beach-beds. In order to make the beach experience a pleasurable one, it is imperative that there is a tourism plan in place for the beaches which is strongly implemented.
- The easy availability of drugs on the beaches of Goa has led to the proliferation of an undesirable tourist culture along the coast.
- There is inadequate infrastructure in place in the tourist belt to cater to the 20 lakh tourists who visit Goa annually. There is no sewage system for the entire beach belt, the water supply cannot meet the demand, and there are not enough public toilets.
- Ground water reserves are under threat and this has resulted in sea-water ingress into aquifers due to overexploitation of resources. The situation is

especially bad in the summer months due to high extraction levels to cater to domestic and peak tourist demand.

- Independent studies have shown evidence of groundwater contamination-the loads of COD, BOD, bacteria etc. are indicative of severe sewage contamination in the coastal areas due to absence of proper handling of sewage and solid waste.
- Several facilities are proposed very haphazardly and randomly like the 3 new casinos that are slated to come up on the Mandovi river. This has implications for the sewage and the waste that will be generated and the infrastructure on land that would be needed to support these.

#### Policies and Spatial Controls

- The Government of Goa should use its tourism promotion budget (of nearly Rs. 30 crores) to augment tourism infrastructure in the beach belt area and improve roads, sanitation and garbage collection, rather than spending it on advertisements and foreign trips.
- Convention centres can be promoted since Goa would be an attractive conference destination especially for the domestic market.
- Marinas can be set up in backwaters in R. Mandovi and R. Zuari
- Thought needs to be given to the kind of tourism that the state wants to have and a clear policy should be drawn up stating what facilities need to be accordingly encouraged.

- Detailed critical area plans are urgently needed to be drawn up for all settlements within the tourist belt considering the enormous pressures this belt is currently facing.
- Water transport is currently under-utilised by the tourism industry. Can the tourist trade be re-oriented to approach Goa from the water in an environmentally sound manner? ( Link from Vasco to Panjim/Dona Paula) Similarly Old Goa could be approached through old ferry points, and old water routes explored. This would not only provide a novel experience for the tourist but also decrease tourist traffic on the roads of Goa.
- To make tourism viable for the long term, some 'green' initiatives like water conservation, solar water heating, etc. should be made mandatory for the hospitality industry to follow so that some of the environmental impact of tourism can be mitigated.
- It is important to increase tourism revenues by moving Goa up-market. Charter tourism needs to be rethought from this perspective. Currently the charter tourist pays money in the home country and spends nothing here. Instead, a cess might be charged (based on number of days stay) against which tradeable vouchers are issued. This way a charter tourist is forced to spend in Goa. A part of the funds collected could be kept for building infrastructure in the tourist belt while the rest can go towards food and artifacts etc.
- The range of tourist activities needs to be increased to include eco-tourism, medical and cultural tourism, etc
- The number of people who earn a livelihood in tourism and hospitality related fields is quite large. Any planning exercise has to acknowledge the very real

numbers of people who come to Goa every year (often base themselves for 6-9 months of the year) and earn a livelihood through the tourism industry. These service providers are however never part of any floating population figures arrived at or any planning exercise that looks at Goa's tourism. There is an urgent need to get this primary data on service providers in the tourism and hospitality industry.

- Finally, necessary precautions have to be taken to ensure that locals should be part of education and skill formation programs so as to prepare them for different market opportunities in case tourism declines. Otherwise an entire generation does not have skills/education due to availability of easy money and work from tourism.

Follow-up work to be done

1. Primary data on service providers in the tourism and hospitality industry needs to be obtained. Otherwise most planning would be woefully off-target since it would be missing a very important segment of the population who would also be consuming local resources.
2. A survey needs to be done on how many housing complexes are being used as hotels and also houses as home-stays, clearly spelling out how many beds are available from this sector.

## IV. SOCIAL INFRASTRUCTURE

### 4.1 HOUSING

#### The Existing Situation

By 2021, the population of Goa is estimated to be 18 lakhs with floating population and infrastructure provision is required for 20 lakh persons by 2021. Given an average family size of 4.5, a total of 4.44 lakh houses will be required by 2021.

As per 2001 Census data the housing stock in Goa stood at approximately 2.75 lakh and the housing shortfall was approximately 0.25 lakh.

During the span 2001-2008 the backlog of 0.25 lakh houses is assumed to have been cleared by way of construction of additional houses, thereby maintaining the difference between supply and demand.

Thus, additional housing needed by 2021 will be in the range of 1.69 lakh (i.e. total 4.44 lakh minus 2.75 lakh existing in 2001). Of these, 85% of the houses will be required by the middle classes, the lower middle classes and the economically weaker sections of Goan society and migrants who also fall in the above category. The upper middle class will need the remaining 15% of total required housing ( i.e about 0.25 lakh units) In addition, the upgrading of housing stock is a continuous exercise. The cost of housing has made it unaffordable to a major portion of the middle and lower middle class population.

#### ISSUES

The big challenge therefore is to build affordable houses keeping in mind that land is a scarce resource in Goa.

Land with potential for settlement in Goa can be categorized in the following sub-groups:

a) Land not available for housing

1. Land falling in Eco-sensitive zones which should not be allowed for settlement (except of improving housing in existing villages).
2. Land locked areas, which do not have access roads.
3. Land without marketable title/ disputed land.
4. Land marked as orchards / agricultural which are not available for settlement.
5. Tenanted land in settlement areas
6. Institutional and Government lands
7. Lands retained by the owners that are not available for development.
8. Land already blocked by existing construction.

b) Land available for housing

1. Land available for development under settlement zone with marketable title and backed by desire to sell the land on part of the landlord.

The Housing Industry in Goa has not been able to meet demand for housing especially affordable houses due to the following reasons:

- § Scarce land resources available for settlement.
- § Rising trend of land prices.
- § Cumbersome procedures and inordinate delay in getting construction licenses/Occupancy Certificates.
- § The situation of shortage of houses in Goa is further compounded by tendency on behalf of Goans in higher income bracket, non-Residents Goans and Indian from Rest of India to invest in second homes. These homes are usually kept vacant for most of the year.



## Policies and Spatial Controls

1. Providing affordable housing is not an isolated task. It is closely related to job locations and public transport. If the location of jobs is highly centralized, then the surrounding land prices rise – and affordable housing becomes impossible. The worker must live near his job, or near a transport system that takes him to his job. These conditions are more likely to exist in a poly-centred system of employment places, than in one that is centralized. Fortunately, Goa's towns and villages are evenly distributed – and none of them are very large. Any intervention we suggest would serve to extend the balance of that system, not centralize it.
2. There is enough land in rural and urban areas. There is no need to infringe on productive agricultural lands to cater to housing needs, in the absence of approved settlement plans.
3. There is a need to improve existing infrastructure in terms of road network, water, power, sewage disposal and solid waste disposal and take development to infrastructure. There is generally no need to take infrastructure to new development that leapfrogs the settlement fence. Proper road network needs to be built to create access to land locked areas.
4. The Government should establish land estates on the lines of Industrial estates exclusively for building affordable houses. The Government should also promote the formation of housing Cooperative Societies.
5. Comprehensive schemes for low cost housing need to be introduced especially for migrant population who are an integral part of Goan Society so as to make Goa slum free.
6. The Government should provide land in major settlements in Goa at a concessional rate to organised housing Industry or their professional body i.e CREDAI (Confederation of Real Estate Developers Association of India) Goa and make it mandatory to provide houses for construction workers.

7. Strong political will on part of Government and effective implementation to enforce existing laws in order to stop building of illegal dwelling units, slums etc.
8. Unauthorised construction and encroachments in open spaces, R/w, Government/communal lands needs to be dealt with by making the provisions of the TCP Act applicable in non PDA areas as well.

Follow-up work to be done

1. A survey of the housing stock available in Goa, its location, based on its demand & need has to be urgently undertaken. This should also include a survey of all vacant housing in Goa.
2. The Government should revisit its housing policy so as to :
  - a) Simplify procedures related to housing
  - b) Rationalize FAR's wherever required
  - c) Prepare an Action Plan to build affordable houses by Government Organizations and through authorized private enterprise.
  - d) Discourage second homes lying vacant in Goa.
  - e) Establish fast track courts to resolve land related disputes so that more lands have marketable titles.
  - f) Modify rent control act and revise it as per Model Rent Act implemented in Delhi so as to make it owner-friendly.
  - g) Build proper road network in settlement plans to create access to approved land locked areas and where feasible.
  - h) Explore possibility of levying property tax on all vacant (fallow) lands in settlement/agriculture Zones. (This negative incentive will bring more land in settlement zone into the housing market and will also induce cultivation of fallow agriculture lands.)
  - i) Simplify and rationalize all procedure vis-a-vis Conversion sanads, construction licenses and Occupancy certificate.

- j) Prepare Town Planning Schemes (TP Schemes) to facilitate Housing development in organized manner.
- k) Prepare Coastal Zone management plan (CZMP) so as to facilitate construction of houses for locals residing in coastal zone (Right now, houses can not be built in CRZ-III ie. within 200-500 mts. area from High Tide line but Hotels and Resorts are permitted. This anomaly should be done away with)

## 4.2 HEALTH

### The Existing Situation

Goa has a better coverage in terms of medical facilities than the rest of India. In Goa, the average area served by a hospital is 23.88 sq. kms, while the population each hospital serves is about 9519. This translates into each hospital bed serving a population of 284.

TABLE 16: Health Facilities in Goa

Taluka	Number of Health Centres					
	Specialised & General Hospital	Community/ primary health centres	Private Hospital	Dispensaries (R.M.D)s.	Urban Health Centres	Sub Health Centres
Coastal						
Bardez	1	4	23	2	1	26
Tiswadi	4	1	22	4	2	13
Mormugao	4	2	11	1	1	6
Salcete	4	3	33	2	1	26
Midland						
Pernem	0	2	1	4	0	16
Bicholim	0	2	6	3	0	15
Ponda	1	4	17	4	0	20
Quepem	0	3	7	0	0	12
Ghats						
Sattari	0	1	1	3	0	13
Sanguem	0	1	0	4	0	17
Canacona	0	1	2	3	0	8

Source: Goa at a Glance, 2006, Dir. Of Planning, Statistics & Evaluation

The above table shows that there are 137 hospitals (government and private), 24 primary Health centres (PHC), 5 urban health centres, 30 rural medical dispensaries and 172 primary health sub-centres (PHSC) in the State.

It also shows that medical care is best in the crowded coastal belt, with all the hospitals- specialized, general hospitals, and both government hospitals located

here. Private hospitals too are mostly in the Coastal Talukas. In the Midland Talukas, only Ponda is served by Private Hospitals and 1 general hospital while all other talukas are served largely by government health facilities. The highland belt is largely served by government-run rural Medical dispensaries and sub-health centers and private hospitals are virtually non-existent.

As per the Health Information of Goa 2007, the doctor to population ratio is 1: 586. Table 17 below indicates that the estimated rural population served by a sub-centre is 3908 as against the national norm of 5000. However each PHC or CHC in Goa serves a much larger population than that specified by the national norms. (35377 and 1.35 lakh respectively as against the Goa figures of 30,000 and 1.25 lakhs respectively). Clearly it is the rural population of Goa that is underserved.

TABLE 17: Health Infrastructure in Goa

Item	All India Norms	Achievement	
		Goa	India
Estimated Rural General population covered by			
Sub-centre	5000	3908	5401
PHC	30000	35377	32469
CHC	120000	135000	244000
Average Area covered			
Sub-centre		19.28	23.38
PHC		174.58	140.52
CHC		663.4	1054.84
Average Radial distance covered			
Sub-centre		2.48	2.73
PHC		7.45	6.69
CHC		14.53	18.32
Average number of villages covered			
Sub-centre		2.09	4.46
PHC		18.95	26.81
CHC		72	201.27
No. of sub-centres per PHC		9.05	6.01
No. of PHC per CHC		3.8	7.51

Source: Health Information of Goa 2007, Dir. of Health Services

Details regarding the health of the population reveal some interesting facts. In 2006, the incidence and treatment of vector borne diseases like filaria, malaria (5010 cases and 7 deaths), japanese encephalitis, dengue and chikungunia have been reported. Morbidity statistics given in the Table 18 below are very revealing. In Goa, majority of cases that occurred have been due to acute respiratory infection. In 2006, 25,559 persons have suffered due to this cause, followed by acute diarrhoeal disease (7,631) and pulmonary tuberculosis (2,228). It would be necessary to map the occurrence of these cases to understand if they were all in one particular area, if there were environmental reasons or any other causes that lead to these diseases.

TABLE 18: Morbidity Statistics (2006)

Disease	Male	Female	Total
Cases of Acute Diarrhoeal Disease	4017	3614	7631
Cases of Acute Respiratory Infection	12872	12687	25559
Cases of Pulmonary Tuberculosis	1259	969	2228

Source: Health Information of Goa 2007, Dir. of Health Services

#### Issues

- Quantitatively and statistically, Goa seems very well served by the health facilities it has. However it is the quality of the service that needs to be upgraded.
- The coastal talukas are well served and people have options that they can choose from. However, as one goes inland, the service is poor, there is little or no choice and no specialized care available.
- Major deficiency lies in the lower order facilities like PHSC and PHC. The numbers need to increase in the rural areas.

- d) Even at the largest institution GMC the quality of service needs urgent upgrading.
- e) Also in the Ghat talukas, where the terrain makes access difficult, the provision of services needs to be double the national norms so as to make the services that much more accessible.
- f) There also seems to be no general hospital or specialized hospital in the highland belt.
- g) There are some villages that have no medical access by road, for example at Keri-Tiracol. This village has a ferry service but that too is stopped at low tide making guaranteed access to medical facilities difficult.
- h) Medical waste disposal is not strictly monitored as per the norms either in the urban or the rural levels.

#### Policies and Spatial control

1. Village level access to basic medical service should be easily available. Ideally every village should have a sub-centre. Upgrading the rural village health service should be top priority. The number of subcentres needs to be doubled in the highland belt and increased in the midlands.
2. Prevalence of diseases needs to be recorded and their implications understood.
3. Annual health checks should be mandatory at all levels of educational institutions, so that prevalence of conditions like anaemia in children can be identified and treated.

4. Sewerage systems need to be put in place so that there is no contamination of ground water resources in urban areas and wherever possible dry ecological toilets should be explored especially in the rural areas.
5. General hospital at district level needs to be provided. Margao could be where the South Goa District hospital could be located besides upgrading and improving medical facilities at Hospicio. North Goa District hospital could be at Mapusa besides upgrading and improving medical facilities at Asilo.
6. Appropriate site for bio-medical waste needs to be identified. Medical Waste is to be disposed off as per the Bio-Medical Waste (Management and Handling) Rules, 1998 and every hospital/nursing home/dispensary etc. is required to be responsible for its safe disposal.

Follow-up work to be done

1. The prevalence of diseases needs to be mapped. This would help us identify physical/environmental factors, if any, which can then be addressed.



### 4.3 EDUCATION

#### The Existing Situation

As per the 2001 Census, the literacy rate for Goa was 82.32% which is much higher than the national literacy rate of 65.4 %. Male literacy rate was 88.88% as compared to 75.51% female literacy rate. The literacy rate for rural areas, 79.65% is lower than the urban areas which stands at 85.03%. As per the Directorate of Education<sup>5</sup>, there is discrepancy within the talukas, with the talukas of Canacona (68%), Quepem (75%), Sanguem (75%) and Sattari (77%) having the lowest literacy rates. Female literacy rates (2001) for these talukas were Canacona (54%), Quepem (68%), Sanguem (66%) and Sattari (67%).

To understand these disparities in the level of literacy looking at the status of the educational infrastructure that exists at the taluka level was useful- in terms of actual number of educational institutions at various levels, (Table 19) the average population served by a school (Table20) and the average area served by the school (Table 21).

TABLE 19: Talukawise No . of Schools

Taluka	Primary stage (I to IV)	Middle stage (V to VII)	Secondary (VIII to X)	Higher secondary (IX & XII)	Colleges/ University	Professional/ colleges	Vocational/ Technical (Pre-matric)	I.T.'s	Professional education (Post-matric)
Coastal									
Bardez	138	63	55	11	5	0	1	1	2
Tiswadi	94	47	42	12	6	11	4	3	3
Mormugao	61	39	36	6	1	1	1	1	1
Salcete	147	71	60	16	5	3	1	3	1
Midland									
Pernem	101	39	29	4	1	0	0	1	0
Bicholim	100	35	27	6	2	0	0	2	1
Ponda	173	45	45	13	3	5	0	1	0
Quepem	96	21	19	4	1	0	0	1	2
Ghats									
Sattari	105	31	22	3	0	0	0	1	0
Sanguem	125	23	21	3	0	0	0	0	0
Canacona	79	23	17	3	1	0	0	1	0

Source: Goa at a Glance, 2006, Dir. Of Planning, Statistics & Evaluation

<sup>5</sup> Educational Statistics at a Glance, 2005-2006, Statistics Section , Department of Education

### Primary and Secondary Education

Goa has 1267 primary schools, 643 middle schools and 367 secondary schools, 81 higher secondary schools as facilities for primary, secondary and higher secondary are concerned. The table also clearly shows that the Ghat talukas have very few higher secondary educational institutions. While the majority of the primary education infrastructure is provided by government, most of the higher levels of schooling are covered by non-governmental institutions in all the talukas except in Satari taluka where government is the main provider of both primary and higher secondary education.

### Higher Education

Goa has 21 non-professional colleges and 5 professional colleges. Of these there are 15 Arts Colleges, 17 Commerce Colleges, 9 Science Colleges while there are 2 colleges each of B.Ed and Law and one each of Home Science and Music. As seen from the Table above, the coastal talukas are well serviced but the midland belt (except for Ponda) and the Ghat talukas seem to be underserved in terms of colleges and technical institutes.

TABLE 20: Average Population Served by a School 2005-06

Taluka	Primary Level	Middle Level	Secondary Level	Higher Secondary
Coastal				
Bardez	1649.96	3614.21	4139.91	20699.55
Tiswadi	1703.1	3406.19	3811.69	13340.92
Mormugao	2376.21	3716.64	4026.36	24158.17
Salcete	1782.55	3690.63	4367.25	16377.19
Midland				
Pernem	712.86	1846.13	2482.72	17999.75
Bicholim	907.34	2592.4	3360.52	15122.33
Ponda	863.82	3320.91	3320.91	11495.46
Quepem	771.19	3525.43	3896.53	18508.50
Ghats				
Sattari	509.68	1890.74	2664.23	19537.67
Sanguem	512.64	2786.09	3051.43	21360.00
Canacona	556.92	1912.91	2588.06	14665.67
GOA	1096.56	3083.91	3613.05	16637.88

Source: Educational Statistics at a Glance, 2005-2006, Department of Education

From the above Table 20 one would conclude that the highland talukas are well served with every school serving about 500 odd persons. However when one then looks at the Table 21 below which gives the area served by each school in the Ghat talukas, it becomes clear that the population is actually underserved because each school is serving an average area of 5.25 sq kms at the primary level as compared to the coastal talukas where they are serving an average area of 1.99 sq kms.

The two tables taken together help us understand that the provision of schools, at all levels (primary, middle, higher and higher secondary) in the highland areas is insufficient and in fact should be greater in number to facilitate greater accessibility in the harsher terrain. Sanguem seems the worst served educationally in the highland talukas, while Quepem seems to be the worst served among the midland talukas.

TABLE 21: Average Area (in Sq. kms) Served by a School 2005-06

Taluka	Primary Level	Middle Level	Secondary Level	Higher Secondary
Coastal				
Bardez	1.91	4.19	4.8	24
Tiswadi	2.27	4.54	5.09	17.8
Mormugao	1.79	2.8	3.03	18.19
Salcete	1.99	4.13	4.88	18.31
Midland				
Pernem	2.49	6.45	8.68	62.92
Bicholim	2.39	6.82	8.84	39.8
Ponda	1.69	6.51	6.49	22.52
Quepem	3.32	15.15	16.75	79.56
Ghats				
Sattari	4.31	15.97	22.51	165.04
Sanguem	6.99	37.99	41.61	291.25
Canacona	4.46	15.31	20.71	117.34
GOA	3.01	8.47	9.92	45.7

Source: *Educational Statistics at a Glance*, 2005-2006, Department of Education

The teacher student ratio as per the Departmental Statistics for 2005-2006 is given as 1: 25 at primary level, 1: 32 at middle level, 1: 17 at secondary and 1: 17 at higher secondary levels. These are much better than all-India figures.

TABLE 22: Enrollment and student nos. in Govt and Non-govt Schools

Level	Item	Govt.	Non-Govt.
Primary Level	No. of schools	951	278
	No. of students	36976	45206
Middle Level	No. of schools	138	299
	No. of students	11661	56876
Secondary Level	No. of schools	82	291
	No. of students	7996	54910
Higher Secondary	No. of schools	14	67
	No. of students	2806	20113

Source: Educational Statistics at a Glance, 2005-2006, Department of Education

As per the Madhav Kamat report, (2006) government schools are patronized by and large by the poor and weaker sections of the society including children of migrant labourers. The government schools also serve the children of the remote and hilly areas where there are few or no private schools.

#### Medium of Instruction

In Goa, the medium of instruction is a significant variable affecting the quality of education.

At lower levels of schooling, the medium of instruction is in the local language/mother tongue and then the medium of instruction changes to English at higher levels of schooling, often at high school level.

In Goa, of the 888 government run schools at the primary level, the majority offer instruction in Marathi (790) and a further 31 are Konkani-medium and 32 are Konkani/Marathi medium schools. There are no government –run English

medium schools at primary level. Urdu, Kannada, Malayalam, Hindi and Telugu are the other languages of instruction at the primary level.

At middle school level, in Government schools, dual language instruction is present while wherein English is used as a medium of instruction in combination with the local language. Non-Government schools are mostly English medium schools.

At the higher secondary level, 11 out of 14 Government run schools are in English and 1 each of the remaining are in English in combination with Marathi, Hindi and Kannada. All non-Government run schools are English medium schools.

#### ISSUES

1. Between the period 1990 to 2006, 106 Govt. Schools were closed down. (82 primary and 24 middle schools) During the year 2006-2007, in as many as 103 Govt. primary schools the student enrolment was below 10.
2. The infrastructure of all Government Primary as well as High schools is pathetic in terms of classrooms, toilets, playgrounds, etc. According to the Madhav Kamat Committee Report (2006) 50% of all government schools have no toilet facilities , 10% have no electricity, 37% have no water and 64% have no compound wall. <sup>6</sup>
3. The single biggest issue regarding education is linked to the 'language of instruction'. All education in higher levels being in English, children in govt.

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<sup>6</sup> Source: Directorate of Education as indicated in Madhav Kamat Report 2006. (Half of the deficient schools were being upgraded under the SSA during 2006-2007).

schools are at an automatic disadvantage. This results in even bright children finding it difficult to cope and their performance drops as a result.

4. According to the Director of Higher Education, Goa performs well along quantitative dimensions both in depth and extent and in fact currently the facilities are underutilized. However what needs to be addressed on a war footing is the quality of education and education that matches actual needs.

#### Policies and Spatial control

1. Currently the Government is working on an integrated education policy and encouraging educational institutions is part of that policy.
2. Recommendations of the Madhav Kamat Report need to be followed. Upgrading of infrastructure and strictly following guidelines for design of schools should be implemented.
3. The University of Goa is being proposed as a central university. A maritime university of international repute could be established here. An institute of Science Education and Research (ISER) is also proposed for Goa.
4. Education facilities should be upgraded to meet actual needs of industry in Goa. For example, the pharma industry in Goa means that the Pharmacy college needs to have many more seats to fill the demands of industry. Or the fact that the government is interested in promoting medical tourism means that Goa should produce the doctors and hospitality personnel who are going to be part of that stream of activity.
5. Goa should aim to have a first class educational system and the higher secondary infrastructure needs to be particularly strengthened. Top level institutions like the IITs and IIMs could be located here.

#### 4.4. SPORTS AND RECREATION

It is important to assess the extent to which standards for open space have been met. Further, it should be mandatory that all schools should have a playground. This is necessary to ensure that the young stay healthy.

Standards as per RP 2001 for minimum sizes for school playgrounds were as under:

- a) 3000 sq m Primary school
- b) 6000 sq m for high school
- c) 10,000 sq m for colleges

At the regional level, the minimum sizes for playgrounds are:

- a) 15,000 sq m at Panchayat level
- b) 25,000 sq m at Taluka level

The Department of Sports is proposing several Sports Facilities (upgrading of existing facilities as well as new facilities) in the State to prepare Goa for the 36<sup>th</sup> National Games to be held in 2011.

A major site is being planned for the 36th National Games along with a series of other facilities related to these Games. Thereafter, these facilities are to be maintained, and improved by the State for the youth of the State. It is important to note that these centralized facilities may be beneficial for the Games but the local population will have to travel great distances to access these facilities.

## V. PHYSICAL INFRASTRUCTURE

### 5.1 TRANSPORTATION GOA – 2021

1 As a littoral State, Goa is served by all four modes of transport – road, rail, water and air. This is for both, the movement of goods and people. However international movements are primarily by air and sea. Also, movements by all four modes are for destined as well as through traffic. Thus these modes in action are to constitute a state transportation system along with interchanges and other distributory hubs and nodes. The fact has also to be underlined that transportation largely governs the settlement pattern in the compact rural state of Goa. (Refer Map 3: Transportation Network and Map B )

#### 2 Roads:

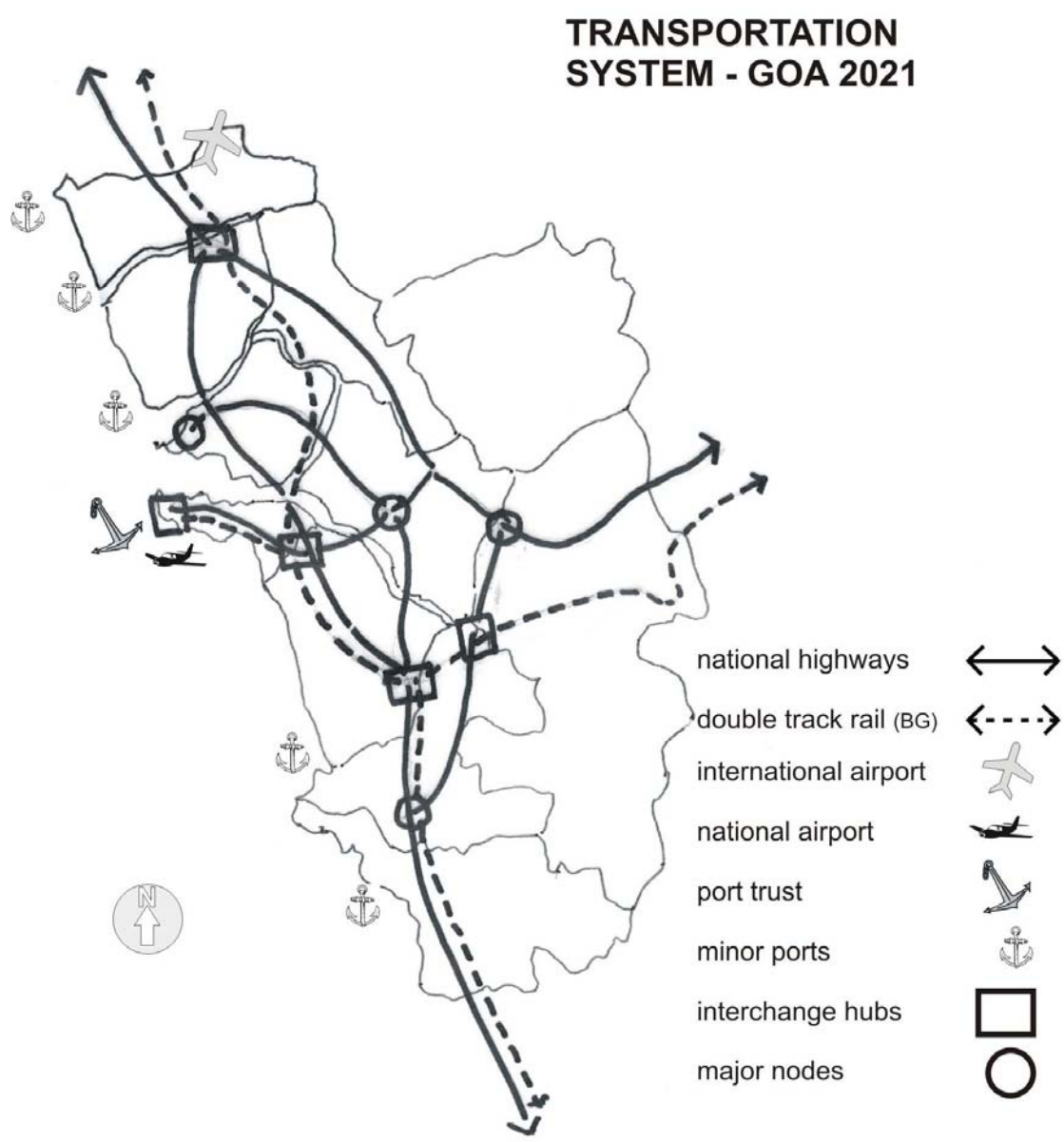
- a) This mode accounts for most of the movements within the state as the only point to point facility and on which the other modes are dependent. Road right-of-ways along with public transport interchange areas, vehicle stabling, maintenance yards and pooled parking areas occupy about 15 percent of the states land surface area. Road networks are developed in a hierarchy and which RPG-01 determined as being:

National Highways (NH) with 80m R/w and 4 lane carriageways  
State Highways (SH) with 30 m R/w and 2 lane carriageways  
Major District roads (MDR) with 25 m R/w and 2 lane carriageways  
Other District roads (ODR) with 15m R/w and 2 lane carriageways  
Panchayat roads (VPR) (i) with 10m R/w and 2 lane carriageway

- b) Within the prescribed R/w there is sufficient land for pavement dividers, marginal access roads, street lighting etc. as and where required. The carriageways and the prescribed R/ws are to be provided over a period of time. Within settlements, the nomenclature of the above hierarchy could



change e.g. bye-pas, arterial, sub- arterial roads, feeder roads etc. All buildings / plot lines are to be outside the prescribed road R/ws.  
Map B



- c) At the level of the RPG-21 plan only NH's, SH's and MDR's are shown. NH4A is to link the National Expressway system (NH4 / NE4).
- d) Road R/w's are financed and built by Central, State and local governments according to the hierarchy of roads. In Goa, the state PWD builds all levels of R/w's including NH's (on behalf of the central Government)

### 3 Rail:

- a) This is a National Network developed, operated and maintained by the Ministry of Railways. In Goa, the South Western Railway (SWR) and the Konkan Rail Corporation (KRC) are responsible for the system. Two single broad gauge track routes bring the state of Goa on the the rail map of India for the movements of both goods and people. These are:
  - (i) The Panvel – Kankanadi North-South link by KRC
  - (ii) The Londa-Mormugao East-West link by SWR
- b) As per G.O.I. policy, both lines are programmed for double track BG operations. In such an event (perhaps beyond 2011) electric traction would be in place for the haulage of larger rakes in quicker time. The stretch between Dudh Sagar in Goa and Castle rock in Karnataka is a difficult terrain for which SWR are surveying an alternative for double track BG haulage.
- c) The Konkan Railway Corporation is expanding its rake formation, stabling and maintenance yard at Verna along with a direct loop from Mormugao for north bound haulage. They are also developing a second loop for direct haulage from Londa via Sanvordem. However there are no plans for further rail routes within Goa. Thereby the railways in Goa are

primarily for inter state movements and for more stations where activities and people are increasing in the state.

- d) The above proposals are incorporated in RPG-21 so that better rail-cum-road nodes are facilitated. Also, better designed hubs are on the anvil at Mormogao (port, rail, road), Dabolim (air, road, rail) and eventually Mopa (air, road, rail).

#### 4 Waterways:

- a) Mormugao is perhaps India's best deep draught natural harbour. The expansion of the Port Trust for handling iron ore, containers, oil and bulk goods etc. as also for the growing cruise tourism is restricted and possible only through expensive breakwaters and the like. The state also operates five minor ports including Panaji which handles barge to carriers iron ore at mid stream platforms. All minor ports along with the MPT are slated for expansion along with coastal and inland fishing jetties. More minor ports are planned and it is possible that hydrofoil services could offer relief to road based transport from airports and other nodes.
- b) A large part of Goa's inland waterway system is navigable with ferry (ro-ro) and some motor launch services helping in transportation of people and goods. Non mechanized boats also help in this process. An expansion of this system is on the anvil, especially for motor launch services.
- c) Marinas, water sports and inland tourism is also being programmed and
- d) related to road linkages for quicker movements.

## 5 Air:

At present the Naval Airport at Dabolim doubles up as an International Airport. It is however not available for civilian use between 8:00 hrs and 13:00 hrs each day. Also, land for expansion of airport facilities is limited. However, a new international airport at Mopa on the border with Maharashtra in North Goa district has been cleared by the Govt. of India. Once operational for the movement of goods and people, Dabolim would be a secondary airport – as a national airport. Mopa and Dabolim would have improved linkages to the road, rail and waterways network of the state.

## 6 General issues:

- a) Map B shows the emerging transport system by road rail, water and air for Goa as part of RPG-21 along with emerging major hubs and nodes. The development of the system is largely subject to the application of the land Acquisition Act 1894 and fast track clearances.
- b) It is broadly estimated that the number of trips by people within the state is about the same as that in larger cities. Accordingly, by 2021, 20 lakh people could generate 30 lakh trips per day (at 1.5 trips per person per day). Public transport by road and to a lesser extent by water should be expanded through bus and para transit modes (mini-bus, auto rickshaws up to 7 seaters and the like) so that the incidence of personalized vehicles (4 and 2 wheelers) get reduced along over stressed roads.
- c) Apart from destined traffic, a fair percentage of goods and people pass through Goa by road and rail. A state level NH bye-pass is part of RPG-21 so as to facilitate a quicker movement of through traffic (Mumbai-Londa and Mumbai-Kochi). Also rail wagons and trucks comprise of Goa destined and through goods. This requires a quick rake, wagon and truck

reformation at convenient regional nodes. Hence the importance of a NH bye-pass and which could also facilitate the movement of port based iron ore through given nodes.

- d) With the rapid increase of personalized vehicles in the state, the idle parking of vehicles in settlements is a major issue requiring not only integrated traffic management and rigid enforcement but also adequate development control regulations (DCRs) that encourages parking only within plots or designated areas. DCRs as part of the Draft will cater to this provision at the time of sanctioning of building plans.

### 5.2.1 WATER SUPPLY

#### 1. BACKGROUND

Goa receives good annual rainfall and is endowed with perennial rivers that are well distributed and flow across the State to empty finally in the Arabian Sea.

#### 2. SURFACE WATER

The Water Resources Department, undertook Master Planning for the river basins covering 86% of the surface water resources, to assess water availability. It is estimated that 2842 Mcum of water is exploitable of a total average annual yield of 9464 Mcum. Experts concluded that the Mandovi, Sal and Zuari basins are 'water deficient' after making estimates of demand of various competing sectors in Goa, viz. drinking water, industries, tourists, environment-salinity control, forest management, irrigation. This deficiency was recorded more on the inability to meet the rising agricultural demand for paddy cultivation.

A reworked allocation of water across sectors as per the national priority for drinking water estimated that of the exploitable resources, 1016 Mcum needs to be allocated to meet the drinking water demand and 1826 Mcum to other uses including irrigation. The WRD has sought to augment this available water through construction of several dams, canals, tanks and 'bandharas' to harness and store this annual run-off of the rivers.

##### a) Irrigation:

The major irrigation projects in Goa are the Tillari, the Anjunem Irrigation Project, and the Salaulim Irrigation Projects while minor irrigation projects

are the Panchawadi tank, Amthane Tank and the Chapoli Tank as indicated in the Table below:

TABLE 23: Details of the Major Irrigation Projects in Goa

No.	Name of the Project	Source River	Command Area (Ha.)	Catchment Area(sq km.)
1	Tillari Irrigation Project	River Tillari	20,338	301.27
2	Amthane Tank	River Assonora	300	4.03
3	Anjunem Irrigation Project	River Costi Nadi	2624	17.18
4	Panchawadi Tank	River Zuari	200	4.13
5	Salaulim Irrigation Project	River Guleli Nadi	23876	209
6	Chapoli Tank		550	3.63

Source: Department of Water Resources, Government of Goa, 2008

TABLE 24: Details of Main Water Treatment Plans for Public Water Supply in Goa

No.	Water Treatment Plant	Source Water	Water Potential (MLD)	Areas Served
1	Salaulim WTP	River Sanguem	160	Mormugoa, Vasco, Margao, Fatorda, and 71 villages of South Goa
2	Opa WTP	River Khandepar	112	Ponda, Panjim, Margao, Mormugoa and 53 villages
3	Assonora WTP	River Assonora/Amthane dam/River Valvanti	42	Mapusa and Calangute and 22 other villages
4	Sanquelim WTP	River Valvanti	52	
5	Dabos WTP	River Madei	5	Bicholim and Sanquelim and near by villages in the mining areas
6	Chandel WTP	Tillari Irrigation Project/River Kalna	15	
7	Canacona WTP	River Talpona	5	Sattari taluka including Valpoi and 4 other villages.
TOTAL			391	

Source: Public Works Department, Government of Goa, 2008

b) Water Supply

Goa's rain-fed rivers are the primary source for potable water for the State.

According to Government sources, Goa is unlikely to face a shortage of drinking water in the foreseeable future. The present demand for water supply is met through 7 water supply schemes as per Table above. (Refer Map 4: Water Supply Network) The total present installed capacity is 391 MLD.

As per PWD, estimated water demand by 2018 will be 236 MLD and by 2025 it will be around 340 MLD.

Sectorwise, the demand will be as under:

In Domestic Sector	201 MLD
Industrial Areas,	98 MLD
Tourism sector	<u>41 MLD</u>
	<u>340 MLD</u>

As per the Goa Infrastructure Analysis, 2007, GCCI, multi-pronged approach is needed to address water supply needs:

- a) Reduce distribution losses and wastage
- b) Put Rainfall on tap
- c) Improvements in regional water treatment plants
- d) Implement education in water conservation

c) New Proposals:

In addition, the following schemes have been sanctioned by the Government:

- a. Maisal in Panchwadi (10 MLD) WTP to cover Panchwadi, Shiroda and surrounding villages
- b. Madai River (25 MLD) to cover Ponda and Priol



d) Service Provision

The standards prescribed by the CPHEEO manual are 70 lpcd and 135 lpcd (in rural and urban areas respectively). However, in Goa, actual per capita consumption is 83 lpcd and 143 lpcd in rural and urban areas respectively. Therefore for Goa, for augmentation of supply the norms proposed are 100 lpcd for rural and 150 lpcd for urban areas.

e) Domestic Water Supply

92% of Goa is covered under a regional water supply scheme. Remaining 8% depend on spot sources or single village schemes. In addition, Goa has 648 tube wells and 301 open wells that mainly serve a part of the rural population.

There are gaps in the service at intra-taluka level, at intra-urban and intra-rural levels as under<sup>7</sup>:

1. In rural areas across talukas, in areas like Bardez and Ponda, more than 75% access through a private connection, while in Canacona it is as low as 24 %. Looking at quantity of water supplied, it seems that Pernem, Sattari, Sanguem, Quepem and Canacona need to be given focused interventions to upgrade what the lowest 25% of the rural population receives. Similarly Bardez, Mormugao, Tiswadi, Salcete and Quepem urban lowest 25% urban population receive lesser supply than urban norms of 150 lpcd.
2. In urban areas, almost all talukas except Pernem, 70% have house hold tap connection.
3. There is however no major problem of access to water supply source since multiple sources are available and accessible.
4. In rural areas, except for Canacona, most talukas are covered using a norm of 55 lpcd. In urban areas, if a 150 lpcd norm is applied, then with

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<sup>7</sup> As per *Sector Status Study-WSS*, Goa, Feedback Ventures, 2004

the exception of Tiswadi, Mormugao, Ponda, Salcete, Quepem, all talukas fall below prevailing norms.

### 3. GROUND WATER

The drinking water needs of about 8% of the population is addressed by ground water reserves. The CGWB estimates the entire groundwater reserves at 425 MLD. However all of this may not be utilizable because of specific spatial and temporal distribution. The estimate does not take into account micro water-shed utilization.

Industry is the highest consumer of ground water meeting half its demand through this source. In some areas of the state, especially the mining belt, people prefer to use water from wells over piped water especially in the monsoons because the quality of piped water is poor due to high turbidity. In coastal areas too, there is high level of ground water extraction because of a higher demand-supply gap.

### ISSUES

A private survey, Sector Status Study-WSS Goa, (Feedback Ventures, 2004) raises the following concerns about ground water:

1. Consumers across sectors paradoxically face a shortage of water and need to rely on private sources to augment public supply.
  - i. These shortages are seasonal, sub regional and user segment specific.
  - ii. The more densely populated areas are also the areas with high tourist concentration and they tend to face maximum shortage.

Given that urbanization trends are unlikely to be reversed, demands will continue to increase and deficits continue to rise.

- iii. The industrial and commercial segment users face high shortages and are dependent on private supplies. The quality of water from private supplies is suspect since there are no monitoring systems in place.
2. The fairly widespread sinking of borewells in urban areas is a water distribution and regulation issue. This is because domestic and industrial dependence on ground water is increasing rapidly.
3. Ground water contamination is of increasing concern due to the following:
  - a) In mining areas mining is often carried out below water tables; freshwater is pumped out for dry working conditions from mine pits into natural streams and iron ore washing plants produce sludge and effluents that further contaminate water sources.
  - b) Coastal area aquifers are very vulnerable and show severe sewage contamination due to the high impact of tourism and absence of proper handling of sewage and solid wastes.
  - c) There is sea water intrusion in coastal aquifers due to high extraction especially in summer
  - d) Urban sewage, solid waste disposal and industrial effluents are another threat
  - e) Agricultural pesticides, fertilizers and agricultural waste disposal also pose a pollution threat
4. Ground water legislation in the form of 'Goa Ground Water Regulation Act 2002' exists but it is weak since it only talks about penalties for

violations. It does not address groundwater pollution, abatement, conservation, community participation in watershed management, industrial effluent management or urban sewage management.

4. POLICIES AND SPATIAL CONTROL:

1. Incompatible uses that exist within a 2kms buffer zone around drinking water intake points for WTP Schemes cannot be allowed.  
(recommendation as per the Environmental Atlas of Goa, 2007)
2. Quality of water needs to be closely monitored by the Pollution Control Board so that the health of the population does not suffer. All polluting industries need to be identified and sewage treatment outfalls need to be strictly monitored.
3. Rain Water Harvesting subsidies have been announced by the Govt. It must be made mandatory that all new projects like hotels, housing and industry should include rain water harvesting in their schemes
4. The supply of raw water directly to industry would reduce the demand for treated water. This should be immediately undertaken.

## 5.2.2 SANITATION

### Background

As per the 2001 Census, 50% of the State is urbanized. The State lacks a well knit sewerage network. Majority of the population is dependant on traditional septic tank and soak pit system. Contamination of ground water has been noticed in areas of increasing urbanization and along the coastal belt. Along the high tourist pressure belt, indiscriminate letting off of the waste water into open drains, adverse soil conditions and shallow water table aggravates the problem of safe sewage disposal.

### Existing and Proposed Government Schemes:

#### a) Urban Sanitation:

##### Existing Sewage Treatment Plants:

##### 1. Panaji Urban Agglomeration Sewerage System:

Initial STP was a 5.5 MLD one that was inadequate because the wastewater flow of entire Panaji was of the order of 10.5 MLD. As a result the wastewater treatment was ineffective. An additional STP for 12.5 MLD was commissioned.

##### 2. Part of Margao town is having sewerage system mainly in Central and North zone. Capacity 7.5 MLD. Sewer connections 742 (Household 4017, Population 20,085)

##### 2. Vasco Town is having sewerage system. Capacity 14 MLD. (Households 5500, Population 27,900)

### Proposed:

1. Extensions to existing sewer lines in North, Central and South zones in Margao, Vasco, Panaji.
2. Sewerage Scheme for Taleigaon, Caranzalem, Dona Paula.

3. Upgradation of existing sewage treatment plant at Patto to cover entire Patto.
4. Renovation and improvements to Sewage treatment plant at Vasco.

b. Rural sanitation:

1. Tribal-Sub plan

It is proposed to provide low cost sanitary units to Scheduled Tribe population in the villages of Quepem, Goadongrem Qusicicond and Darbandora. Schemes in other villages have to be planned as per requirements.

2. Total Sanitation Campaign

There is a programme for North Goa to cover the rural population of the entire district by low cost sanitation with 100% central assistance. Under this programme it is proposed to sanitise 283 schools, and provide 116 toilets for anganwadis and 115 community toilets. Of these 96 schools were provided with separate sanitary toilets for girls and boys and 8 anganwadis were given toilets.

A similar program for South Goa is under preparation.

3. External Assistance is being sought to cover the following:

- a) Coastal belt of North Goa, (Baga, Calangute, Candolim, Sinquerim) with 5.6 MLD STP and allied works
- b) Margao currently is partially covered. It is proposed to cover entire town. Additional Sewage treatment plant of 6.7 MLD and allied works
- c) Mapusa town to be covered with a treatment plant of 5.4 MLD and allied works

4. Sewerage schemes for the following areas are being prepared in the hope of getting Central Assistance:
  - a) Taleigaon
  - b) St. Inez
  - c) Porvorim
  - d) South Goa Coastal Areas
  - e) Ponda

Issues:

- In urban areas as well as tourism areas there are developments that directly dump their waste into the nearest nalla or drain that eventually drains out to the river or the sea. There is no monitoring or control on this kind of waste disposal.
- RP 2001 had suggested that in areas apart from urban areas, other service/central/beach areas which are fast growing and where individual septic tanks do not function satisfactorily due to adverse soil conditions and shallow water table, sewer treatment based on oxidation ponds or large biogas plant should be considered.
- Pilot gobar plants in rural areas in each taluka were recommended to be set up by RP 2001 to demonstrate feasibility, importance and utility of such schemes.

Policies and Spatial Controls:

1. All erring establishments with regards to safe norms of waste disposal have to be immediately identified and deterrents put in place to enforce compliance with the norms.
2. For rural areas the RP 2001 proposal for large scale use of gobar gas plants would still be a valid one.
3. Sewage treatment based on oxidation ponds could work in Goa. Areas should be identified for such projects.

### 5.2.3 POWER

#### The Existing Situation

Development and progress of any region depends on the availability of power. Power plays a vital role in all sectors of development. Goa is a state which has been depending on borrowed power till date. There is a need to augment the power supply from all possible sources which is suitable to the Goan environment since any further progress will depend on the newly augmented power. There is a serious necessity to focus on investment in the power sector.

Goa with a population of about 14 lakhs is expected to grow to reach 18 lakhs by the year 2021. In addition to the above, Goa also needs to cater to floating population (tourist). Therefore provision is required for 20 lakh persons by 2021. At present the per capita consumption of units in Goa is 1560 units and it covers nearly 5 lakhs consumers. Refer Map 5: Power Supply Network . As regards power supply, Table 25 indicates only 352 MW of power for Goa, inclusive of a small quantity of 30 MW of privately generated power.

TABLE 25 POWER SUPPLY  
CENTRAL SECTOR POWER STATION

1. WESTERN REGION	
A. NTPC STATIONS	
Name of Station	<u>Allocation</u>
KORBA	210 MW
VINDHYACHAL I	35 MW
VINDHYACHAL I I	12 MW
VINDHYACHAL I II	10 MW
B. NPC STATIONS	
TAPP 3&4	11 MW
KAPP	15 MW
2. SOUTHERN REGION	
RAMAGUNDAM	100 MW
3. TOTAL (Round The clock)	393 MW
4. UNALLOCATED QUOTA FROM NTPC (ER) PEAK HRS ONLY	10 MW
5. GRAND TOTAL ( C.S. ALLOCATION)	403 MW
6. AVERAGE POWER AVAILABILITY (80%)	322 MW
7. PRIVATE GENERATION	30MW
TOTAL	352 MW

Source: Dept. of Power, Govt. of Goa



The present peak hour demand for power is around 400 to 410 MW. This leaves a deficit of 50 to 60 MW power requirements. In fact, the power position in Goa is much better than many neighbouring states, which are power producing states. There is also a phenomenon of excess power during “non peak months and non peak hours” in a day. A quick look at the 17<sup>th</sup> energy power survey for cast load based on normal growth pattern shows that the demand by 2011-12 will be to the tune of 721 MW and if the same normal growth extends to 2021 then the peak load demand would be to the tune of 1000 MW. If Goa focuses on promotion industrialisation such as food parks, SEZ’s, cold storage chains, infrastructure developments etc. demand for power for overall development will be high power intensive and it may touch 1500 MW.

(As assessed by CEA in 17<sup>th</sup> EPS based on normal load growth pattern)

2007-08	-	505 MW
2008-09	-	552 MW
2009-10	-	604 MW
2010-11	-	660 MW
2011-12	-	721 MW

TABLE 26 POWER CONSUMPTION

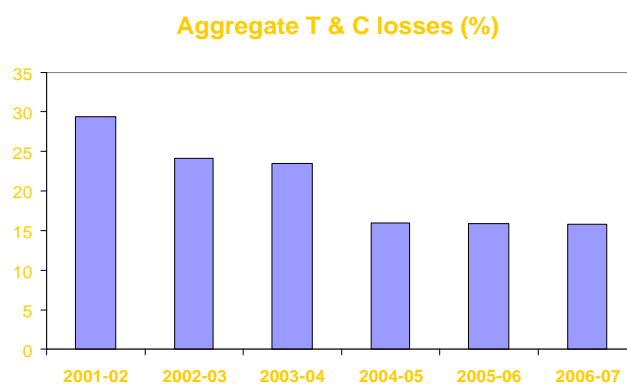
Year	Peak Load in MW as per 17th EPS (inclusive of IPP)	Actual Peak Load in MW (Inclusive of IPP)
2000-01	-	
2001-02	-	280
2002-03	-	292
2003-04	308	334
2004-05	322	372*
2005-06	415	372*
2006-07	460	407*
2007-08	505	408 (as on date)*
2008-09	552	
2009-10	604	
2010-11	660	
2011-12	720	

\* Restricted demand due to load shedding

Source: Dept. of Power, Govt. of Goa

Managing the “allotted power” and the “available power” and “distribution” has been a major area of concern for the power sector. Though, this is a standard

problem associated with power sector, it is equally necessary to find suitable scientific/technical solutions. The graph below indicates that the power losses during transmission both while receiving from the grid as well as transmission to consumers was as high as 30 % loss in the year 2001-02. The Government of Goa is making its efforts in converting the high power over head lines to underground cabling as one of the elements to control transmission losses. The second main important management required to reduce losses due to the pilferage both in Industrial and domestic sectors.



Source: Dept. of Power, Govt. of Goa

Table 27 POWER LOSSES

Particulars	Goa State					
	2001-02	2002-03	2003-04	2004-05	2005-06	2006-07
Energy Input (MUS)	1650.5	1758.4	1955.2	2145.35	2269.4	2472
Energy Metered (MU)**	1200.8	1354.5	1488.9	1762.6	1877.7	2052
Metering Efficiency %	73%	77%	76%	82%	82.70%	83%
Energy Billed (MU)	1231.6	1384.2	1519.9	1800.4	1911	2089
Energy Billed (%)	75%	79%	78%	84%	84%	84%
Revenue Billed (Cr.)	408.91	431.26	454.95	505.07	540.36	596
Revenue Collected (Cr.)	386.86	415.83	447.7	505.76	539.95	594.99
Revenue Collected (C%)	94.61%	96.42%	98.41%	100.14%	99.90%	99.50%
T & C losses (%)	25.38%	21.28%	22.26%	16.10%	15.79%	15.49%
Aggregate T & C losses (%)	29.40%	24.10%	23.50%	16.00%	15.86%	15.90%

Source: Dept. of Power, Govt. of Goa

## CONCLUSIONS

- a) The growth in demand for power is undisputed due to industrialisation or otherwise.
- b) The demand will grow if industrial development and urban development is to take place at a faster rate.
- c) This leaves deficiency to be met by alternative sources of power.
- d) Serious consideration to substantially increase the generation of power in Goa needs to be attended to.
- e) The alternative (more suitable for Goan situation) will be a gas based power generation on one side and using captive power generation from flue gases, developing wind and solar energy receiving centres at micro levels etc needs to be ventured into. Since Goa has high velocity of wind blowing in major part of the year, wind energy could be used at micro level for public lighting.
- f) Solar energy shall be made as compulsory element in public buildings, hotels, hospitals and even the commercial developments complexes)
- g) Plateaus having little vegetation can be used for solar thermal energy production.

## 5.2.4 SOLID WASTE

### The Existing Situation

Currently garbage collection and disposal in Goa is to be done by 14

Municipal councils and 189 Panchayats. In actual practice, however, it means that organized garbage collection is done only in the municipal areas and in some of the more urbanized panchayats of the State.

TABLE 28: Municipal Solid Waste Generated from Major Settlements in Goa

Name of Municipal Council	Per Capita waste Generated (Kg/Day)	Total Population	Total Municipal Solid Waste Generated (T/day)	MSW Collected (T/day)
<b>North Goa</b>				
Valpoi Municipal Council	Approx. 4tons/day	7,913	One truck per day	One truck/day
Bicholim Municipal Council	1	12,000	12	10
Pernem Municipal Council	Data not available	7,400	Data not available	500 kg/day
Mapusa Municipal Council	1.55	40,487	62	48
Ponda Municipal	0.40 to 0.45	17,713	7 to 8	7 to 8
Sanquelim Municipal Council	0.5	11,191	6	4
<b>South Goa</b>				
Curchorem-Cacora Municipal Council	0.38	18,489	7	6.5
Cuncolim Municipal Council	50	25,000	0.5	0.5
Margao Municipal Council	0.5 to 1	78,382	40 MT	39 MT
Vasco Municipal Council	0.33	1,50,000	50	45
Cacacona Municipal Council	0.16	11,901	2	1.85
Sanguem Municipal Council	0.23	9,000	2	1.5
Quepem Municipal Council	2 tons/day	20,000	2	2

Source: Environmental Atlas of Goa 2007

- 1) The legal framework for solid waste management is already in place, (Municipal solid wastes (Management and Handling) Rules 2000) whether it is for Municipal Solid wastes, bio-medical waste, recycled plastics manufacture and usage, industrial and hazardous waste, etc. It is now something that needs to be addressed at the implementation end. It is here that the institutional framework and the “will” to tackle the problem seem to be lacking.
- 2) The High Court of Mumbai, directed every city/village in Goa to identify its own garbage site. The garbage at this site would then be treated through the process of “composting of biodegradable waste” and “recycling of non-biodegradable waste” after segregating the waste at “source”.
- 3) Various Municipalities have submitted site locations for landfill to the High Court and the Panchayats need to follow. These submissions to the Court need to be looked at by the TF to assess the identified sites. These sites need to be mapped to ensure that they are environmentally sound locations. Thereafter two sites (one for North and the other for South) would need to be identified at the District level for a “residual” waste landfill (i.e. for waste which can neither be composted nor recycled at the local level and would have to be transported to these sites).

## Issues

- 1) “Waste management” needs to be addressed in all proposed developments such as housing colonies, commercial developments, hotels, hospitals etc. Approvals/licenses should be issued for all such new development only after verifying that the system for disposal of the solid waste generated by the proposed development is in place.

- 2) The TF will have to check on the plans for hazardous waste disposal from the State Pollution Control Board and the plans for Medical/hospital waste from the health department, to ensure that sites for such waste are also identified. Currently at the village level it is incinerated, or dumped in fields or wells. This practice needs to be stopped and regulated.
- 3) Slaughter waste is mostly biodegradable and is as hazardous as medical waste as the entire waste will be infectious even if contaminated slightly by pathogens. There is no organized system in place for disposal of solid waste in most of the slaughter houses in Goa. Usual practice is that the entire solid waste is collected and disposed off as landfill.
- 4) With the present situation of villages being unable to identify solid waste management sites industrial estates having empty plots or sick units, waste management centers can be setup within the industrial estates to cater to the needs of the surrounding villages.

Policies and Spatial Controls:

- 1) Landfill sites at taluka level (one for each taluka) need to be identified
- 2) Segregation at source has to be compulsory
- 3) Treatment of biodegradable waste and recycling of non-biodegradable waste should be done at the settlement (town and village) levels.
- 4) A state-wide waste monitoring and awareness agency needs to be set up
- 5) Medical waste needs to be addressed and methods prescribed and strictly enforced.
- 6) Slaughter waste needs to be addressed and methods prescribed and strictly enforced.

## VI. MAPPING

Mapping is an important aspect of planning. In order to make the process of planning more transparent and participatory, this Regional Plan, RPG-21, is mapped at State, District and Taluka Levels. This will have to be followed by local level planning will have to be done at more detailed scales. The scales of maps are to be as given below:

- |    |  |                   |
|----|--|-------------------|
| a) | Goa State level Plan                                 | 1: 1,00,000 scale |
| b) | District Level Plans                                 | 1: 50,000 scale   |
| c) | Taluka level Plans                                   | 1: 25,000 scale   |
| d) | Settlement Level Maps<br>(Village Panchayat or town) | 1: 5,000 scale    |
| e) | Ward Level Plans                                     | 1: 2,000 scale    |

The regional plan proposals as shown on the Taluka level Maps would have to be detailed out at the Settlement Level.

An extensive mapping exercise has been undertaken as preparation towards the Regional Plan and the existing maps have been digitised. Further, these have been linked to land survey records wherever possible.

The Settlement area Plans will be further detailed and will have demarcated on it all Settlement level land uses i.e. lands that can be developed and those that are eco-sensitive and hence non-developable. Further the ward plans would be to greater levels of detail through public participation.

In this RPG-21 exercise, the TF decided to broadly identify all lands in Goa that are environmentally sensitive. Such lands are shown as Eco-Sensitive Zones. This includes Forest lands, mangroves, all water bodies, slopes of 25% and greater, wet agricultural lands, khazan lands and the like which need conservation.

Once all eco-sensitive areas that need conservation are mapped, development landuses can then be indicated in the remaining areas, to the extent feasible and in consultation with the Settlement stake holders.

It is planned to use the latest technologies of satellite imageries of 60 cms resolution and/or Google earth professional to achieve the desired accuracy at Taluka level and Settlement level maps.

The maps included in this Interim Report are for reference only and shall not be usable for any legal purposes since the contents are only indicative.



## VII. ECO-SENSITIVE ZONES

### 1. Existing Situation:

Goa's environment is under pressure due to promotional development.

The fragility of Goa's environment is clearly indicated by the fact that a little over 50% of Goa's land area (1853.45 sq kms) is under Environmentally sensitive zones as per the Pollution Control Board's Environmental Atlas of Goa, 2007. <sup>8</sup>

Since RPG-21 was to expressly address itself to the issues arising out of developmental pressures on the environment, it was decided to first and foremost identify clearly the areas that needed conservation in the State. To this end, a mapping exercise was undertaken to map the various environmentally sensitive areas in the State.

### 2. Spatial Controls

The Task Force has classified Goa's environmentally sensitive areas into 2 zones-

a) Eco-sensitive Zone I and b) Eco-sensitive Zone II. Refer Map 6: Eco-Sensitive Zones

### 3. Eco-sensitive Zone I (ESZ -1)

1. Eco-Sensitive Zone I includes all areas rich in bio-diversity that need conservation. These will be no-development zones. Within ESZ-I no development will be allowed that endangers the health of the environment.

ESZ-I includes :

- |                  |                      |
|------------------|----------------------|
| (i) Forest lands | a) Protected Forests |
|                  | b) Reserved forests  |
|                  | c) Private Forests   |

---

<sup>8</sup> The Pollution Control Board has identified Environmentally sensitive zones as follows:

- a. Areas with Biological Diversity
  - i) Reserved Forests ii) Protected Forests ( National Park and Wildlife Sanctuaries), iii) Turtle Nesting Grounds (Morjim, Galgibag and Agonda), iv) Coral Reefs (found at St. Georges Island), v) Estuarine Crocodiles (Cumbharjua canal), vi) Mangroves, vii) Wetlands (Carambolim, Chorao, Pilar, Verna, Rumbrem, Raiche-Tolem, Curtorim)
- b. Areas with Sensitive land uses
  - i) Public water supply areas from surface water bodies, ii) World Heritage Site, iii) Monuments of National Significance, iv) Sacred Groves ( 9 of them identified), v) Agricultural Research Stations, vi) Command area of irrigation projects, vii) High physiography areas, viii) Airports, ix) Coastal Regulatory Zones

- (ii) Water Bodies
  - a) Rivers/Rivulets
  - b) Natural Springs
  - c) Tanks and water bodies
- (iii) Mangrove forests
- (iv) All lands with slopes of 25% and above.  
Slope calculation on any plot of land will be as per actual slope of the land, not average slope.
- (v) Khazan Lands
- (vi) Natural Heritage Sites:
  - a) Sacred Groves (Devrais)
  - b) Settlement Natural Reserves: These are essential to the health of the settlement areas and include Aguada Plateau and Baga Hill
  - c) State Parks: Areas that are to be preserved as pristine areas not to be despoilt by development and include unspoilt beaches and hills like Chandranath Hill.
  - d) All areas demarcated as CRZ-I as per CRZ notification.
- (vii) Lands that need to be regenerated: These include all inactive/ closed/ dormant mines and mining wastelands and dumps.

2. In addition to the above, there are other areas with biodiversity that also need conservation but are difficult to map due to their unclear boundaries as under:
  - i) Bio-diversity hotspots like the Turtle Nesting sites and Estuarine Crocodile habitats<sup>9\*</sup>
  - ii) Coral Reef\* and underwater/marine biodiversity areas
  - iii) Sand Dunes

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<sup>9</sup> (Items from Environmental Atlas of Goa)

#### 4. Eco-Sensitive Zone II (ESZ-II)

1. Eco-Sensitive Zone II includes areas that need to be protected from indiscriminate development, which would otherwise cause irrevocable damage to the environment as under:
  - i) Coastal areas (currently under CRZ regulations except CRZ-I areas)
  - ii) River banks (currently under CRZ regulations except CRZ-I areas)
  - iii) Agricultural lands:
    - a) Cultivable lands
    - b) Orchards (Kullagars)
    - c) Social Forestry Areas
  - iv) Saltpans
  - v) Net command areas of Irrigation Projects: This is to include all areas within the Gross Command Areas of the Irrigation Project excluding the areas within the existing settlement fence as per RP 2001 and all new settlement areas that will in future be included in the Settlement Fence.
2. In addition to the above the TF feels that the following areas need special control mechanisms due to their increasing vulnerability due to high footfalls or to preserve their cultural importance:
  - vi) World Heritage Site
  - vii) Heritage areas of National Importance
  - viii) Heritage areas of Regional Importance
  - ix) Tourism Hotspots (including areas where more than 10 lakh tourists annually)

As per the Eco-Sensitive Zones, the Task Force is creating maps ranging from 1: 100000 to 1: 2000 scales to indicate all the categories mentioned therein.

## 5. Manmade Heritage

1. The abundance of the natural heritage of Goa requires that around two-thirds of its territory gets protected (the eco-sensitive zones). Tourism and surface mining dent the land surfaces of these areas but as they are essential to the economy of the State these two critical industries need to be strictly restricted and regulated.
2. Goa also has a long history which is being pieced together through concerted excavations and research. In general the track record of the State in addressing the manmade heritage has been far better than most other states of India, yet a lot more needs to be done.
3. The manmade heritage is of two categories a) Movable b) Immovable. The first is largely addressed through museums and museology while the latter is addressed through regional and settlement plans as comprising of sites, remains, ruins and buildings of archaeological, historical, cultural and architectural values.
4. The two critical acts for protection and preservation are the a) Ancient Monuments (Sites and Remnants) Act 1958 for national monuments as implemented by the Archaeological Survey of India and b) the Goa, Daman and Diu Ancient Monuments & Archaeological Sites and Remains Act 1978, as implemented by the State Department of Archaeology.  
  
In addition, the rules and regulations under these Acts require a buffer zone around protected sites and monuments. At present, the ASI have a 100 m 'no development area' and a further 200 m regulated area around each of their areas. A move is on to remove the 'no development' clause and to have only a 300 m regulated area within which the ASI have to be consulted on all

development projects. A similar clause is required for State protected Monuments.

5. However, in addition to the protection list a supplemental conservation list where new uses for old buildings are provided is published under the State Act. This list as at present is annexed at Appendix VIII: Conservation List. This list can be added to as and where required by the concerned local bodies, provided the development rights of the owners if adversely affected vis-avis the neighbourhood, compensation is given for the loss of FAR. The list also includes precincts for conservation like Fontainhas and Campal in Panaji and within which development would have to be through a heritage precinct plan.
6. For retrievable archaeology, an archaeological park can be indicated in which uses are to be such that they can easily be accessed for retrieval of artifacts. Common permissible uses are recreational areas or orchards. Roads are permissible especially through such large parks. In addition, areas can be shown for historic gardens eg. Azad Maidan (Panaji) and Lohia Gardens (Margao)
7. In RPG-21, the following archaeological parks are indicated
  - 1) Chandor (Salcette)
  - 2) Goa Velha (Tiswadi)
  - 3) Old Goa - World Heritage Site (Tiswadi)In addition the following heritage trail will be indicated
  - 1) Kadamba Plateau Heritage Trail (Tiswadi)In general, outer fortifications (as existing or as accessed) are indicated. Chandor and Old Goa are to be developed by the ASI, whereas Goa Velha

and the Kadamba Plateau by the State Department of Archaeology. Further such areas could be shown as and when required.

#### 6. Uses Permitted/Not-Permitted

Within ESZ-II no development detrimental to the area will be allowed as under:

1. Within the CRZ zones, certain activities including the following are prohibited<sup>10</sup>:
  - a. Setting up of new industries and expansion of existing industries, except those directly related to water front or directly needing shore facilities
  - b. Manufacture or handling or storage or disposal of hazardous substances
  - c. Setting up and expansion of fish processing units including warehousing (excluding hatchery and natural fish drying in permitted areas)
  - d. Mining of sand, rocks and substrata materials except those rare minerals not available outside CRZ areas etc.

#### 7. Follow up work/Work in Progress:

1. The government urgently needs to conduct primary surveys through the Agriculture Department and the Forest Department to accurately map the biodiversity hotspots, the sacred groves, the private forests, the present agricultural lands, the orchards that have biodiversity, cashew plantations, the natural springs and all traditional and other water tanks in Goa.
2. The Zoning Atlas stipulates buffer zones of 2kms around Goa's World Heritage Site and all intake points for drinking water supply, and buffer zones of 1 kms around areas of sacred groves, major tourist destinations,

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<sup>10</sup> Guidelines for Siting of Industries, Goa State Pollution Control Board

areas of national importance. The TF will decide on these concerns. Further, the TF will also propose spatial controls and guidelines for archaeological sites and other built heritage in Goa.

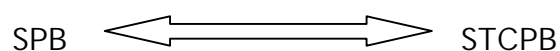
3. The Task force will put in place guidelines and policies for conservation of these environmentally sensitive zones and also review current incompatible land uses in these areas.
4. The TF is also in the process of framing policies for extraction of minor minerals such as sand, bricks, metal and soil and on industries located in Eco-Sensitive Zone I and II.

## VIII. SAFEGUARDING THE PLAN

1. The TF through its consultative process has recognised that
  - a) The GT&CP Act '74 needs a crucial amendment that restricts the Goa Government from recommending land use changes after the legal public objections/ suggestions stage through the GTCPB.
  - b) The GTCPB has to firmly stress that ODPs/CDPs are an integral part of RPG - 21 and its subsequent amendments, even if they are processed by separate arms of governmental machineries. The Act needs no changes on this account. At the most Government orders may be required to stress on this fact.
  - c) The GT&CP Act allows spatial plans to be prepared at State, District, Taluka, Settlement and Ward levels. The local Authority Acts (Municipal Corporation, Municipal Council, Village Panchayats) can avail of this framework in the application of their mandates.

### RELATED ACTIONS REQUIRED FOR IMPLEMENTING RPG-21

- a. Currently RPG -01 as in place is being updated as RPG- 21. Its concurrent disaggregation into 2 DRPs is a first step towards an integrated decentralized development through spatial plans with the participation of the District Planning Committees.
- b. At State level it is imperative that the State Planning Board (SPB) and STCPB work in tandem.

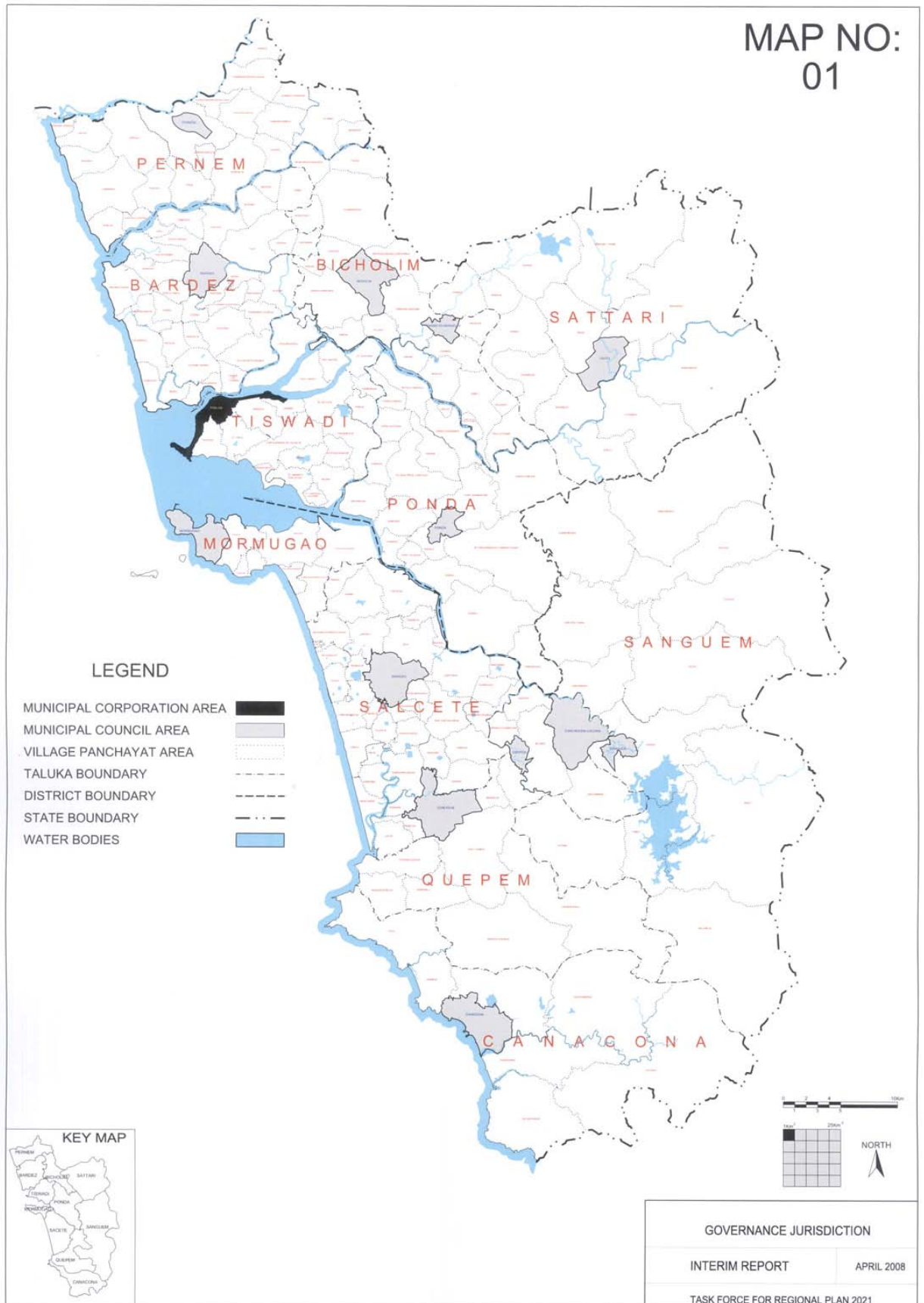


For this, all Government departments and parastatals restate their plans, programmes and projects to fit into plans at State, District, Taluka, Settlement and Ward levels as applicable, so as to address the issue of access to land when these are in conflict with each others mandates – (due to the sectoral priorities of the agencies).



- c. The composition of the STCPB should be restructured to ensure adequate representation to the elected 3rd Tier of Governance (DPC/TPC/Mun/VP), with the State Chief Town Planner as Secretary to the Board and Sectoral Department Heads as invitees to Board meetings for agenda items of their concern.
- d. Except for 'operational areas' as shown on statutory plans (e.g. airports, seaports, rail lines and yards, major roads, non civilian areas of cantonments, power distribution systems, water works) all other land uses should be as per the GTCP Act '74. In particular, access to land under the GIDC Act, SEZ Act and the like would be valid only if processed upfront under the GTCP Act '74.
- e. Generally, Central and State Government projects could be processed through a fast-track but within the parameters of the Development Control Rules. As Government has amended Sec 16 of the GTCP Act '74, to cater to Government projects, the TF have recommended rules to Government to implement this Section of the Act (A Copy is at Appendix X:Rules for Government Projects under Section 16 of GTCP Act'74).
- f. To facilitate the participatory implementation of RPG-21 the TF recommends a governance matrix which gives credence to the 73<sup>rd</sup>/ 74<sup>th</sup> CA ( A copy of this is at Appendix IX: Participatory Planned Development System for Goa Through RPG – 21)

MAP NO:  
01



MAP NO:  
02

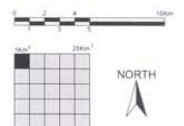
# LEGEND

SETTLEMENTS AREAS  
VILLAGE PANCHAYAT AREA  
TALUKA BOUNDARY  
DISTRICT BOUNDARY  
STATE BOUNDARY  
WATER BODIES



\* Yet to be Mapped  
All Gazette changes from 1988 to 2005

SETTLEMENT AREA



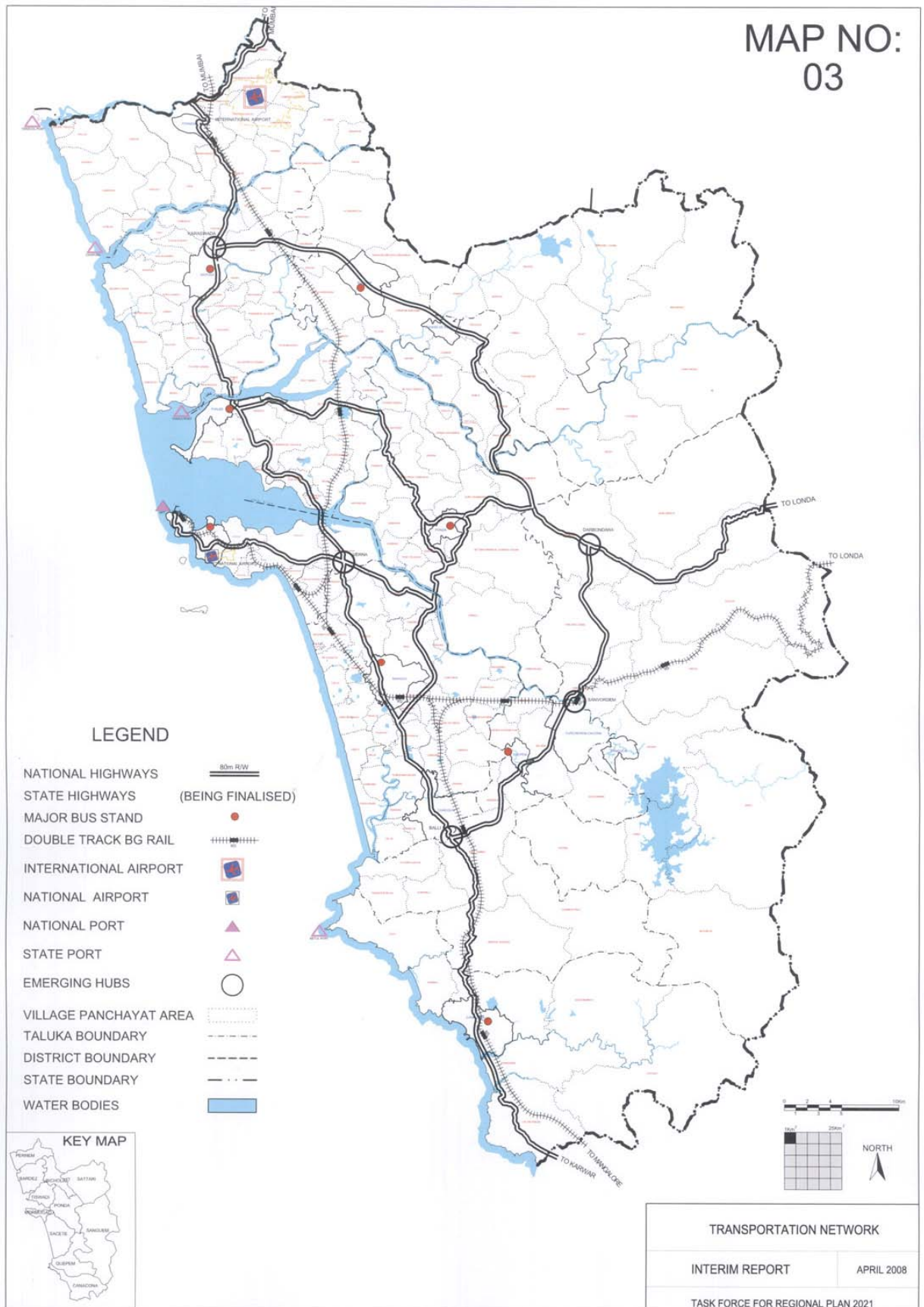
SETTLEMENTS AREAS RP 2001\*

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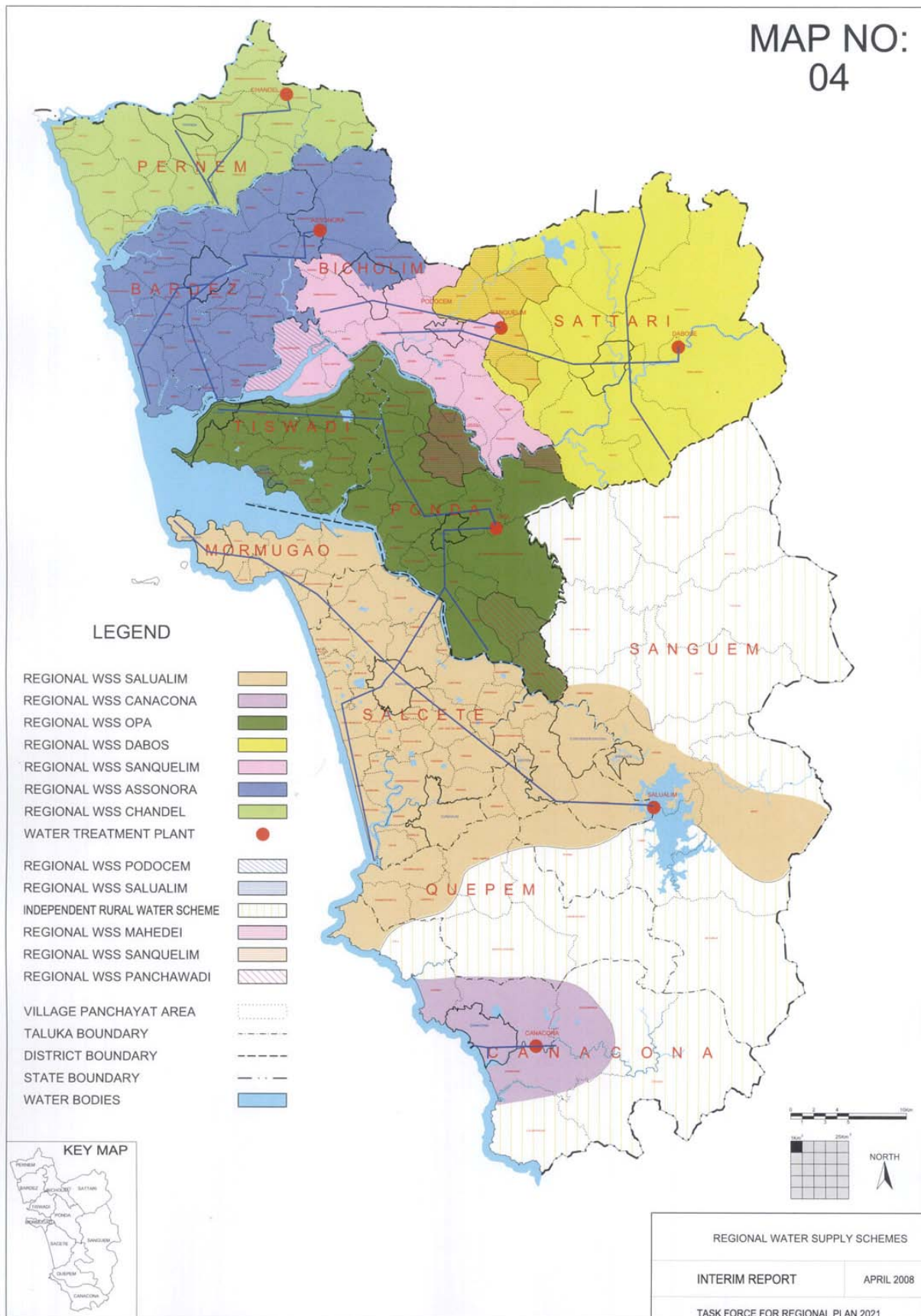
TASK FORCE FOR REGIONAL PLAN 2021

MAP NO:  
03

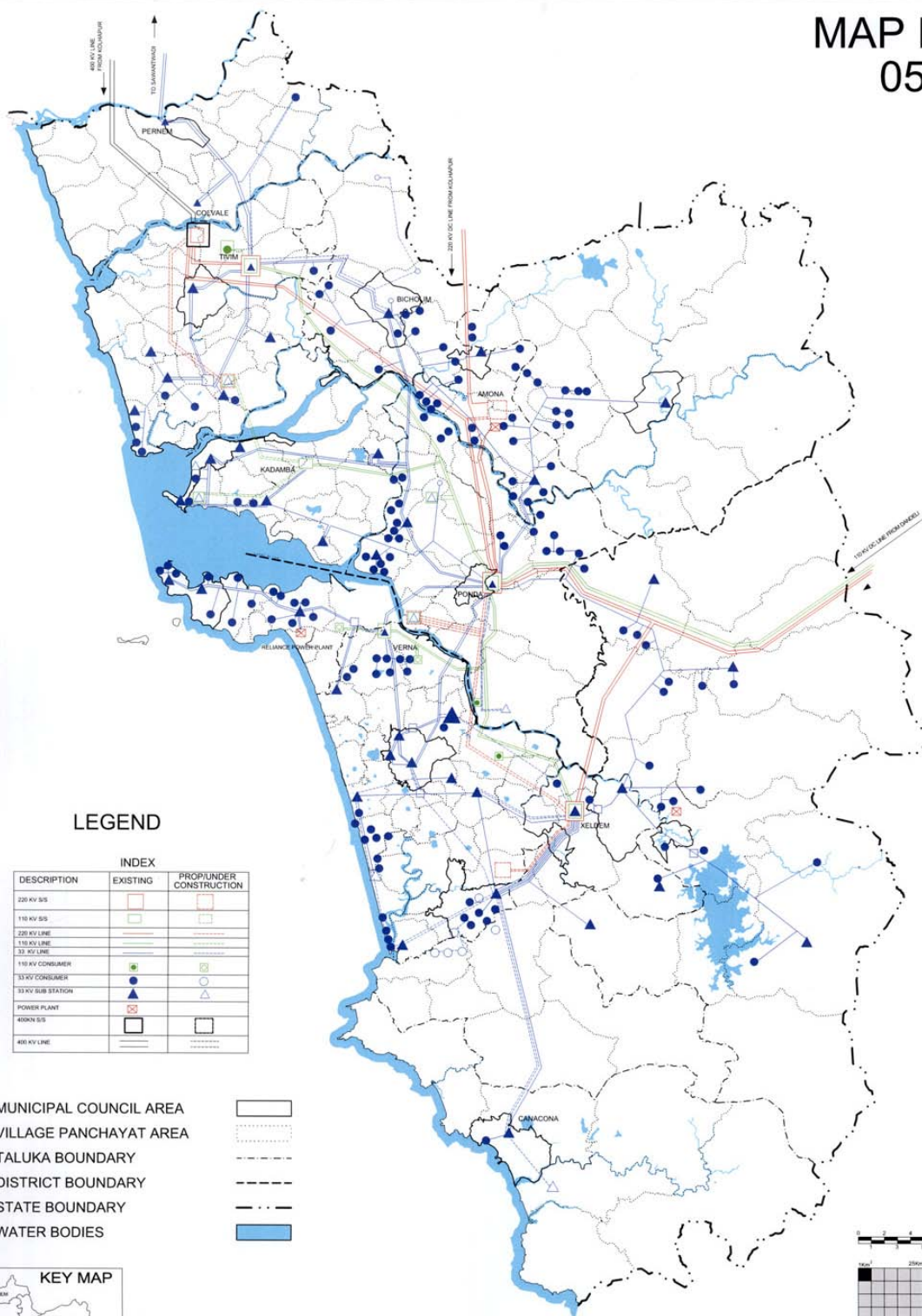




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04



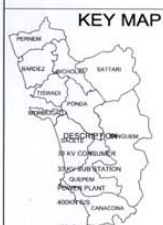
MAP NO:  
05



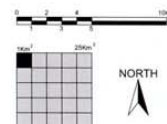
### LEGEND

DESCRIPTION	INDEX	
	EXISTING	PROPOSED/UNDER CONSTRUCTION
220 KV S/S		
110 KV S/S		
220 KV LINE		
110 KV LINE		
33 KV LINE		
110 KV CONSUMER		
33 KV CONSUMER		
33 KV SUB STATION		
POWER PLANT		
400KV S/S		
400 KV LINE		

MUNICIPAL COUNCIL AREA  
VILLAGE PANCHAYAT AREA  
TALUKA BOUNDARY  
DISTRICT BOUNDARY  
STATE BOUNDARY  
WATER BODIES



\* The Power Supply Network is only Indicative



POWER SUPPLY NETWORK \*

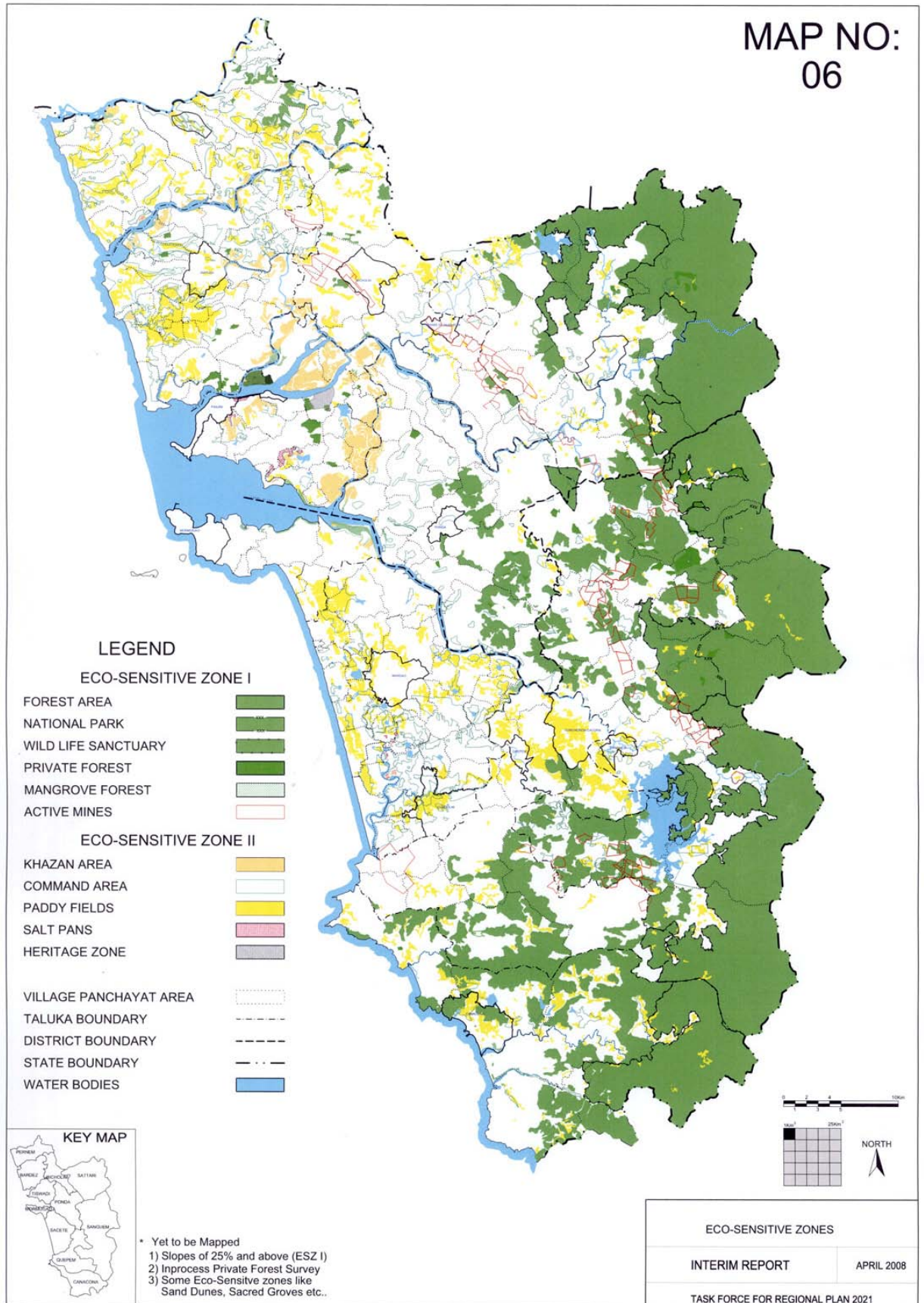
INTERIM REPORT

APRIL 2008

TASK FORCE FOR REGIONAL PLAN 2021



MAP NO:  
06



## APPENDICES



## APPENDIX I      TERMS OF REFERENCE 1

No. 29/8/TCP/Pt.file/Task Force/R.P./2007/3353,  
dated 4/10/07.  
Town & Country Planning Dept.

## N O T I F I C A T I O N

Whereas, the Government of Goa desires to prepare a broad based Regional Plan for a perspective horizon year of 2021 AD

Whereas, the Government desires to adopt a transparent process in preparation of the Regional Plan as per the provision of the Town and Country Planning Act 1974 having regard to the existing Regional Plan 2001 along with the changes effected subsequently by the due process adopted by the Government in the past, old Outline Development Plans/Zoning plans in force and commitments of the Government in terms of notification at different stages and decisions of the Town and Country Planning Board taken in the past.

Now, therefore, in order to undertake this exercise of preparation of the Regional Plan in a time bound manner the Government hereby appoints a Committee to be called "Task Force for guiding the preparation of the Regional Plan for Goa, 2021 AD".

The Task Force will comprise of the following members:-

- |  |                |
|--|----------------|
| 1) Hon.Chief Minister, Shri Digamber Kamat         | Chairman.      |
| 2) Padma Vibhushan, Charles Correa,                | Vice Chairman. |
| 3) Dr.S.P.Deshpande,                               | Member         |
| 4) Prof. Edgar Ribeiro                             | Member.        |
| 5) Dr. Oscar Rebello, Convenor, Goa Bachao Abhiyan | Member.        |
| 6) Ar. Dean D'Cruz                                 | Member.        |

- |   |          |
|---|----------|
| 7) Er.Rahul Deshpande   | Member.  |
| 8) Shri Mark Rodrigues, Representative<br>of Goa Chamber of Commerce & Industry | Member.  |
| 9) Shri Datta Naik, Rep. of Goa Chamber of<br>Housing Industry.                 | Member   |
| 10) Secretary, Town and Country Planning  | Convenor |

The Task Force will meet at least once every 15 days and submit an interim report to the Government on or before 15<sup>th</sup> December, 07 and the final report by 15<sup>th</sup> March, 08.

The Task Force will suggest an appropriate methodology for preparation of Regional Plan for horizon year 2021 AD. The Committee will be entitled to obtain information, data and any other material from the Town and Country Planning Dept., or any other Government Dept./Corporation for the purpose of making recommendations to the Government.

Once the interim report of the Task Force is accepted by Government, the Task Force will be directed to prepare and submit the final report to the Government .

The Final Report of the Task Force will be considered as a guideline for preparation of the Regional Plan 2021 AD.

The Task Force will review the Regional Plan approved by the Town and Country Planning Board before submission to the Government and Government may also refer the Regional Plan to the Task Force before according its approval for its final notification.

Two members of the Task Force will be included as special members for considering the suggestions received on the Regional Plan during the

notification stage. The Task Force may invite any one special professional in the field of regional planning as a special invitee as it considers fit.

The Chief Town Planner, Government of Goa may appoint any one senior officer of TCP Dept., as a nodal officer to ensure all secretarial and logistical help to the Task Force who shall also liaison between Town and Country Planning Department and the Task Force.

Each member (other than minister, Government officials) will be paid an honorarium of Rs.1000/- per sitting and to and from travel, Boarding and lodging expenses as applicable of the rank of Secretary to the Government of Goa.

All the expenses towards the functioning of the Task Force will be debited to the Budget Head of the Town and Country Planning Department, Government of Goa.

By Order and in the name of  
Governor of Goa  
Sd/-  
(Raajiv Yaduvanshi)  
Secretary(TCP)  
Government of Goa

Place: Panaji

Date: 10/4/07

To,

The Director, Printing and Stationary, Panaji .....with a request to publish the above Notification in the Extra Ordinary Official Gazette. 20 copies of the relevant Gazette may kindly be supplied to this Department for record.

Copy to,

- 1) All members of the Task Force.
- 2) All members of the Town & Country Planning Board.
- 3) P.S. to Hon'ble Chief Minister, Secretariat, Porvorim.
- 4) P.S. to Chief Secretary, Secretariat, Porvorim, Goa.
- 5) Chief Town Planner.
- 6) All Officers of Town & Country Planning Department.
- 7) Directorate of Accounts, Panaji-Goa.
- 8) R.A.O., Porvorim, Goa.
- 9) The Collector, North/South Goa District, Panaji/Margao.

APPENDIX II      TERMS OF REFERENCE 2

**No. 29/8/TCP/Pt.file/Task Force/R.P./2007/3353,  
dated 4/10/07.**

**Town & Country Planning Dept.**

***NOTIFICATION***

Whereas, the Government of Goa desires to prepare a broad based Regional Plan for a perspective horizon year of 2021 AD

Whereas, the Government desires to adopt a transparent process in preparation of the Regional Plan as per the provision of the Town and Country Planning Act 1974 having regard to the existing Regional Plan 2001 along with the changes effected subsequently by the due process adopted by the Government in the past, old Outline Development Plans/Zoning plans in force and commitments of the Government in terms of notification at different stages and decisions of the Town and Country Planning Board taken in the past.

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- 6) All Officers of Town & Country Planning Department.

### APPENDIX III: PRESENTATIONS TO THE TASK FORCE

Dr. Nandakumar Kamat

- Land use data should be obtained from the Land Use Board.
- The Ground Water Notification has been issued but ground water officers have not been appointed.
- Housing amenities should be provided for the poor.
- Out of 3,65,000 hectares of land only 70,000 hectares in midland/coast would be left for development.
- There should be a sustainable land utilisation Policy (spatial planning).
- State Housing Policy.
- Natural resources like rivers, springs etc. should be mapped.
- We are losing our life support systems, these should be protected and maintained.
- The objective of the Town and Country Planning Act should be to monitor the State.
- There has been an inflow of 2.5 million tourists this year, but no proper infrastructure in place.
- Land mafia should be checked – land has become a commodity which Goans cannot afford.
- Micro level space utilisation – village level – through “remote sensing centre”.
- Goa’s medicinal habitat should not be lost.
- Public participations at village level for spatial planning and suggested public hearing.
- National pasture policy to be adopted – need to define natural pastures, orchards etc.
- Solid waste disposal system to be put in place at the earliest.
- Ecological sustainability – bunds, backwaters etc.
- Stop converting agricultural land.
- Comprehensive Development Plan to be prepared.
- Tackle problems posed by floating population in Goa
- 30% of built space in Goa is vacant. Most houses are locked.
- 70% area of Tiswadi Taluka is below sea level or less than one to two mts. from MSL, due to which, the whole area is at danger of Tsunami or tidal effect. The Salcette coastline is prone to flooding. Salcette needs a special plan.
- No policy for crematoria/muslim burial grounds. 70 villages don’t have Crematoriums, where as large tracks of land are proposed for development.
- The Regional Plan 2001 needs to be reviewed. Chapter wise success/failures to be identified, so that new plan can take care of the short comings. R.P. 2001 was a good plan.
- A specific plan should be prepared for the tourism belt.
- Heritage maps to be prepared – natural and built.
- Contour maps to be obtained.
- Goa should not be created as an “Investment centre”.

- Mines to be mapped.
- The Panchayati Raj Act needs to be translated so that the common man can understand this Act.
- Policy to have incremental growth and not bullish growth.

Shri Nitin Cuncoliencar ,GCCCI

- Shri Nitin Cuncoliencar presented his few points on Economic analysis and touched upon SEZs, Mopa Airport and other infrastructure requirements in the State. He also suggested to treat Goa as a cosmopolitan region. He submitted a CD consisting of housing policy report 2004 by Dr. Deshpande, report on infrastructure by Mark Rodrigues, report on Mopa Airport and report on Social Economic Zone (SEZ).

Adv. Andre Pereira and Savio D'Souza on "Comunidades in Goa".

- Village communities are still in force in Goa and allowed to function.
- As per the Constitution of India any law of the State has to be retained. However, when the Town and Country Planning Act came into force incorporation of the Code of Comunidades has been left out.
- The Land Revenue Code survey has ignored the existence of the law.
- Land can be held for agriculture purpose only. Name of comunidade has been entered as occupant and the Collector changes its purpose without even referring the same to the comunidade.
- The Code of Comunidade does not permit land for commercial purpose.
- Land is held on "lease" only. It has a temporary limitation.
- Old Comunidade maps are drawn on cloth. The Director of land survey should produce these maps.
- The contract entered into by the holder should be checked. While planning don't lose sight of the contract.
- Goa has 222 villages that is governed by the Code of Comunidades. No other Act applies.

Arch. K.D. Sathale of Nirmal Vishwa

- Land in Goa is scarce.
- Land guzzling - Change of land use is most lucrative.
- Need to lay down procedure so that changes do not happen.
- Thrust of land guzzling to be avoided – Industrial/Mining/large lands.
- Comunidade had their own development plan for resources like water bodies etc.
- Town Planning department does not seem to take cognisance of water resources.

- Conservation of water bodies is a must – these should be identified and a no development zone of 15 mts. Should be kept around small water bodies and upto 50 mts around large water bodies.
- Wetland needs to be conserved – paddy, mangroves, marshy lands etc.
- Wild life habitat and breeding grounds (mangroves) need to be protected.
- Water shed management is necessary. Due to this project in Ponda for 2 years there have been no floods.
- Global warming – sea level rise may affect the coast. RP should respond to global cause – emissions.
- Keep tree cover intact.
- Reduce energy consumption.
- CDM – Clean development mechanism.
- No more big dams – 20% methane from big dams.
- Forest areas not to be reduced by Mining sharks.
- RP should identify ecologically damaged areas and suggest restoration.
- Agriculture – single largest employment sector – improve agriculture practices – proper marketing.
- Tourism has become an unstable industry – overgrowth mismanaged. Needs to be managed properly.
- Line of no construction to be shifted – to be continued upto rivers also.
- Steady growth of Goa should be our motto – not a rush.
- Regarding Mining – mineral ore will be exhausted in 20 years – Goa to be impoverished – Why the rush to finish ore. Need to rehabilitate areas specially the mining dump areas.
- Dumping of mining rejects double the mining area and destroy agriculture and forests. This results in long term ecological damage for short term gains.
- Opening of new mines should be subject to rectification of earlier damage.
- Need to conserve our forests – no development on hills with a gradient of 25% or more.
- Do not provide roads/services in forests as per Swaminathan Report.
- Need to prepare a manual for conservation zones.
- Conservation should apply to Kavlem, Marcel, Priol, Bandora – temple belt and Loutolim/Chandor.
- Regarding SEZ – ground water will be exploited. Generator electricity will pollute the environment and add to global climate change.
- Industry should be encouraged after taking stock of emissions which should not contribute to global climate change.
- Regarding decentralisation – villages to be self reliant – solar and wind energy should be encouraged – rainwater harvesting to be done – waste from one region should not be transported to the another – planning should be done at the local level.
- Self reliance is one of the strongest parameter for planning.

## Roland Martins of Goa Desc/Goa can

- Tourism Master Plan – prepared in 1986 – presented in 1987 – Massive protest – Document printed – Mr. Correia on the Steering Committee – Plan rejected.
- Distinct pattern of tourism in Goa – starting with the common wealth meeting – then charter flights
- 5 star hotels – airports – planned 20 years ago – It is a plan to give legitimacy in what is to be done – There is documentation with International agencies for plans for Goa.
- Goa has become a field laboratory for experimenting tourism by the Central Government. Goa has been structured to suit the global market. The free port is based on the Macao Casino model.
- A plan to move Goa into MMT –Mass Modern Tourism destination.
- There is a plan to develop Goa as a ghetto for high spending tourists – with the coming in of IFFI – 18 hole golf courses – casinos – townships – convention centres etc.
- Three police stations have been identified along the coast with jurisdiction within 200 mts line and 12 nautical miles into the sea.
- Japanese consultants have been identified for PWD water supply report.
- The Task force needs to define Goa's territorial jurisdiction.
- What kind of Goa do we want – with respect to its culture, language etc.
- Define Goa's carrying capacity.
- Tourism structure is as per Govt. of India plan. There is too much imposition from the Centre – a parallel planning.
- Goa needs a state tourism authority and it is important to ask the Tourism Department about their plans for Goa.
- Soon as Goa obtained statehood in 1987 – GOI's plan of land for tourism came in.

## Ramesh Gauns on Mining

- Out of the 150 km from North to South, more than 95 km is taken over by Mining.
- 1600 mining leases exist – they are termed as lapsed – but it cannot be said when they could be released.
- The 4 talukas i.e. Bicholim/Sanguem/Quepem/Sattari have 70% forest cover, 69% by rivers, 2,794 sq.mts. mining – 77% of forest cover is affected by mining – 17% of population affected.
- At present Sanguem is the most important taluka for new leases. Sanguem has 56000 hect of forests. More than 8000 ha. Brought under mining activities.

- The wild life sanctuaries stores water – hydrological cycle – which is cut off by mining. In 5 to 10 years we will be short of drinking water with the diversion of Mhadei and siltation of rivers due to mining dust. The work of desilting the rivers would cost the government Rs. 2,00,000 per day.
- Who says that mining is the backbone of Goa's economy? With the way it is continuing, it will destroy the bone altogether.
- Various reports could be referred to as regards the mining situation in Goa – TERI Report, NIO – 1997, Sen Gupta 1973 Report, Dr. Chachadi's report on Kudnem.
- Mining is destroying ground water – surface water – causing air pollution – destroying forests – is a danger to the local people.
- 4500 crores is the revenue earned – most of which goes to the Centre.
- There is no data with Government on mining impacts except the TERI report.
- Is the mine existing within the mining lease or beyond? Nobody really knows. All reports are sidelined.
- If at all we want and have to save Goa it is important to keep a check on the MOEF who have been blindly renewing all the mining leases irrespective of the objections, hearings held. People are totally bypassed.

Rajendra Kerkar

- It is very important to safeguard the Wild Life Sanctuaries.
- The State Government is not serious about this – de-notification.
- Netravali is the largest Sanctuary.
- There are 57 Mining leases in these Wild Life Sanctuaries.
- Tribal people – Tribal bill.
- Agriculture is the main activity – subsidies not reaching people.
- The main issue is water.
- These areas in the Wild Life Sanctuaries act as a sponge.
- Karapurkar committee recommended 160sq.m. forest cover but Goa Government did not accept the same – Government wants to renew mining leases.
- There is no concern for the animals – is it because animals do not vote.
- Mr. Mazalkar has been de-notifying mining areas illegally.
- Old leases are being renewed in the forest areas.

Mrs Sonak, TERI, Western Region Centre

- Spoke about Growth in population – demographic profile.
- SEZs and construction.
- Pensioners paradise.
- Tourism.
- Climate change.
- Our resources – land, water, air, energy.
- Measure – monitor – manage

- Availability of local knowledge.
- New Innovative techniques
- Policy tools and regimes. How do we plan:
- Demand projection – land/air/water/energy upto 2021.
- Compare with supply
- Alternative scenarios – draft plan.
- Second round of stake holder dialogue
- Final plan.

Soter D'Souza of Centre for Panchayati Raj in Goa

- Made power point presentation on devolution of powers to the local bodies as per the 73<sup>rd</sup> and 74<sup>th</sup> Constitutional Amendment., Kerala Model.

Miguel Braganza of Botanical Society of Goa

- Land is finite.
- Definition of "Development"
- Land filling is also development.
- Waste Disposal.
- Sewage and waste water disposal.
- Rain water – covered surfaces.
- Deep bore wells – surface water.
- Incentive for rainwater harvesting to be incorporated.
- Reduce 15% sun influence by planting trees on western side.
- Avoid shading in south for light.
- Green technologies to be adopted with incentives.
- Forests – Sawant and Karapurkar report.
- Incentive or compensation for keeping area as forest – get into system of carbon trade.
- TDR – compensation at market rate.
- Mining – saline river water for dampening surface to take care of dust – affects agriculture.
- System for disposal of saline water.
- Mining dumps – joint forestry management practices – afforested with "fruit" trees – income from fruit.
- Sand dunes for shacks? Sea water rise – sand dune areas to be compensated by TDR.
- Planning is best if people are involved.
- Planning should be open, transparent and inclusive.

Dr. Claude Alvares, Director, Goa Foundation

- Huge projects approved – constructions started – SEZ approvals are being given – While Task Force meets.
- 9 lakhs jobs through SEZ – means about 8 lac migration.

- Protected/ecological sensitive area – all proposals approved without checking this.
- SEZ literally overrides everything including the RP – 18 SEZs for Goa?
- Mopa airport – practically equal to two talukas – 6 lane highway – none of this has been reflected on the RP.
- After Section 17C – how can all schemes SEZ etc. continue.
- SEZ proposals tying the hands of the task force.
- What is the RP for? – Fundamental right under section 21.
- Could there be some semblance of law in this place.
- All major projects to be kept on hold so that the Task Force is not tied.
- Section 17 (amendment) to be scrapped with respect to “time limit RP 5 years”
- Legal safeguards to be incorporated – time clause of 5 years or period of the plan.
- Involvement of Panchayats and local bodies important. Regional Plan cannot violate the Constitution. The Task Force should make this recommendation.
- Check the Zoning Atlas of the Pollution Control Board – siting of Industries – Water bodies, rivers, wild life sanctuaries.
- IPCC Report – 4-5% of Goa’s landuse will be submerged in 20 – 30 years.
- Keep land to rehabilitate people displaced from the Coast.
- “Ecologically sensitive areas” – in pursuance of writ petition filed by Goa Foundation – Forest department.
- 67 sq.km. of private forest identified – 80% demarcated on ground – unless areas identified no RP can be prepared. 1<sup>st</sup> RP did not use the word “forest” – 250 sq.km Private forests as per affidavit filed in the High Court– 67 identified – large portion is under Communalidade.
- National Policy 33% of forests.
- Barren plateaus for Industrial Estates – These are areas of highest endemic species for Goa besides water.
- Solid waste site – not shown in RP nor in ODP.
- 60 mine old leases regularised and given clearance without reference to the Regional Plan – This has impact on roads, people, water etc.
- 2001 RP shows active mines.
- Map showing 700 leases in the State of Goa -given manual leases – not disclosed – all granted in 1952 (Map of Mines department).

Fr. Maverick, Council for Social Justice and Peace

- Evaluation of the Draft RP 2001 – to indicate the deficiencies and difficulties in implementing the RP 2001.
- The process used in implementing the plan 2001.
- Decentralisation of powers – base for new plan – or it would not be people centric – earlier plan prepared by Consultants withdrawn.



- We have confidence in people preparing their plan with technical expertise provided by the Government.
- This exercise will give people an opportunity to learn in depth about their village.
- DPC will draw up an amalgamated plan for the district 1:10,000 scale.
- New draft plan back to villages in order to see what is proposed is reflected in the plan – we understand that State vision will also be incorporated.
- Areas under consideration – clear demarcation between urban and rural land.
- Further demarcation into sub-regions – talukas – coastal/midland/ghats.
- After demarcation – planning by local bodies.
- Goa's distinct geography, topography, heritage, demography, needs to be respected.
- This guideline to be given to citizens keeping vision for next 20 years in mind.
- Areas to be considered – agriculture – main source – neglected – surroundings not conducive to agriculture like effluents/sewage.
- Khazan lands destroyed by Pissiculture. Conversion of agricultural land for settlement/industry to be reviewed.
- Allotment of agriculture budget – where does it go?
- Abandonment of agricultural land vis a vis policies – Industrial/Tourism etc.
- Agriculture is on its death bed, it has to survive.
- For industry the geographical area has to be conducive – bore wells in SEZ areas – Tourism.
- True culture of village through the Plan.
- People's plan for tourism.
- People should benefit by Tourism. Who is benefiting - at the cost of the village? Review of tourism policy.
- Other areas to be looked into: water supply, garbage, power, social welfare, sports and recreation facilities, fisheries, forestry, housing, sewerage, health, irrigation, transportation and communication, education, animal husbandry.
- Other issues – migration, carrying capacity, destruction of khazans and mangroves.

Mr. Arvind Bhatikar, retd IAS, of Jagrut Goem/Nitoll Jinn Trust

Mr. Bhatikar based his presentation on the following three points:

- I. Long term objectives.
- II. Process for formulation of plan.
- III. Specific issues.

I. Population density: 316/sq.km. Small state v/s. high standard.

- Does not require further development.
- Conservation main objective of planning.

- Rate of growth population – should not exceed 1.5%
- Restrict influx of migrants.
- Economic activities for local youth.

## II. 73<sup>rd</sup>/74<sup>th</sup> Amendment.

- GPR Act not implemented – ward committees to prepare plans.
- Municipal Act, 1968, to be amended to incorporate 74<sup>th</sup> amendment. Activity to be undertaken by Government.
- Amendment of TCP Act to incorporate 73<sup>rd</sup>/74<sup>th</sup> amendment.
- Administrative and technical capability to be provided to the grass roots by the Government – to undergo necessary restructuring.
- Base studies required.
- Macro economic plan – to answer needs of projects like highways, dams, to be juxtaposed into plans from below.

## III.

- Amendment of TCP Act/List of baseline studies.
  - ODPs and Regional Plans to be integrated.
  - Concurrence of time period.
  - PDAs to be abolished.
  - Change on subjective decisions?
  - Frequent changes between two plans to be deleted.
  - Section 44 of TCP Act to be deleted.
- 
- Emergency activity by Government – provided this Activity is discussed – for eg. Housing for flood victims etc.
  - Minister should not head the TCP Board.
  - Board to be expanded – overwhelming presence of government officials – require principled inputs from private sector – Add well known environmentalists, town planners, architects etc.
  - Scale of RP 1:5000 not 1:25,000
  - Baseline study.
  - Rate of growth of settlements from 1998 to 2006 has to be known.
  - Deviation of reality on ground that what was planned – where and why?
  - Environment: Implementation of laws and rules.
  - Restrict FSI in coastal areas or reduce it.
  - Extend CRZ to 1000 mt. And restrict FSI 50%
  - Separate Act in the interest of conservation.
  - Employment: Why steel industries – huge section of power – no employment – raw material from out market out – what serves goans? Study of employment- preferences of goan youth.
  - Level of industrialisation/tourism that we require.
  - Study of land requirement for industry.
  - Or should acquisitions continue unabatedly?
  - All mega projects should be frozen.

- All acquisitions should stop.
- Urgent attention of Government to: initiate baseline studies (Management Institutes).
- Freeze SEZ totally until RP is notified.

Goa Heritage Action Group: Raya Shankwalker, Prajal Sakhardande, Leroy Veloso

- Heritage Regulations.
- Heritage listing.
- Development in a balanced manner.
- Model Regulations for Goa (copy given to Task Force).
- Conservation Committee.
- List makes grading
- TDR an essential requirement.
- Repair fund.

Nasser Munji, Economist

Mr. Nasser Munji made a power point presentation on how planning should take place as follows:

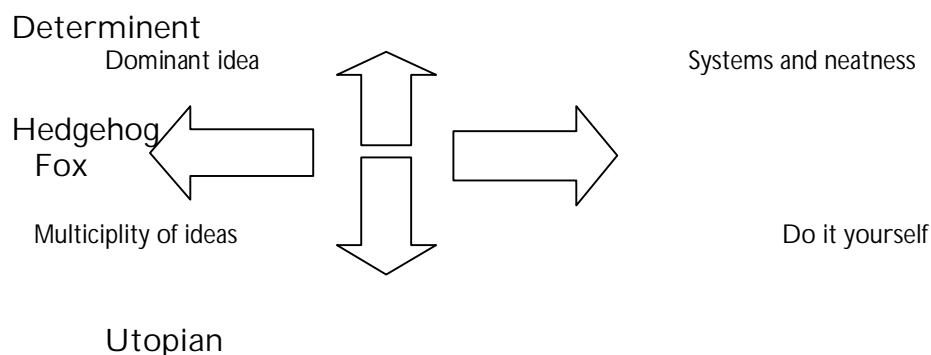
Vision Process – 30 years.

Strategic vision – 5 year.

Tactical – annual.

Critical space planning.

Mr. Munji explained the above set of points with the help of a diagram and explained in detail each point:



- Economic drivers
- Transport corridors – Integration.
- Connectivity and logistics.
- Role of settlements – purpose of cities/towns.
- Labour market.

- Creation of entertainment/social infrastructure.
- Conservation.
- Fiscal environment – commerce and growth.
- Infrastructure:
  - ▬ Basic services – water/electricity ...
  - ▬ Enabling the economic drivers.
  - ▬ Public sector “leads”.
  - ▬ Partners – PPP

He ended with saying:

“Everything is prohibited unless expressly appropriate  
Everything is permitted unless expressly prohibited.”

#### WWF on conservation of wild life and environment

- Every development project should have an EIA.
- Natural resources should be given priority.
- CRZ to be strictly implemented specially with regard to: sea level rise, mangroves and estuaries.
- Mining should be carried out beyond eco-sensitive areas.
- 700 leases have been given in Goa. In Mollem, leases are within 1 km stretch.
- Area of leases to be obtained with satellite imagery.
- Estuarine forests (mangroves) should be deleted from any such activities.
- The Forest department is indifferent to mangroves.
- Gelatine sticks are being used for fishing which should be stopped immediately.
- Natural lakes and reservoirs (khazans) to be protected.
- Laterite table lands of Western Ghats are endemic.
- Goa is the 12<sup>th</sup> bio-diversity hotspot in the world.
- Waste disposal should be done in a proper manner.
- Mining should be done scientifically.
- Why is acacia being planted while afforesting mining areas?
- Compensatory afforestation has become a formality.

Institute of Engineers – Mr. Gaitonde (Chairman), Mr. Moniz, Mr. Thomas, Mr. Yogesh and Mr. Agnelo Gomes.

- The Regional Plan is only a Policy document; the surface utilisation plans deal with land use.
- Taluka wish plans in the scale of 1:5000 should be prepared with survey boundaries.
- All land use changes made and notified should be reflected in the plan.
- A negative list should be prepared on areas that should not be developed.
- Look into activities like ship building in wet lands/marshy land.

- Regarding sloping lands – most of these lands have been encroached upon by migrants – whether it should be looked at by regulating building on them depending upon soil conditions.
- Regarding paddy fields and land to the tiller – there should be a policy on how to bring these back to productive use.
- Comunidade fields could be brought under a cooperative movement.
- All development should be in tandem with CRZ
- Transportation/communication – there should be a uniform width of road – say 15 mts?
- Roads connecting village to village should be of 15 mts. Width and within the village – 10 metres.
- Inland water ways should be looked at as a mode of transportation.
- Land should be demarcated for burial grounds/crematorium.
- Waste management should be proper.
- Power requirements to be looked into.
- Lands classified as orchard could be made settlement.
- Important to have local body input.
- SEZs to be studied with reference to data or they could come up anywhere.
- Government should revive the RP Cell in the TCP department instead of appointing consultants to prepare the RP.
- Conservation areas to be earmarked and heritage buildings to be listed.

#### Goa Shipyard Association and Barge Owner Association

- Goa Shipyard Association detailed about the kind of activities carried out by the shipyard and the difficulties faced by them. They requested that the shipyard are existing for last 3 decades which are not yet shown as Industrial zones needs to be classified as Industrial zone. They suggested for a Marine Industrial estates one at North one at south. They also suggested that Government should provide 2, suitable location one at Mandovi river one at Zuari are for fuelling station for Barges.

#### Goa Mineral Ore Export Association

- The power point presentation giving details about the existing miners and the area covered under mines. He informed that mining leases occupied about 8% of the total geographical areas out of only 2% is under active mining operation. The Fe contents of Goan iron ore is generally in between 50 to 55% which is not marketable. To make it marketable it is required to remove gangue minerals by way of beneficiation. It was also brought to the notice of the task force that some of the Beneficiation plant and other related activities carried out outside lease areas outside such needs to be earmarked. He also provided the details of other ancillary activities which are depend on mining activities. The Goa Mineral Ore Export Association is

also concern towards environment and social sectors. The Mineral Foundation of Goa is doing the work in these areas. In last it is submitted that Minerals are site specific, Needs to be mined to be put in use. All mining leases and the mineral rich areas to be demarcated as mineralised zones. All sites used for ancillary activities such as beneficiation plant, workshop, jetties, ship repair dry dock etc. to be demarcated in the regional plan.

Ms. Sabina Martins from Bailancho Saad

- The non inclusion of women in the Task Force constituted to formulate the Regional Plan- 2021 which is the first stage of the planning process is a violation by the Government of Goa. A Regional plan is a policy document for the development of the Common people (Aam Aurat, Admi) with special attention to disadvantaged sections Urban and rural poor, Women, Scheduled caste, Scheduled tribes, differently abled. Task Force should do all mapping of existing Natural resource, Human resource and Infrastructure and patterns of conservation and development. She demand that women be part of all planning bodies which includes the Task Force, Town and Country Planning Board, District Planning Committees, Sectoral bodies at Department and Panchayat level to be set up during the planning process.
- The setting up of SEZs , new townships, various parks in the name of industry are examples of how land is being acquired for real estate agents by the government despite the withdrawal of Regional Plan 2011. The SEZs were never approved by the people, for the people, as a development model for the state. Besides it infringes on the sovereignty of the state, takes away limited land resources, burdens the fragile infrastructure, takes away labour rights especially of women , will result in social tension and law and order problems due to the influx of people.
- Development policies should conserve and protect the environment. Destruction of environment means destruction of livelihoods of women increased working hours, deterioration of health, increased expenditure. Mining industry has been the primary destroyer of forests, hills, caused pollution, depleted water tables, destroyed fertile agricultural lands , destroyed grazing lands and fuel sources, adversely affected the flora and fauna of the state.
- The regional plan has to be formulated through a participatory process in keeping with the 73rd and 74th Amendment of the Constitution. Bailancho Saad recommends a Bottom Up - Top Down approach with the finalization of the plan in a time frame .

Fr. Romuald D' Souza

The Task Force requested Fr. Romuald D' Souza, from Goa Institute of Management, Ribunder to give presentation on possibility of setting up of a knowledge village in Goa. He brought to the notice of the task force that knowledge village will provide Economic Prosperity and Higher Quality of Life. He defined knowledge economy as an economy in which the production dissemination and use of Knowledge is the main driver of development, wealth creation and employment across all industries. At last he requested to identify the suitable location for Knowledge Village.

Dr. Kharapurkar, Ex. Director Agriculture ( Chairman of Karapurkar Committee for demarcation Private Forest in Goa)

Provided details about Pvt. Forest and how the committee identified the Private forest.

Informed that the report was submitted to the Supreme Court.

He suggested that if all Khajan lands, mangrove forest, Forest land, Cashew garden, forest on comunidade land and the net command area are protected then 60% of the state land can be saved as green

- Informed that, there are about 400 tanks all over Goa. Revenue forest land details needs to be collect from respective department.
- He suggested the adopt Co-operative farming or contract farming etc., to increase agriculture production in Goa.
- Task Force requested to submit a brief report on his views & presentation.

Utt Goenkara

- Goa must have harmonious and sustainable development.
- Land use changes are to be taken up as per the need of the people.
- Preserve local culture of Goa, heritage, peace and sensitivity too.
- Organised areas to be demarcated for permitted uses only.
- Permission of vertical development with control of density F.A.R. and specific areas to be earmarked.
- Industrial estate/areas to be earmarked for industrial uses only.
- About cultivable areas only cooperative farming must be imposed by Goa agricultural department.
- Harmonious sustainable development of Goa.
- Only active mines may be permitted to carry out the mining activity.
- We oppose Tivim Cricket Stadium.

# APPENDIX IV: PUBLIC INPUTS RECEIVED

Sr.No.	Reg. No.	Name	Address	Views/Suggestions
1	155	Sunanda Rajaram Borkar	H.No.170, Near Multi Purpose High School, Borda Margao Goa	<ul style="list-style-type: none"> <li>Objected for proposed road in the ODP Margao passing over Chalta. No. 116/4 of Borda, Margao</li> </ul>
2	202	Mr. Efigerio Dias	H.No.41, 1st ward, Colva, Salcete Goa.	<ul style="list-style-type: none"> <li>Requested that task force to bring out the amendment to CRZ notification.</li> </ul>
3	1	Jacinho Sequira	Bonglo De Jacinho, Tivim Avchit Vaddo- Bardez	<ul style="list-style-type: none"> <li>2011 Regional Plan to be scrapped.</li> </ul>
4	5	Rajesh M. Banuaulikar,	Arpora- Vigas _Waddo Bardez	<ul style="list-style-type: none"> <li>Not to convert agriculture tenanted land.</li> </ul>
5	7	Santana Philip Pinto	H.No. 162, Gavant, Nadora , P.G. Colvale Bardez.	<ul style="list-style-type: none"> <li>Hills and Mountain should not be cut unnecessarily.</li> <li>Environmental aspects to be considered;</li> <li>Greenery to be protected. Policy to control the land prizes.</li> <li>Acquired land should not be sold to big contractor/ Developer</li> <li>Development should be permitted keeping into mind the Goan identity.</li> </ul>
6	8	Camilo D'Souza	H.No. 523/1 Vagator, Anjuna- Bardez Goa	<ul style="list-style-type: none"> <li>CRZ should be scrapped.</li> <li>No Development Zone to be restricted to 90 m from HTL;</li> <li>Tourism project only to be allowed along the Coastal areas;</li> <li>Tenancy law to be scrapped where ever the Mundkar exists;</li> <li>Tourism related projects to be considered along with proper infrastructure.</li> </ul>
7	10	Anil R. Borkar	Ramakunj Behind Azad Bhavan, Porvorim	<ul style="list-style-type: none"> <li>Local authorities should be given a plan for objection suggestion village wise.</li> <li>Appropriate law to ban outsider to buy property in Goa.</li> </ul>



8	15	Prof. J.M. Prabhudesai	Loliem Canacona	<ul style="list-style-type: none"> <li>• No more industrial zone as it is contributing to in migration;</li> <li>• Procedure for residential houses approval to be simplified for Goan in panchayat areas;</li> <li>• Earmarked Government land for garbage dumping away from residential area;</li> <li>• Discourage housing complex;</li> <li>• Agricultural land should not be acquired by the Government;</li> <li>• Areas for rain water harvesting should be earmarked.</li> </ul>
9	72	Calarine B. Tolleband	Davorlim P.O. Navelim _ Goa	<ul style="list-style-type: none"> <li>• Suggested that all barren field along the coast which are not cultivated to settlement or industrial.</li> </ul>
10	3	Anthony M. Dias	H.No. 753, Campal, Panjim, Goa	<ul style="list-style-type: none"> <li>• Laws need to be made strict and should be implemented strictly;</li> <li>• No agricultural for housing/SEZ, only barren hill side land may be utilized for this purpose;</li> <li>• No mix land use. Residential to be allowed with proper parking; Any commercial establishment strictly required to keep space for parking;</li> <li>• Agriculture Land should not be allowed to sell and organic farming should be encouraged.</li> </ul>
11	103	Rajesh Poojari	D-53 Shiv Parati Co-operative Society Sector -21 , Nerul Navi Mumbai	<ul style="list-style-type: none"> <li>• Not to widen the road width from the Morjim beach up to 1km as road development will be detrimental to environment.</li> </ul>
12	111 & 114	United Real Tech Pvt. Ltd & Others	4 <sup>th</sup> Floor, Alfran Plaza, M.G. Road Panaji Goa	<ul style="list-style-type: none"> <li>• Requested that Shri.Dean D'Cruz may not be continued as member of Task Force , since he is party to the case before the High Court in which their interest are involved &amp; they expect injustice to their interest, if he is continued.</li> </ul>
13	113	Alan Victor De Souza	H.No. 173, Ana Villa,, Bela Vista Sangolda, Bardez Goa	<ul style="list-style-type: none"> <li>• Advocated for uniform zoning from Mac de Dus Chapel to Saligao as the development is not uniform both side of the road.</li> </ul>
14	97	Navelkar Estate Developes	Hotel Rajdhani ,Panaji Goa	<ul style="list-style-type: none"> <li>• Requested for Change of zone to settlement at chimbél, Tiswadi as the surrounding area is already grown having no trees and totally barred land.</li> </ul>
15	119	Gaonkar First	1140, Maira, Soccorro, Bardez Goa	<ul style="list-style-type: none"> <li>• There are 222 private comunidade where state landlordism is totally absent. Not to plan for comunidade</li> </ul>

				land.
16	18	Mr. Tome Isidaro A. Carvalho	H.No.116 , Nanta, Cortalim, Goa	<ul style="list-style-type: none"> <li>• Put every private land into settlement zone except for those lands which are tenanted in the new regional plan 2021;</li> <li>• Task force should suggest measures to clear the slums and recommend suitable site for rehabilitation or compensation.</li> <li>• Identify all water body for supply of clean Water after treatment;</li> <li>• No water and power consuming industries;</li> <li>• In all the zone development shall be allowed for private individuals; Advocated after elevated express way;</li> <li>• Monthly compensation to heritage homes.</li> </ul>
17	25	Mr. Sergio R. Furtado	E.340, Fontainhas, Panjim Goa	<ul style="list-style-type: none"> <li>• Hilly land, Plateau top should be used for orchard and should not be marked for Industrial zone</li> </ul>
18	41	Mr. B. Naronha		<ul style="list-style-type: none"> <li>• No Ration card, voting card to migrants,</li> <li>• No to baggers, Hawkers;</li> <li>• No to conversion of agriculture SEZ Housing Colonies,</li> <li>• No to New public Hospitals,</li> <li>• No to Polluting Industries;</li> <li>• Provide good water and electricity, road parking (Clean beautiful city)</li> <li>• Restoration of green field, hilly forest.</li> </ul>
19	76,64,57, 161-a, 159	Villagers of Goa Velha, Siridao, Bambolim, Chimbél Ribandor		<ul style="list-style-type: none"> <li>• Do not permit filling of Khazan land; Stop cutting of hills; Impact on natural drainage; Not to allow SEZ in Goa;</li> <li>• Promote eco friendly tourism; Proper disposal of Garbage.</li> </ul>
20	77	Mr. Andrew O.C. Simoes	H.No. 13/306/A-6 opp. Water Supply Dept. (P.W.D.) St. Inez, Panaji Goa	<ul style="list-style-type: none"> <li>• Policy to Stop out migration;</li> <li>• Stop dependence on Tourism;</li> <li>• Focus to be agriculture and Industrial development Encourages of employment,</li> <li>• All unproductive land should be classified for settlement purpose;</li> <li>• Farm houses should be encouraged.</li> </ul>

21	6	Subhash Nilekani	Landscape Architect, Shiv House No. 1657, Upper Housing Board Colony Alto Porvorim.	<ul style="list-style-type: none"> <li>• Broad demarcation of areas for Agriculture forestry, Industry, Mineral Development &amp; Urban &amp; Rural settlement;</li> <li>• Reservation land for recreation botanical &amp; Zoological gardens; Countryside backwaters and protect man made heritage areas of tourism nature;</li> <li>• Improvement of network &amp; services &amp; development of Mopa &amp; Dabolim airport;</li> <li>• Restrict rural &amp; Urban centres in the low lying paddy fields;</li> <li>• Flood control &amp; prevention of water pollution;</li> <li>• Carrying capacity concept need to be introduced;</li> <li>• Regional Plan 2021 is not a state Level Zoning Plan;</li> <li>• Concept of Developable and non developable area to be introduced;</li> <li>• Show all natural and man made heritage;</li> <li>• Identify and protect historical structure, natural, archaeological and scientific research;</li> <li>• Measure to be suggested for erosion of soil, redevelopment of water front;</li> <li>• Anticipated growth area to be shown all around urban centre;</li> <li>• Density concept for development vis-à-vis carrying capacity;</li> <li>• R.P. should be used as a policy document</li> </ul>
22	73	Vikrant alias Kashinath S. Pangam	Behind Maruti Temple Sankhali Goa	<ul style="list-style-type: none"> <li>• Promote controlling &amp; monitoring a separate building tribunal under the Chairmanship of retired district judge explicitly to dispose appeals within a period of 60 days from receipt.</li> </ul>
23	68	Daryl Gonsalves	nil	<ul style="list-style-type: none"> <li>• CRZ areas as per 1991 notification to be maintain;</li> <li>• No development on hill slope;</li> <li>• NH 17 to be broader to 4 lane.;</li> <li>• Need separate six lane super highway through mid land talukas.;</li> <li>• Self housing should not be objected on field or hill slopes.</li> </ul>
24	65	Villagers of Salvado do Mundo	C/o 345, Ubovaddo Salvador do Mundo, P.O. Betim , Bardez Goa	<ul style="list-style-type: none"> <li>• Agriculture lands should not be converted;</li> <li>• No construction shall be permitted on hill slopes. (Sloppy land);</li> </ul>

				<ul style="list-style-type: none"> <li>• No commercial development such as housing etc.;</li> <li>• Identification of Garbage dumping sites.</li> <li>• Forested and green area should be properly demarcated</li> </ul>
25	59	Vicente Correa Afonso	House 543, Pequeno Pulvaddo, Benaullim	<ul style="list-style-type: none"> <li>• Protect comunidade land. Mundcarial rite to be taken into consideration</li> </ul>
26	150	Gerald da Cunha	Architecture Autonomous H.No. 674, Tordal (Opp. Nishas Play School) Salvador do Mundo , Bardez Goa.	<ul style="list-style-type: none"> <li>• Preservation of Natural drainages &amp; Natural aesthetic areas.;</li> <li>• Introduction of bypass where ever necessary.</li> <li>• Low intensity development in orchard areas;</li> <li>• Lower FAR in regional plan settlement zone i.e.S2 to S3</li> </ul>
27	163	John Fernandes	Cunchelim, Mapusa Bardez Goa	<ul style="list-style-type: none"> <li>• Natural water bodies &amp; spring to be preserved;</li> <li>• Garbage disposal sites to be identified</li> </ul>
28	160	J. A D'Souza	H.No. 283/A Villamar, Aguada Road, Candolim Bardez Goa	<ul style="list-style-type: none"> <li>• Necessary modification to the section 13, 14 &amp; 17 so as to stop change of zone;</li> <li>• Define the specific period for revision after notification under section 17 of TCP Act;</li> <li>• Update base map with the help of all other Government Department;</li> <li>• Concept of micro level planning to be introduced for effective public party;</li> <li>• Illrd class agriculture land to be used for non agriculture purposed only;</li> <li>• All agriculture land to be clearly demarcated.;</li> <li>• Industries to be permitted as per work for availability.</li> <li>• No more industrial area which required outside labours;</li> <li>• FAR in rural area to be controlled with height restriction;</li> <li>• High tide line 200 &amp; 500 mts line shall be clearly shown on the map.;</li> <li>• Policy to control the future population to be made.</li> </ul>
29	153, 154	Mr. Marchal Pereira	Feira Alta, Mapusa Goa	<ul style="list-style-type: none"> <li>• Draft Plan should be made available in each and every local authority, Government Department etc. for public;</li> <li>• Sufficient time to be given for objection and suggestion;</li> <li>• Draft plan to be discussed in all local self Government.</li> </ul>

30	190	Vilas B. Bhangu	110, Gurudatta Complex M.G. Road, Panaji Goa	<ul style="list-style-type: none"> <li>Plan should indicate proposal of all the department and their vision 2021; Update plan with all change of zone till July 2006; SEZ's will amount for influx of population; There should be policy to intra migration at state level;</li> <li>Agriculture:- Double crop forming to be encouraged by providing adequate water by building minor irrigation tanks, bandharas, water shed management, water from abandoned mine .</li> <li>Horticulture needs to be encouraged, policy on agro base industry with food processing industries to be made.</li> <li>Fisheries and pisciculture to be encourage on scientific lines;</li> <li>Power: State own electricity generation should be looked into either gas base or thermal.</li> <li>Water supply &amp; sanitation: All lakes and tanks to be restore which are not used for residential purpose.</li> <li>More settlement zone after proper infrastructure.</li> <li>Education: Goa to be planned as education hub;</li> <li>Tourism: Tourism to be taken to hinterlands;</li> <li>Land use: systematic land use strategy to be evolved based on sustainable socio-economic development vis-à-vis ecology and environment etc.</li> </ul>
31	152	Ar. Mohan N. Tendulkar & Others	1 <sup>st</sup> Floor, Lobo's Bldg. Near Municipality, Mapusa Bardez	<ul style="list-style-type: none"> <li>Decentralized development;</li> <li>Protect sub division open spaces and other open spaces;</li> <li>Promote farm house in orchard areas; Farm house plot to be reduced to 2000.00 m2 it will help stopping the villagers to settle in the city area, help in reducing the land prizes, less burden on the infrastructure;</li> <li>FAR to be worked out for development in Orchard zone.</li> <li>Development permission to be made time bound.</li> </ul>
32	142	Avinash Kochrekar & Others	nil	<ul style="list-style-type: none"> <li>To stop illegal development in orchard and coastal area there is need to extend the more developable zone in continuation to the existing one within the permissible slopes. ; Settlement areas should be increased as per population increase.</li> </ul>
33	33	Dasharath D.	Nil	<ul style="list-style-type: none"> <li>More land for development area i.e. settlement areas should</li> </ul>

		Sawant		be increased as per population increase.
34	32	Dheeraj A. Gawade	Nil	<ul style="list-style-type: none"> <li>• More land for development area i.e. settlement areas should be increased as per population increase.</li> </ul>
35	31	Damodar Kochrekar	Nil	<ul style="list-style-type: none"> <li>• More for water development area i.e. settlement areas should be increased as per population increase. The existing settlement area to be extended as the area is already having all infrastructure.</li> </ul>
36	137 & 138	Sham Jagannath Kamat	122, Opp PWD Water Tanks, Althino , Panaji Goa	<ul style="list-style-type: none"> <li>• Real ground condition to be taken while preparing the R.P.2021</li> <li>• Opportunity to people to prove the legality &amp; oldness of their structure and accordingly zoned them;</li> <li>• Existing use of the building to be taken into consideration while rezoning;</li> <li>• Public participation</li> </ul>
37	126	Antonio F. Fernandes (Senior Citizen)	H.No. 40/C Damaveni, Arossim, Casaulim Goa	<ul style="list-style-type: none"> <li>• Farmers Carrying out agricultural activities within the agricultural land shall be relaxed to construct a small dwelling units in its own land due to scarcity of land</li> <li>• Stop hill cutting &amp; promote eco friendly tourism;</li> <li>• Suggest appropriate modification under section 17A;</li> <li>• Designate area for extraction of minor mineral.</li> </ul>
38	124	Shree Pratasingh Alias Balasaheb A. Rane	At, Vadawal, Naik wada, Latambarcem Post Assnora Takluka Bicholim	<ul style="list-style-type: none"> <li>• The area was earmarked as industrial in 2011 R.P. despite of over objection. Therefore village Latambarcem shall be zoned as per 2001 R.P. as we are doing the agriculture activity for last 3 decades and areas is within Tillari commend area.</li> </ul>
39	167	Sucoro Dias	H.No.1234, Dapot Mashem, Canacona	<ul style="list-style-type: none"> <li>• Focus on rural development;</li> <li>• No to polluting industries;</li> <li>• Agriculture to be encourage;</li> <li>• Protect green areas;</li> <li>• Compulsory employment to 80% Goans in industries;</li> </ul>
40	53	Eng. Bernard D'Souza	H.No.A/9, La Citadel, Colony, Donapaula	<ul style="list-style-type: none"> <li>• Public should be involved in planning process. (Participatory Plan) &amp; Grass root level approaches or bottom top process as per 73<sup>rd</sup> amendment shall be followed.</li> <li>• Capacity building programme at grass root level.</li> </ul>

41	52	Dominic Colaco	Ana Vaddo, Candolim Bardez Goa	<ul style="list-style-type: none"> <li>• Natural /traditional drainage &amp; rain water Passage should be maintained to be shown on the village level plan;</li> <li>• Khazan lands to be protected since it is rich with marine Bio- Diversity and fish breeding;</li> <li>• Global warning to be taken into consideration,</li> <li>• Maintain sand dunes; Hill slopes to be protected; Protect hilly land in Candolim from Anavaddo to Sai farm."</li> <li>• Formulate sustainable land use Policy"</li> </ul>
42	49 & 47	Franciso Dias	Nil	<ul style="list-style-type: none"> <li>• Increase FAR for vertical development to protect agriculture/other natural resource.</li> </ul>
43	48	Vicente Correia Afonso	H.No.543, Pequeno Pulvaddo, Benaulim Goa	<ul style="list-style-type: none"> <li>• Protect comunidade land. Mundcarial rite to be taken into consideration</li> </ul>
44	46	S.C.D'Souza	2 <sup>nd</sup> Floor, Diamond Chamber , 18 <sup>th</sup> June Road, Panjim	<ul style="list-style-type: none"> <li>• Protect forest &amp; its ecology Bio-diversity (rich in Flora &amp; Fauna);</li> <li>• Policy to stop inflow of migrants;</li> <li>• Village level participation through 73rd amendment act i.e. bottom up planning process ;</li> <li>• Proper land use plan is the most important for R.P.2021 which shall provide modest growth, proper infrastructure, and services for present and projected population.</li> </ul>
45	38	Dr. N.S. Dumo	Adarsh Housing Colony "f" Building , Ground Floor, Caranzalem Panaji.	<ul style="list-style-type: none"> <li>• Public participation in planning by involving local public &amp; as per 73rd &amp; 74th Amendment acts;</li> <li>• Housing to be planned for people who serve the city.</li> </ul>
46	189 & 188	Girish Chodankar	Panjim	<ul style="list-style-type: none"> <li>• Improvement of infrastructure;</li> <li>• Additional areas/land should be brought under settlement zone;</li> <li>• Development in forest &amp; agriculture Land should be permitted which is kept without cultivation for more that 10 years;</li> <li>• Be aware of Pseudo environmentalist;</li> <li>• No infringement to fundamental rights under the protect to save the environment;</li> <li>• Close proximity of already developed land to be included in settlement zone;</li> <li>• FAR can be reduced in certain cases</li> </ul>

47	161	Citizen of Nerul	Nerul	<ul style="list-style-type: none"> <li>Only flat area may be considered for settlement;</li> <li>The land kept follow more than 10 years to be converted and use for non agriculture purpose.</li> </ul>
48	192,84	New Age Society Gaunkars first	1140, Maina, socorro, Gaunkary of Serula, Post Porvorim, Bardez Goa (North) 403501	<ul style="list-style-type: none"> <li>Informed about 222 Private Comunidade Village Land where the State Land Landlordism is absent.</li> <li>The State Government cannot prepare any plan over this Private Comunidade Villages.</li> </ul>
49	173	Dempo Mining Corporation Pvt. Ltd.	Dempo House, Campal Panaji	<ul style="list-style-type: none"> <li>Informed about Mining concessions/Mining leases and provided the details of their location of Mining concession/Leases with the Survey No. and village to be shown as Mining areas.</li> <li>For their allied activities it is reported that they have acquired additional areas of Piligao, Bicholim village which shall be Zoned accordingly i.e. loading facilities, dedicated roads for Mining etc.</li> </ul>
50	171	V.S. Dempo & Co. Pvt. Ltd.	Dempo House, Campal Panaji	<ul style="list-style-type: none"> <li>Informed about mining concessions/Mining leases and provided the details of their location of mining concession/Leases with the village &amp; Survey No. to be shown as Mining areas both North &amp; South Goa.</li> <li>The Company has provided the details of additional areas acquired, which proposed to be used for beneficiation Plant/Loading facilities etc. The company also provided the detail list of the Survey Nos. acquired by them with the village Name &amp; Taluka.</li> </ul>
51	199	Village Panchayat	Sernabatim, Vanelim, Colva & Gandalim Salcete - Goa	<ul style="list-style-type: none"> <li>Seek permission of this Village Panchayat before any zoning is changed in their Jurisdiction.</li> </ul>
52	193	Goa Democratic Decentralisation Movement	C/o. Soter D'Souza, H.No. 984/4, Porvorim, Bardez Goa	<ul style="list-style-type: none"> <li>Decentralisation of Planning process to local bodies</li> </ul>
53	194	Shri .Joaquim Alemao	Min. of Urban Development Government of Goa	<ul style="list-style-type: none"> <li>Suggested for a Bypass on the eastern side of the town parallel to KRC line.</li> <li>Informed that the existing by Bye pass alignment is passing through Comba, Parricotto ward which is affecting about 58 houses. Shri Joaquim Alemao suggested that the Regional Plan should incorporate by pass route on the eastern side of</li> </ul>



				<p>Cuncolim Town which is not effecting any habitants which is also passing in close proximity of the Cuncolim Industrial Estate.</p> <ul style="list-style-type: none"> <li>No Map is enclosed.</li> </ul>
54	184	Mr. Raees Ahmed Khan	<p>United Realtech Pvt. Ltd. Matangee Builders Pvt. Ltd. M.L.S. Marketing Pvt. Ltd. Represented by Mr. Raees Ahmed Khan, Major, resident of B1-58, 4th floor, Alfran Plaza, M.G. Road, Panaji Goa.</p>	<ul style="list-style-type: none"> <li>Requested that Shri.Dean D'Cruz may not be continued as member of Task Force , since he is party to the case before the High Court in which their interest are involved &amp; they expect injustice to their interest if he is continued.</li> </ul>
55	180	Shri. Monahor Parrikar, Hon'ble Leader of Opposition	<p>Assembly Complex, Porvorim.</p>	<ul style="list-style-type: none"> <li>Regional Plan 2021 should be based on Regional Plan 2001;</li> <li>All ground realities/situation to be brought on record and also all those changes which has becomes de facto reality ;</li> <li>It is essential that the Task includes representatives from Panchayat, Municipality, Zilla Panchayat and Opposition from Legislative Assembly besides environmentalist;</li> <li>Land use position chart need to be published before any recommendation invited from public; Recommendation of village Panchayat/Municipalities must be taken into consideration.</li> <li>No Construction Zone of 50 m radius from the outer precincts of Heritage monuments should be maintained and should be shown in the Regional Plan 2021;</li> <li>Water bodies, Natural or man made throughout Goa must be shown in Regional Plan 2021;</li> <li>Rail over bridge or Road under Rail should be constructed for smooth traffic movement where ever their are manned level crossing;</li> <li>All lands earmarked for industrial expansion, industrial estates by GIDC or Government should be deleted from Regional Plan 2021 as GIDC is misusing the land;</li> <li>No settlement zone on hill slopes;</li> <li>Goa does not need vertical high rise growth, satellite townships, given its population;</li> </ul>

				<ul style="list-style-type: none"> <li>No new places for settlement;</li> <li>No land should be earmarked for SEZ for any where in Goa;</li> <li>ODP Plan to be reflected to Regional Plan 2021 so that PDA's cannot operate in isolation.</li> </ul>
56	198	Bailancho Saad - Goa	SF-4, Goa Hsg. Board Res-Cum-Commercial-Complex, Opp. Goa Hsg. Board Office, Journalist Colony, Porvorim, Bardez - Goa.	<ul style="list-style-type: none"> <li>Demanded to appoint women in the Task Force and insisted for guide planning.</li> <li>Stressed on the gender planning.</li> </ul>
57	200	Sea Reliance Marine , Services Pvt. Ltd.,	Airport Road, Chicalim - Goa 403711	<ul style="list-style-type: none"> <li>Shipbuilding maritime activity should be exempted form the CRZ regulation.</li> </ul>
58	201	Nisarga	A7, Kurtarkar Classic,Near Power House, Aquem Margao Goa 403601	<ul style="list-style-type: none"> <li>Certain guidelines to be framed to enable compulsory tree planting. All Ficus species tree to be protected.</li> <li>No Change of Zone from agriculture to settlement.</li> </ul>
59	12	Dr. Nandkumar Kamat	<a href="mailto:nandkamat@gmail.com">nandkamat@gmail.com</a>	<ul style="list-style-type: none"> <li>T.C.P. Act to be prepared taking into consideration of 73rd &amp; 74th Amendments</li> </ul>
60	149	Fr. Agnel College of Arts And Commerce		<ul style="list-style-type: none"> <li>Infrastructure to be build as per the character of Goa.,</li> <li>No selling of land for Real estate,</li> <li>No SEZ,</li> <li>Protect Khazan Lands,</li> <li>Control on mining</li> </ul>
61	166	Fr. Agnel College of Arts And Commerce		<ul style="list-style-type: none"> <li>Infrastructure to be build as per the character of Goa.,</li> <li>No selling of land for Real estate,</li> <li>No SEZ,</li> <li>Protect Khazan Lands,</li> <li>Control on mining</li> </ul>
62	42	Residents of Mercedes Village	Merces, Ilhas Goa	<ul style="list-style-type: none"> <li>Area between 1. Panjim Ribandar road and Panaji Old Goa bypass upto Chimbel.; Panaji Mercedes road to Panaji Agacaim (St. Cruz) by pass ; Panaji Agacaim (St. cruz) by pass to old Panaji St. Cruz Road.;Of Panajim St. Cruz road to Taleigao should not be allow to be use for settlement purpose unless it its required by Government for; public purpose.</li> <li>Morombi-O-Pequeno &amp; Morombi-O-Grande can be utilized</li> </ul>

				for settlement with the exception of paddy field; Roads need to be widen , infrastructure like social centre, football ground, Community Halls and bypass may be looked while making Regional Plan 2021.
63	141	Directorate of Sports & Youth Affairs	Govt. Of Goa Directorate of Sports & Youth Affairs, Campal, Panaji Goa.	<ul style="list-style-type: none"> <li>• Requested to demarcate the land for sports city at village Neura, Ilhas admeasuring an area 3.00 lakh sq.mts.</li> </ul>
64	24	Goa Su-Raj Party	383/A, Pirazona, Moira, Bardez - Goa. 403 514 India	<ul style="list-style-type: none"> <li>• Require to enhance such as public transport, garbage clearance ,</li> <li>• Effective and fool-proof disposal of hazardous and medical waste,</li> <li>• Enhancement of agriculture within the State.</li> <li>• Views of Panchayat and Municipalities to be taken into consideration.;</li> <li>• People participation at village level.</li> <li>• Earmarked open space at village, Town and city level.;</li> <li>• Infrastructure such as water, road, power should be give stress.;</li> <li>• Industrial growth must be carefully, weighed as against employment.;</li> <li>• Heavy Industries and Polluting Industries should not be allowed in Goa;</li> <li>• No SEZ's; Settlement/Commercial/Industrial should be decorated after making proper study and the same should not be allow to change.;</li> <li>• Task Force should look into the issue of farm houses.</li> </ul>

65	179	Shri. Matanhy Saldanha	Villa Saldanha Cansaulim Goa.	<ul style="list-style-type: none"> <li>• Regional Plan 2021 should be prepare on the base of Regional Plan 2001.;</li> <li>• Growth of the population envisaged while formatting the Regional Plan 2021 must be told to the public.;</li> <li>• Before allotting the land under new settlement zone the Task Force/ T.C.P. must know how much settlement land is available as per Regional Plan 2001 A.D.;</li> <li>• Land shall be kept vacant for future generation.</li> <li>• Regional Plan 2021 should not allow wild growth which will lead to negative impact on demography and also exert greater pressure on infrastructure.</li> <li>• Considering the natural growth of population of the State of Goa, no new settlement zone, No expansion of existing settlement areas in Loliem-Polem, Baga, Bambolim, Siridao, Tiracol, Querim, Saligao.;</li> <li>• Proposal &amp; recommendations of local authority shall be taken into consideration;</li> <li>• Ownership of land must be indicated on the Regional Plan 2021;</li> <li>• Historical importance sites to be marked on Regional Plan 2021;</li> <li>• 50 m radius "No construction zone" from heritage precincts of monuments.;</li> <li>• Green areas should be marked on Regional Plan 2021.;</li> <li>• Various water bodies natural and man made must be shown in Regional Plan 2021.;</li> <li>• No addition land to be earmarked for expansion of industrial estates , Industrial expansion, SEZ.;</li> <li>• No settlement zone in any forest land including social forest.;</li> <li>• No settlement zone on hill slopes.;</li> <li>• Forest links for free movement of animals to be maintained on hill slopes ;</li> <li>• Height of the building to be restricted G+3 in urban areas or below coconut tree village area G +2;</li> <li>• No change of zone to be allowed in proposed Regional Plan 2021.;</li> <li>• No SEZ for Goa.;</li> <li>• No SEZ for Goa.;</li> </ul>
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				<ul style="list-style-type: none"> <li>• No new mining area to be open.;</li> <li>• ODP to be the part of Regional Plan 2021 A.D.; Plan should be based on authentic and complete survey not on the random sampling;</li> <li>• No 6-lane express way.;</li> <li>• All ODP road shall be shown in the Regional Plan 2021 A.D.;</li> <li>• Land Lock Property should be provided with access.;</li> <li>• All defence area should be properly shown on the Regional Plan 2021.;</li> <li>• Barge building works are shown as cultivable area in 2001 Regional Plan.</li> <li>• CRZ zone must be shown.;</li> <li>• St. George Island to be shown as defence area.;</li> <li>• Minimum road width in village area to be 6.00 mts.;</li> <li>• Compound wall to be built after leaving 1/2 mts after road widening line for future road widening.</li> </ul>
66	12-A	Dr. Nandkumar Kamat		<ul style="list-style-type: none"> <li>• Stop constructive/ filling of fragile low lying khazan land,</li> <li>• Salt pans and removal of mangroves at Chimbhel check.;</li> <li>• Proper enforcement of law rules and regulation to avoid filling of low lying land, saltpan and unauthorized reclamation of land through coconut plantation. ;</li> <li>• Sea level rise scenario should be taken while permitting/ allowing any development along creek, coast etc. water drainage system also to be studied.;</li> <li>• Morphology of the creek should never be artificially change.;</li> <li>• Reclamations of low lying Khazan land to be stopped. Guidelines to avoid slope instability. Disaster prone area mapping to be done.</li> </ul>
	199	Centre for Panchayati Raj	House No. 984/4, porvorim, bardez, 403501, Goa	<ul style="list-style-type: none"> <li>•</li> </ul>
67	162	Milind A.S. Naik	Ansabhat Mapusa	<ul style="list-style-type: none"> <li>• Eco Tourism must be given high priority &amp; also horticulture may be improved by planning with respect to Agriculture Sector.</li> </ul>

68	134	Vikaram Sundarji	Office No.627, First floor, Our Lady of Health Complex, Mazalwado, Anjuna-Bardez Goa	<ul style="list-style-type: none"> <li>• Advocated for development oriented economy;</li> <li>• Change of zone should be implemented around all old settlement zones.</li> <li>• Expansion should be allowed on the existing plinth area within CRZ.</li> <li>• Eco-farm house tourism to be encouraged.</li> <li>• Beach tourism infrastructure to be upgraded to international level.</li> <li>• Illegal structure to be demolished all along the coast;</li> <li>• New housing project should be allowed away from CRZ area to take off some pressure from beach construction.</li> <li>• Requested for change in land use to settlement at Parcém village Pernem Taluka.</li> </ul>
69	177	Arsenio L.L. Furtado	P/A for Shri. Atchut G. Poy Raiturkar & Smt. Shubhada A. Poy Raiturkar, Govind Poy House, Rua Padree Miranda, Margao Goa	<ul style="list-style-type: none"> <li>• Regional Plan to be a policy document;</li> <li>• Land use proposal should be as per requirements and no further change of zone till entire plan period is over;</li> <li>• Requested for change of zone to settlement at Ella Village, Tiswadi, Taluka.</li> </ul>
70	182	Bicu N. Vaigankar	Acoi, Tivim, Bardez Goa	<ul style="list-style-type: none"> <li>• To control the land prices soaring only to few specific locations it is required to take the development to suburbs. It will ease the pressure on the main cities and Town.;</li> <li>• Requested for settlement zone at Tivim, Bardez Taluka.</li> </ul>
164	169	GOACAN (Goa Civic & Consumer Action Network)	South Goa: Post box 187, Margao Goa 403 601 North Goa: Post Box 78, Mapusa Goa 403 507	<ul style="list-style-type: none"> <li>• Suggested the Mapusa ODP to be kept for public either at TCP office Mapusa or Municipal Council office, Mapusa</li> </ul>
165	144	Terence Mazarelo President South Goa Public Interest Action Group	1 <sup>st</sup> Flr Benlix Bldg Opp Fatima Convent, Margao Goa	<ul style="list-style-type: none"> <li>• Requested for detail migration study.</li> <li>• TCP to be modified after taking 73<sup>rd</sup> &amp; 74<sup>th</sup> constitutional amendments.</li> <li>• All change in land use and conversion sanad should be put to end and a status paper.</li> <li>• No change in land use on slope more than 25%, Forest land, around water bodies, river, streams etc.,</li> <li>• Restoration of such area when such changes have been made.</li> </ul>

				<ul style="list-style-type: none"> <li>Maximum land allocation limit for commercial, industrial and education etc.</li> <li>Limit on sale of land to people residing out side Goa &amp; foreign national.</li> <li>Change of zone on the R.P. 2021 should not be allowed for minimum 5 years.</li> </ul>
166	104 & 61	Jairam I. Dialani Proprietor	Vijay Marine services, Rassaim, P.O. Loutlim, Salcete Goa 403 715	<ul style="list-style-type: none"> <li>Earmarking Industrial zone for Shipyard operating &amp; transporting of Mineral ore by way of barge service in the Regional Plan 2021.</li> </ul>
167	86	Sanil Costa Frias	Nil	Requested for change of zone to settlement at village Socorro, Bardez Sy. No. 217/7.
168	74	Bainginim Bachao Samiti	V.P. 16, Bainginim, Old Goa, Goa 403 402	<ul style="list-style-type: none"> <li>Not to allow ship building, hot mix plant along the river as these kinds of industries create noise pollution and water pollution. It is suggested to reserve the area as settlement.</li> </ul>
169	60	Joao N.E. Araujo	Near Canara Bank, Fatorda, Margao.	<ul style="list-style-type: none"> <li>Objection to the ODP of Margao</li> </ul>
170	66	President Public Grievances Forum of Sankhali Goa Shri. Vikrant Sadashiv Pangam	Behind Shri. Maruti Temple, Sankhali Goa 403 505.	<ul style="list-style-type: none"> <li>All approvals including repair required approval from TCP Dept. as the many illegal construction are going on the name of repair.</li> <li>Penalty for delay in providing information.</li> <li>Suggested for simplification of building approval/Time bound approval.</li> <li>Relaxation of side set base if width is less then 10 mts.</li> </ul>
171	63	Goa Democratic Decentralisation Movement	C/o Soter D'Souza, H.No. 984/4, Porvorim, Bardez Goa 403 501.	<ul style="list-style-type: none"> <li>There are 222 private comunidade where state landlordism is totally absent.</li> <li>Not to plan for comunidade land.</li> </ul>
172	20	Goa Heritage Action Group	29/30, Green Valley, ALTO PORVORIM , GOA 403 521	<ul style="list-style-type: none"> <li>Submitted model regulation for conservation of Heritage sites (both natural &amp; Non natural)</li> </ul>
173	2	The Goa Foundation	G-8, St Britto's Apartments, Feira Alta, Mapusa 403 507	<ul style="list-style-type: none"> <li>Stay all large project, SEZ's I.T. Park, housing colonies till the finalization of R.P.</li> <li>Requested Task Force to issue appropriate direction to T.C.P. for stopping approval.</li> </ul>
174	43	Mr. Shivram A. Dhuri	H.No. 362 E/9, Housing Board Colony, Ganeshpuri, Mapusa	<ul style="list-style-type: none"> <li>Requested for settlement zone at Tivim Bardez Taluka as the plot is plain, close to settlement area.</li> </ul>

			Goa.	<ul style="list-style-type: none"> <li>Sy. No. 317/20-A</li> </ul>
175	50	Murgaon Education Society	1 <sup>st</sup> Floor, Joshi Building, Vasco –Da _Gama, Goa 403 802	<ul style="list-style-type: none"> <li>Suggestion to delete ODP road passing through the campus of MES College.</li> </ul>
176	55	Gawada, Kunbi, Velip & Dhangar Federation	New Goa Store, Opp. Café Bhonsle, Panaji _Goa	<ul style="list-style-type: none"> <li>Tribal area interest to be taken care, No further mining leases in the area inhabited by tribal people.</li> </ul>
71	147	Mr. Kanwaljit singh Wadhwa	Dep. Nirrana Nest Building Pvt. Ltd., Near casino Motel, Porvorim –Bardez Goa.	<ul style="list-style-type: none"> <li>Requested for change increase in FAR i.e. S2 to S1 of zone at Anjuna –Bardez</li> </ul>
72	148	Mr. Kanwaljit singh Wadhwa	Dep. Nirrana Nest Building Pvt. Ltd., Near casino Motel, Porvorim –Bardez Goa	<ul style="list-style-type: none"> <li>Requested fror increase in FAR i.e. S2 to S1 at Anjuna , Bardez.</li> </ul>
73	151	Mr. Kanwaljit singh Wadhwa	Dep. Nirrana Nest Building Pvt. Ltd., Near casino Motel, Porvorim –Bardez Goa.	<ul style="list-style-type: none"> <li>Requested fror increase in FAR i.e. S2 to S1 at Anjuna , Bardez.</li> </ul>
74	30	Kanwaljeet Singh Wdhwa	Near Casino, Motel Porvorim Bardez Goa	<ul style="list-style-type: none"> <li>Requested for higher F.A.R. from settlement S2 to S1</li> </ul>
75	36	Kanwaljeet Singh Wdhwa	Near Casino, Motel Porvorim Bardez Goa	<ul style="list-style-type: none"> <li>Requested for higher F.A.R. from settlement S2 to S1</li> </ul>
76	35	Kanwaljeet Singh Wdhwa	Near Casino, Motel Porvorim Bardez Goa	<ul style="list-style-type: none"> <li>Requested for higher F.A.R. from settlement S2 to S1</li> </ul>
77	54	Esteven D'souza	B-120,Behind Omate Estate,Bainguim –Old Goa	<ul style="list-style-type: none"> <li>Requested for change of zone to Industrial</li> </ul>
78	56	Eknath V. Mandrekar	H.No.1994 Rudreshwar colony Arvalem – sanquelim Goa	<ul style="list-style-type: none"> <li>Requested change of zone to settlement in at Arvalem Bicholim</li> </ul>
79	58	Antonio Menezes ,	F-B-6, Sapana Gardens Chogum Road, Alto Porvorim, Bardez Goa.	<ul style="list-style-type: none"> <li>Requested change of zone to Industrial for ship building industry at Piligao – Bicholim</li> </ul>
80	19	Vencesslina Araujo	H.No.75,Ambora, Loutulim, Salcete 403718 Goa	<ul style="list-style-type: none"> <li>Not to change the zone of the property.</li> </ul>
81	21	Vinayak Mhaskar & Others,	Paryem, Sattari Goa	<ul style="list-style-type: none"> <li>Requested for change of zone to settlement zone, at Paryem sattari</li> </ul>
82	22	Sandeep Atmaram Kerkar	Honda Sattari -Goa	<ul style="list-style-type: none"> <li>Requested to change of zone to settlement, as there are existing house all around.</li> </ul>



83	26	Smt. Ratanlal A. Mandrekar	H.No.39, Tulshimala Paryem sattari Goa	<ul style="list-style-type: none"> <li>Requested Change of zone to settlement at Poryem, sattari Goa.</li> </ul>
84	27	Mrs. Vijaya Rohidas Morajkar,	Math Poryem Sattari	<ul style="list-style-type: none"> <li>Requested for change of zone to settlement at Poryem Village Sattari Taluka.</li> </ul>
85	28	Adv. Mukund R. Malik	Bhaili Pete,Bicholim Goa	<ul style="list-style-type: none"> <li>Requested for change of zone settlement at village Bordem, Bicholim Goa.</li> </ul>
86	29	Sandeep A. Kerkar ,	179/A, Narayan Nagar,Honda Sattari Goa, Ph.No.2370318	<ul style="list-style-type: none"> <li>Requested for change of zone to settlement at village Mayem – Bicholim Goa</li> </ul>
87	40	Sham A Shetye	Corgao, Pernem Goa	<ul style="list-style-type: none"> <li>Requested for change the zone from Orchard to settlement at ,village Talaulim Tiswadi Taluka</li> </ul>
88	43	Mr. Shivaram A. Dhuri	Hoiuse No 362 E/9 Housing Board colony, ganeshpuri – Mapusa Goa	<ul style="list-style-type: none"> <li>Change the zone from settlement at tivim Village of Bardez Taluka as there is existing settlement zone at 50 mts distance and their existing houses in the property.</li> </ul>
89	37	Shrimati Maria Elsa Lisbo Fernandes	H.No. 777 near Dr. Bhale Hospital Alto-Porvorim Bardez Goa	<ul style="list-style-type: none"> <li>Requested change of zone land to settlement at village Socorro, Bardez Taluka as part of the plot is already in settlement having same slops.</li> </ul>
90	39	Joseph Fernandes & Others	R/o H.No. 931 Church street, Alto Porvorim Bardez Goa.	<ul style="list-style-type: none"> <li>Requested for change of zone from A1 (Part) , S2 to S1 at Village Socorro of Bardez Taluka that is increase in FAR.</li> </ul>
91	45	Mr. Lino Monteiro	M 27,Housing Board Colony,Porvorim Bardez Goa.	<ul style="list-style-type: none"> <li>Requested for change of zone to settlement in at village Salvador de- Mundo Bardez as there are many existing houses nearby.</li> </ul>
92	44	Mr. K.G. Thomos	Plot. No. 3-F/3 Model of Residency,St Inez Panaji – Tiswadi Goa.	<ul style="list-style-type: none"> <li>Requested for change of zone to settlement at village Talaulim of Tiswadi Taluka</li> </ul>
93	51	Rama A Shetye	Corgao Pedne Goa	<ul style="list-style-type: none"> <li>Requested for change of zone to settlement atvillage Talaulim , Tiswadi Taluka</li> </ul>
94	54	Estevan D'souza	B-120 Behind Ornate Estate,Baiguinim – Old Goa 403402	<ul style="list-style-type: none"> <li>Requested not to change the zone.</li> </ul>
95	121	Shri. Satyesh a. Shiorodkar	Bhatwada Shiroda	<ul style="list-style-type: none"> <li>Requested to change the zone to settlement at Shiroda – Ponda the land is flat, no cultivation, no cutting and also filling is next.</li> </ul>
96	122	Village Panchayat Shiroda	Shiroda Ponda Goa	<ul style="list-style-type: none"> <li>Requested earmarked land for settlement Play ground , Bus stand , Garbage site, Public crematorium at Shiroda Ponda</li> </ul>

97	123	Residents of Compremondi ,	Assolda , P.O. Chandor – Goa.	<ul style="list-style-type: none"> <li>Requested to change from industrial to settlement at Assolda – Quepem as there are many houses all around, accessible internal road.</li> </ul>
98	125	Mrs. Thelna Pinto and others	Nil	<ul style="list-style-type: none"> <li>Requested for change of zone to settlement at Siolim – Bardez as the part of the property is already in settlement /Residential zone.</li> </ul>
99	127	Mrs Ana carvalho	R/o H.No. A-3, Essen Enclave Near Palloti Home Chicalim Goa	<ul style="list-style-type: none"> <li>Requested for change of zone from industrial EPZ to settlement to Quellossim Mormugao</li> </ul>
100	128	Jose Vaz	St. Anthony Building Air Port Road, Adrashnagar Chicalim - Goa	<ul style="list-style-type: none"> <li>Requested for change of zone from industrial EPZ to settlement a Quellossim Morlay, Murmugao.</li> </ul>
101	129	Mr. Khishor N. Kalangutkar	H.No.1135, vasant NagarSanquelim Goa	<ul style="list-style-type: none"> <li>Requested for change for Re-creation of settlement in the Sanquelim-Honda zoning Plan.</li> </ul>
102	130	Mr. Piedade alias Prety Fernandes	Residents of H.No.169,copremordi,Assolda Chandor Goa	<ul style="list-style-type: none"> <li>Requested of zone from industries to settlement at Assolda Quepem</li> </ul>
103	131	Mrs. Joanita Gonsalves	Resident of H.No.155 Vithala Mordi Quepem Goa	<ul style="list-style-type: none"> <li>Requested not to change of zone from Agriculture to settlement at xeldem village Quepem Taluka as same the lawful Tenant.</li> </ul>
104	135	Goan Heritage Leisure House Private Limited	Office shop No.627 First Floor our lady of Health complex Mazalwaddo, Anjuna Bardez Goa	<ul style="list-style-type: none"> <li>Requested for change of zone to settlement at Mandrem village Pernem Taluka as the property is accessibility by Tar road and there are existing houses in the plot.</li> </ul>
105	140	Shambhaji Vishnu Korapurkar	H.No. 1576/2, V.P. Penha –de-france, Porvorim Bardez	<ul style="list-style-type: none"> <li>Request for settlement zone at Carapur Village Bicholim Taluka</li> </ul>
106	143	Prakash S.Arlekar	H.No. 1665, Siddi Krupa Nr. Hotel “The Majestic” Alto Betim, Porvorim- Goa	<ul style="list-style-type: none"> <li>Requested for change of zone at village of Penha –de- france , Bardez.</li> </ul>
107	145	Smt. Liberata Joaquina, Fernandes	Near Fish Market, Britona Penha-de-france, Bardez Goa	<ul style="list-style-type: none"> <li>Requested for change of zone to settlement (part) at Salvador-do-mundo village Bardez Taluka.</li> </ul>
108	146	Ibrahimkhan Ismail Khan	Nanus, valpoi, Sattari Goa	<ul style="list-style-type: none"> <li>Requested for change of zone to settlement at village Nanus, Sattari Goa.</li> </ul>
109	156	Gopalkrishna Gaonkar	Opa Khandepar Ponda Goa	<ul style="list-style-type: none"> <li>Requested for change of zone from cultivated to settlement at Curti Ponda as close to the by pass, plain land , no</li> </ul>

				cultivation.
110	157	Deepak G. Gaonkar	Opa Khandepar, Ponda Goa	<ul style="list-style-type: none"> <li>Requested for change of zone to settlement at Ponda as the land is rocky and plain, land is not suitable for agriculture.</li> </ul>
111	158	Pandurang V. Gaonkar	Parijat, Near LIC Building, Khadabandh, Ponda Goa	<ul style="list-style-type: none"> <li>Requested for change to settlement at Khandepar-Ponda as the land is rocky and plain not suitable for cultivation.</li> </ul>
112	205, 109, 187, 139, 116, 71, 70	Shipyard Association of Goa	Damodar Bldg. Above HDFC Bank, swatantra Path.	<ul style="list-style-type: none"> <li>Requested to declair all barge, repair ship building industries as Industrial zone at Lotali, Chiicalim, Sancoale, Quelossim, Bandora, Borim, Shiroda, Madkai, xelvona-Quepem, Ella, Pilligao &amp; Loutolim</li> </ul>
113	206 , 85	Tyronne Souza,	Porbavaddo, Calangute	<ul style="list-style-type: none"> <li>Request made of change of zone from Agriculture cultivate to settlement at Calanguteo as the area is under coconut garden, there are existing houses, accessibl by 10.00 mts. Road, covered with electricity &amp; water supply, not desigrated as fruit, not a hilly land with no slooes, beyond 500 mts of height</li> </ul>
114	207	Mr. John Martin D'Costa,	A 320, 3rd Floor, Reliance Trade Center, Varde Valauliker Road, Margao	<ul style="list-style-type: none"> <li>Requested to show the zone as settlement as the procedure to change of zone is already completed by TCP Board.</li> </ul>
115	168	Shripad S. Arlekar	H.No.510, Malim, P.O. Betim, Bardez Goa	<ul style="list-style-type: none"> <li>Requested for change of zone to settlement at village Penha –de-France, Bardez</li> </ul>
116	172	Mr. Raju Chavan	C/o. Shri Raymond Pereira, R/o H.No. 940, Rajbag Tasir, Canacona – Goa.	<ul style="list-style-type: none"> <li>Requested for change of zone to settlement at village Poinguinim, Canacona Goa.</li> </ul>
117	175	Shri. Yeshwant Mahadev Mhalshkar,	Khotodem, Sattari Goa	<ul style="list-style-type: none"> <li>Request for settlement zone of property at village cotorem, Sattari Taluka.</li> </ul>
118	176	Sanjay A.P. Raiturkar	Abade Faria Road , H.No. 152, Margao Goa	<ul style="list-style-type: none"> <li>Requested for change of zone to settlement and also suggested that Jua village can be developed for hinterland Tourism.</li> </ul>
119	181	Delta Engineers Designers, Fabricators & Electors of	office:- 15 Kossambe Bldg. Vasco da Gama	<ul style="list-style-type: none"> <li>Requested the maintain the Zoning as it is.</li> </ul>

		Mechanical, Marine & Structural Work		
120	183	Ajit R. Katak Advocate High court,	Off. 1st Floor, Vikas Bldg. Near Pharmacy College, Panaji Goa.	<ul style="list-style-type: none"> <li>Requested for settlement zone at village Borim Ponda Goa ,so as the hinter lands in the suburbs gets development.;</li> </ul>
121	196, 104	Jairam I. Dialani,	Vijai Marine Services Rassaim P.O. Loutlim, Salcete	<ul style="list-style-type: none"> <li>Earmarking the areas as Industrial Zone for operation of Shipyard serving the Barge Industry at village Loutulim, Salcete Goa.</li> </ul>
122	162	Jaidev Zengado Gaonkar	H.No. 2200, Rudreshwar Colony, Arvalem, Sanquelim	<ul style="list-style-type: none"> <li>Requested for change of zone to settlement at village Aravlem, Bicholim Goa.</li> </ul>
123	90	Sanil Costa Frias	H.No. 368, Carrem, Socorro, Bardez Goa	<ul style="list-style-type: none"> <li>Requested for change of zone to settlement at village Socorro, Bardez Goa.</li> </ul>
124	67	Teofilo D' Souza Mathias Villa,	Near Bambolim Cross, Bombolim Goa	<ul style="list-style-type: none"> <li>Requested for change to Industrial zone at village Ella Taluka Tiswadi</li> </ul>
125	79	Dr. Vasudeo Rajendra Deshprabhu,	Ramvilas Palace, Nanerwada, Pernem Goa	<ul style="list-style-type: none"> <li>Requested for change of zone for Hotel at village Arambol, Chopdem, Poroscodem, Kerim, Mandrem, Korgao, for Petrol pump along the NH at Tamboxem, for Higher education campus at Pernem, for SSI unit at Casrem village, settlement at Torxem and Warkhand, Pernem Taluka</li> </ul>
126	80	Dr. Pramod P. Sawant	Kothambi Pale Goa.	<ul style="list-style-type: none"> <li>Requested for zone Change of zone to settlement at Bhatwadi, Village Mayem, Bicholim Taluka</li> </ul>
127	81	Dr. Pramod P. Sawant	Kothambi Pale Goa.	<ul style="list-style-type: none"> <li>Change of zone to settlement in property at village Carapur in Bicholim Taluka</li> </ul>
128	4	Francis J. Lobo	Lobos cottage, H.No. 580/3, Goddar- Aldona Bardez Goa	<ul style="list-style-type: none"> <li>Request for change of zone to settlement at village Aldona.</li> </ul>
129	91	Aldrin Soares	H.No. 432, P.O. Porvorim, Ararim, Sucoro.	<ul style="list-style-type: none"> <li>Request for change of zone to settlement at Uceassaim, Bardez.</li> </ul>
130	78	Subhash Vithal Dessai	Sharada Nagar, Bhatwadi, Mayem, Bicholim	<ul style="list-style-type: none"> <li>Requested for change of zone to settlement at Mayem, Bicholim. The plot is a sub-divided plot.</li> </ul>
131	75	Sebastiao Lobo	Melvin Lobo, Marta Nirmala D'Cruz, Ranoi Aldona Bardez Goa.	<ul style="list-style-type: none"> <li>Requested change to settlement at Aldona Bardez as the property is surrounded by many houses There is existing structure in the plot and the land is Barren land.</li> </ul>
132	83	Uday D. Palyekar	Siolim Bardez Goa	<ul style="list-style-type: none"> <li>Requested for settlement zone for the part which is shown</li> </ul>

				as orchard.
133	9	Rudolph O D'Souza	H.No.351 (A) Marra Pilerne Bardez Goa	<ul style="list-style-type: none"> <li>Requested for change of zone to settlement at Marra Pilerne Bardez fo self housing.</li> </ul>
134	16	Sanjiv Khemraj Gaonkar	Vivek Khemraj Gaonkar Chopde Pedne Goa.	<ul style="list-style-type: none"> <li>Requested for change of zone at chopde village Pernem Taluka for self housing.</li> </ul>
135	82	Mrs. Maria Lumen Aguir Cuitinho & Tulia A. Olivera	Pond –Margao Road Ponda Goa	<ul style="list-style-type: none"> <li>Requested for change of zone to settlement at Quela, Ponda Goa.</li> </ul>
136	92	Saiprasad Naik & Associates	Consulting civil Engineer, Gr.Floor, Ravalnath Sadan, Bhiturli Peth, Bicholim	<ul style="list-style-type: none"> <li>Request to show the zone as settlement to at Bordem, Bicholim as the area is already provisionally approved as settlement by TCP Board.</li> </ul>
137	17	Vaman J. Pandit & Others	Teen Mad , Maina , Siolim Bardez Goa.	<ul style="list-style-type: none"> <li>Requested for change of to settlement at village Maina Siolim, Bardez as there are 20-25 houses in the said property , part of the area is already change of settlement by TCP Board.</li> </ul>
138	87	Sanil Costa Frias	H.No. 368, Carrem, Socorro, Bardez Goa.	<ul style="list-style-type: none"> <li>Requested for change of zone to settlement at Socorro Bardez Goa.</li> </ul>
139	86	Sanil Costa Frias	H.No. 368, Carrem, Socorro, Bardez Goa.	<ul style="list-style-type: none"> <li>Requested for change of zone to settlement at Socorro Bardez Goa.</li> </ul>
140	89	Sanil Costa Frias	H.No. 368, Carrem, Socorro, Bardez Goa	<ul style="list-style-type: none"> <li>Requested for change of zone to settlement at Socorro Bardez Goa.</li> </ul>
141	88	Sanil Costa Frias	H.No. 368, Carrem, Socorro, Bardez Goa	<ul style="list-style-type: none"> <li>Requested for change of zone to settlement at Socorro Bardez Goa.</li> </ul>
143	132	Mr. Victor Gesler D'Souza Eaipsy	Calangute Bardez Goa	<ul style="list-style-type: none"> <li>Requested for change of zone to settlement as land is barren, without gradient, many residential houses within 100 mts radius</li> </ul>
144	110	Sudhakar alias Subhash Nilkanth Shet Shirodkar	P.W.D. Govt. Qtrs.GPA 1/3 Alto Porvorim, Bardez Goa	<ul style="list-style-type: none"> <li>Request for change to settlement zone as he has only plot for residential house.</li> </ul>
145	102	Meena P. Rajani	Seza Ghor, 2nd Floor , Entrance 3, Patto, Plaza , Panaji - Goa	<ul style="list-style-type: none"> <li>Requested for settlement zone.</li> </ul>
146	105	Narayan Saulekar	Seulem Pilerna, P.O. Reis Magos, Bardez - Goa	<ul style="list-style-type: none"> <li>Requested for settlement zone for area and measuring 300 sq. m at Pilerne.</li> </ul>

147	112	Nirmala F. Sulakar	H.No.760/1, Near Chubby Cheeks Play School, Alto, Porvorim	<ul style="list-style-type: none"> <li>Requested for residential S2 zone for area of 300 sq.m for construction of residential house.</li> </ul>
148	106	Shivanand N. Fal dessai	Bhi Kar wada, Nagarcem, Canacona Goa	<ul style="list-style-type: none"> <li>Requested for change to settlement zone for area of 306 sq. m.</li> </ul>
149	107	Silrano Estibei	H.No.174/2, Copremondi Assolda, Chandor, Saluli Goa	<ul style="list-style-type: none"> <li>Requested for Change of zone from orchard to settlement as there are many existing houses</li> </ul>
150	108	Priya Engineering Works	Do Rosario Chambers, First Floor, above Pastry Palace, Vasco – Da-Gama Goa	<ul style="list-style-type: none"> <li>Requested for industrial zone at Lotulim village barrage repaid activity running since 1989.</li> </ul>
151	117	Franky Monteiro	H.No. 501, Devote, Loutolim – Salcete Goa	<ul style="list-style-type: none"> <li>Requested for settlement zone at Camorlim village as the surrounding area to settlement.</li> </ul>
152	118	Sadanand S. Kerkar	H.No.506, Aradi, Porvorim Bardez Goa	<ul style="list-style-type: none"> <li>Requested for higher FAR that is change from S2 to S1</li> </ul>
153	115	United Real Tech Pvt. Ltd & Others	4 <sup>th</sup> Floor,Alfra Plaza, M.g. Road Panaji Goa	<ul style="list-style-type: none"> <li>Requested for change to settlement zone as It was settlement as per 2011 R.P. and the construction has already started.</li> </ul>
154	95	M/s Bonjour Investment Co. Pvt. Ltd.,	3, Citi Business Centre, Coelha, Pereira Bldg, Dr. D.V.Road, Panaji Goa	<ul style="list-style-type: none"> <li>Request for change of zone to settlement for Hotels &amp; Restaurant. Cola, Canacona</li> </ul>
155	93	Moreswar N.P. Navelkar	Sync Court Bldg., St. Inez Panaji -Goa	<ul style="list-style-type: none"> <li>Requested for change of zone to settlement zone in Baigunium village , Tiswadi Taluka</li> </ul>
156	94	Moreswar N.P. Navelkar	Sync Court Bldg., St. Inez Panaji -Goa	<ul style="list-style-type: none"> <li>Requested for change of zone to settlement zone at Baigunium, Tiswadi</li> </ul>
157	101	Jeris Pereira	Vaddy Siolim, Bardez Goa	<ul style="list-style-type: none"> <li>Requested for change of zone to settlement at Quirem, Siolim Bardez.</li> </ul>
158	100	Jeris Pereira	Vaddy Siolim, Bardez Goa	<ul style="list-style-type: none"> <li>Requested for change of zone to settlement at Quirem, Siolim Bardez.</li> </ul>
159	99	Prabhakar V. Bhandri	305 Govind Bldg, Panaji – Goa	<ul style="list-style-type: none"> <li>Clear all small proposal pending the finalization of R.P. 2021 and also requested for change of Zone to settlement</li> </ul>
160	96	Navelkar Landmarks	Ganesh Prasad Building, Dr. A.B. Road, Panaji Goa	<ul style="list-style-type: none"> <li>Requested for change of zone to settlement at Salvador-do-Mundo Bardez</li> </ul>
161	120	Pratapsing alias Balasaheb Abasaheb Rane	Waid Waddo, Vadawal , Latambarcem, Bicholim Goa	<ul style="list-style-type: none"> <li>Retain the zone as agriculture.</li> </ul>

162	23	Rohidas H. Morajkar	Kolamwado Karapur, Bicholim Goa	<ul style="list-style-type: none"> <li>Requested for Change of zone to settlement zone at Harvelm – Bicholim.</li> </ul>
164	178	Chowgule And Company Pvt. Ltd.,	Shipbuilding Division, Near Borim Bridge, Lotulim 403 718 Goa	<ul style="list-style-type: none"> <li>Requested for Industrial Zone admeasuring to 375 Sq. mtrs. Of Loutulim Village salcete Taluka.</li> </ul>
165	178/2	Chowgule And Company Pvt. Ltd.,	Shipbuilding Division, Near Borim Bridge, Lotulim 403 718 Goa	<ul style="list-style-type: none"> <li>Requested for change of Zone to Industrial as the ship/building activities is going on since 1968.</li> </ul>
166	178/3	Chowgule And Company Pvt. Ltd.,	Shipbuilding Division, Near Borim Bridge, Lotulim 403 718 Goa	<ul style="list-style-type: none"> <li>Requested for Industrial Zone admeasuring to 950 Sq.Mtrs. Village Loutulim Salcete Taluka</li> </ul>
167	178/4	Chowgule And Company Pvt. Ltd.,	Shipbuilding Division, Near Borim Bridge, Lotulim 403 718 Goa	<ul style="list-style-type: none"> <li>Requested for Industrial Zone at Loutulim Village Salcete Taluka for ship building industry.</li> </ul>
168	178/5 A	Chowgule And Company Pvt. Ltd.,	Shipbuilding Division, Near Borim Bridge, Lotulim 403 718 Goa	<ul style="list-style-type: none"> <li>Requested for change of Zone to Industrial as the ship/building activitie is going on since 1968.</li> </ul>
169	178/5	Chowgule And Company Pvt. Ltd.,	Shipbuilding Division, Near Borim Bridge, Lotulim 403 718 Goa	<ul style="list-style-type: none"> <li>Requested for change of Zone to Industrial as the ship/building activitie is going on since 1968.</li> </ul>
170	178/6	Chowgule And Company Pvt. Ltd.,	Shipbuilding Division, Near Borim Bridge, Lotulim 403 718 Goa	<ul style="list-style-type: none"> <li>Requested for change of Zone to Industrial as the ship/building activitie is going on since 1968.</li> </ul>
171	178/7	Chowgule And Company Pvt. Ltd.,	Shipbuilding Division, Near Borim Bridge, Lotulim 403 718 Goa	<ul style="list-style-type: none"> <li>Requested for change of Zone to Industrial as the ship/building activitie is going on since 1968.</li> </ul>
172	178/8	Chowgule And Company Pvt. Ltd.,	Shipbuilding Division, Near Borim Bridge, Lotulim 403 718 Goa	<ul style="list-style-type: none"> <li>Requested for change of Zone to Industrial as the ship/building activitie is going on since 1968.</li> </ul>
173	178/9	Chowgule And Company Pvt. Ltd.,	Shipbuilding Division, Near Borim Bridge, Lotulim 403 718 Goa	<ul style="list-style-type: none"> <li>Requested for change of Zone to Industrial as the ship/building activitie is going on since 1968.</li> </ul>
174	185	Comunidade De Tivim	Comunidade Office , Tivim, Bardez Goa	<ul style="list-style-type: none"> <li>Requested for settlement at Tivim Village, Bardez Taluka as settlement Zone because it will help to release the housing pressure at Mapusa and Bicholim</li> </ul>

175	178/10	Chowgule And Company Pvt. Ltd.,	Shipbuilding Division, Near Borim Bridge, Lotulim 403 718 Goa	<ul style="list-style-type: none"> <li>Requested for Industrial zone at Loutulim Village, Salcete Taluka as the ship building activity is going on since 1968.</li> </ul>
176	178/11	Chowgule And Company Pvt. Ltd.,	Shipbuilding Division, Near Borim Bridge, Lotulim 403 718 Goa	<ul style="list-style-type: none"> <li>Requested for change of zone from Agricultural to Industrial at Lotulim, salcete</li> </ul>
177	197	Tourist India Private Limited	Shree Katyayani Chambers, 1st floor, Apna Bazar , Complex, Behind , Collectorate, Margao Goa, 403601	<ul style="list-style-type: none"> <li>Requested to the change of zone from Orchard to settlement.</li> </ul>
178	14	Praka Engineering	No.3, Pereira Chambers, Vasco-da-Gama 403802 Goa	<ul style="list-style-type: none"> <li>Required to democate industrial zone as the said activity is carried out since 1982.</li> </ul>
179	98	Comunidade of Sirsaim	Sirsaim,Bardez Goa	<ul style="list-style-type: none"> <li>Request to change for settlement purpose as it is a barrand land without any slope and trees.</li> </ul>
180	133	Peter D'silva	C/o. P.P. Purushan, H.No. 351/C Taleigao Goa	<ul style="list-style-type: none"> <li></li> </ul>
181	195	Mrs. Deepa Vengurlekar	Block E, Flat No.3 Satya Adhar Society, Near Sporting Complex, Pedem, Bardez Goa. Ph. 9823461898	<ul style="list-style-type: none"> <li></li> </ul>
182	11	Goa Mineral Ore Exporters Association	Post Box 113, Vaglo Building, Panajim 403001 Goa	<ul style="list-style-type: none"> <li></li> </ul>

183	169	GOACAN (Goa Civic & Consumer Action Network)	South Goa: Post box 187, Margao Goa 403 601 North Goa: Post Box 78, Mapusa Goa 403 507	<ul style="list-style-type: none"> <li>Suggested the Mapusa ODP to be kept for public either at TCP office Mapusa or Municipal Council office , Mapusa</li> </ul>
184	144	Terence Mazarelo President South Goa Public Interest Action Group	1 <sup>st</sup> Flr Benlix Bldg Opp Fatima Convent, Margao Goa	<ul style="list-style-type: none"> <li>Requested for detail migration study.</li> <li>TCP to be modified after taking 73<sup>rd</sup> &amp; 74<sup>th</sup> constitutional amendments.</li> <li>All change in land use and conversion sanad should be put to end and a status paper.</li> <li>No change in land use on slope more then 25%, Forest land, around water bodies, river, streams etc.,</li> </ul>



				<ul style="list-style-type: none"> <li>• Restoration of such area when such changes have been made.</li> <li>• Maximum land allocation limit for commercial, industrial and education etc.</li> <li>• Limit on sale of land to people residing out side Goa &amp; foreign national.</li> <li>• Change of zone on the R.P. 2021 should not be allowed for minimum 5 years.</li> </ul>
185	104 & 61	Jairam I. Dialani Proprietor	Vijay Marine services, Rassaim, P.O. Loutlim, Salcete Goa 403 715	<ul style="list-style-type: none"> <li>• Earmarking Industrial zone for Shipyard operating &amp; transporting of Mineral ore by way of barge service in the Regional Plan 2021.</li> </ul>
186	86	Sanil Costa Frias	Nil	Requested for change of zone to settlement at village Socorro, Bardez Sy. No. 217/7.
187	74	Bainginim Bachao Samiti	V.P. 16, Bainginim, Old Goa, Goa 403 402	<ul style="list-style-type: none"> <li>• Not to allow ship building, hot mix plant along the river as these kinds of industries create noise pollution and water pollution. It is suggested to reserve the area as settlement.</li> </ul>
188	60	Joao N.E. Araujo	Near Canara Bank, Fatorda, Margao.	<ul style="list-style-type: none"> <li>• Objection to the ODP of Margao</li> </ul>
189	66	President Public Grievances Forum of Sankhali Goa Shri. Vikrant Sadashiv Pangam	Behind Shri. Maruti Temple, Sankhali Goa 403 505.	<ul style="list-style-type: none"> <li>• All approvals including repair required approval from TCP Dept. as the many illegal construction are going on the name of repair.</li> <li>• Penalty for delay in providing information.</li> <li>• Suggested for simplification of building approval/Time bound approval.</li> <li>• Relaxation of side set base if width is less then 10 mts.</li> </ul>
190	63	Goa Democratic Decentralisation Movement	C/o Soter D'Souza, H.No. 984/4, Porvorim, Bardez Goa 403 501.	<ul style="list-style-type: none"> <li>• There are 222 private comunidade where state landlordism is totally absent.</li> <li>• Not to plan for comunidade land.</li> </ul>
191	20	Goa Heritage Action Group	29/30, Green Valley, ALTO PORVORIM , GOA 403 521	<ul style="list-style-type: none"> <li>• Submitted model regulation for conservation of Heritage sites (both natural &amp; Non natural)</li> </ul>
192	2	The Goa Foundation	G-8, St Britto's Apartments, Feira Alta, Mapusa 403 507	<ul style="list-style-type: none"> <li>• Stay all large project, SEZ's I.T. Park, housing colonies till the finalization of R.P.</li> <li>• Requested Task Force to issue appropriate direction to T.C.P. for stopping approval.</li> </ul>

193	43	Mr. Shivram A. Dhuri	H.No. 362 E/9, Housing Board Colony, Ganeshpuri, Mapusa Goa.	<ul style="list-style-type: none"> <li>• Requested for settlement zone at Tivim Bardez Taluka as the plot is plain, close to settlement area.</li> <li>• Sy. No. 317/20-A</li> </ul>
194	50	Murgaon Education Society	1 <sup>st</sup> Floor, Joshi Building, Vasco –Da _Gama, Goa 403 802	<ul style="list-style-type: none"> <li>• Suggestion to delete ODP road passing through the campus of MES College.</li> </ul>
195	55	Gawada, Kunbi, Velip & Dhangar Federation	New Goa Store, Opp. Café Bhonsle, Panaji _Goa	<ul style="list-style-type: none"> <li>• Tribal area interest to be taken care, No further mining leases in the area inhabited by tribal people.</li> </ul>

## APPENDIX V

Notification re: Trial Run for Six Villages and 3 Municipal Councils

No.29/8/TCP/TaskForce/07-08/1334  
Dept. of Town & Country  
Planning,  
Panaji-Goa.

Dated : 31/3/2008.

### **NOTIFICATION**

On recommendation of the Task Force for Regional Plan 2021, the Government of Goa is pleased to constitute the state Level Co-ordination Team (SLCT) for coordinating the preparation of draft village/Town Plans on Pilot basis in identified Village Panchayat areas and towns. The SLCT consists of the following

- |   |             |
|---|-------------|
| 1) Commissioner & Secretary (TP)                                    | .. Chairman |
| 2) Senior Town Planner /Nodal Officer<br>(Task Force)               | .. Member   |
| 3) Director of Panchayats   | .. Member   |
| 4) Director of Municipal Administration                             | .. Member   |
| 5) Representative of Centre for Panchayati Raj,<br>Peaceful Society | .. Member   |
| 6) Nodal Officer (Admn.) Task Force                                 | .. Convenor |

#### **Terms of Reference for State Level Co-ordination Team:**

- (1) Implement Pilot projects in identified Villages/Town of North and South Goa Districts to formulate a frame work for Village/Town development plans.
- (2) Co-ordinate with all the Elected Representatives of the People as well as concerned State Departments and their functionaries at the district/taluka/village levels, Non Government Organisations, Community Based Organisations, Voluntary Organisations, Educational Institutions including University, Professional Colleges and Sector wise experts, GIRDA, Government owned Corporations and Institutions and other interest groups,

etc. to facilitate participatory processes of decentralized planning for micro-level planning and development.

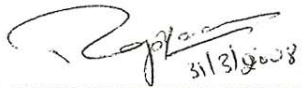
- (3) The SLCT shall meet regularly at least once in 15 days at any convenient place and time as may be decided by the Chairman.
- (4) SLCT can call for any information on the Pilot Studies as and when need arise.
- (5) SLCT shall finalise the contents and members of the other teams/Committees at District/Taluka/local body levels in consultation with Peaceful Society.
- (6) The pilot project are limited to proposed six Village Panchayat areas in North Goa such as Terekhol-Kerim, Savoi-Verem, Mouxim-Sattari in North Goa and Banaulim, Agonda, Chandor, in South Goa District. The Towns Selected are Bicholim, Ponda and Margao.
- (7) The Pilot studies will be done by the Kundai based NGO called "Peaceful Society", will carry out the exercise at the grass root level and also develop a data base & formats for data collection
- (8) In order to meet the expenses an amount of Rs.10.00 lakhs has been earmarked for this purpose and same shall be placed at the disposal of the "Peaceful Society" to meet the expenses in five equal instalments i.e. Rs.2.00 Lakh at a time . Each instalment will be released after submitting the bills and vouchers and utilization certificate of previously released funds of at least upto 90%.
- (9) The "Peaceful Society" shall submit bills against the funds utilized, duly certified by them & counter signed by the Convener.
- (10) The expenses shall be debited to the account of the Town & Country Planning Department, dealing with the Task Force Expenses.
- (11) The SLCT shall submit periodical progress report to the Government.

- (12) The term of the State Level Coordination Team shall be for a period of six months.
- (13) SLCT or any of its members may tour the study areas and or participate in the meetings of any other Committees or Gram Sabhas, as may be decided by them.

Place:- panaji

Dated:- 31/3/2008

**By Order and in the name of  
The Governor of Goa**

  
( **RAAJIV YADUVANSHI** )  
**SECRETARY (TCP)**

Copy to :

- 1) Government Printing Press, Panaji.
- ✓ 2) Chief Town Planner, Dempo Tower, 2<sup>nd</sup> floor, Panaji.
- 3) Director of Accounts, Panaji.
- 4) Director of Panchayats, Junta House, Panaji.
- 5) Director of Municipal Administration, Panaji.
- 6) To all members of the SLCT.

## APPENDIX VI      STUDY OF DENSITIES

The comparative densities as emerging in the districts of Goa are explained in

Table 1 below:-

TABLE I.:      COMPARATIVE EMERGING DENSITIES – ALL INDIA, GOA AND ITS DISTRICTS – 2021

No.	TERRITORY AND AREA (Sq.Kms.)	Population (in lakhs)				Density (Persons per Sq.km.)			
		1991	2001	2011	2021	1991	2001	2011	2021
1	INDIA (33 lakh. approx)	84,000 (approx)	103,000 (approx)	117,000	134,700	250	303	318	405
2.	GOA (3702)	11.70	13.48	16.10	19.78	316	366	433	540
3	NORTH GOA DISTRICT (1710)	6.65	7.59	9.09	11.25	390	443	532	652
4	SOUTH GOA DISTRICT (1858)	5.05	5.89	7.01	8.53	272	317	379	459

Note:

- Rivers separating the Districts are excluded in area calculations.
- For 1991 and 2001 figures are actual from Census of India unless otherwise stated in chart.
- For 2011 and 2021 figures are estimated.

2. From the above chart it would be seen that

- (i) the average densities in Goa are higher than the average densities at the all India level
- (ii) For North Goa district, the average densities are higher than South Goa district due to area under forests in South Goa district being more than that of in North Goa Districts.
- (iii) At approx 4.5 persons per household, the emerging average size of households in 2021 is 1.45 households per hectare in North Goa District and 1.02 households per hectare in South Goa District- Refer table 2 below.

TABLE 2: AVERAGE SIZE OF HOUSEHOLDS – GOA AND ITS DISTRICTS – 2021

S.No.	Territory	Density (persons per sq. km.)				Average size of household per hectare*			
		1991	2001	2011	2021	1991	2001	2011	2021
1	Goa	316	366	433	540	0.70	0.81	0.96	1.20
2.	North Goa District	390	443	532	652	0.86	0.96	1.20	1.45
3	South Goa District	272	317	379	459	0.60	0.70	0.86	1.02

\* At 4.5 persons per household

3. The table 3 below indicates gross densities for the talukas of Goa.

TABLE 3. EMERGING DENSITIES IN THE TALUKAS OF GOA – 2021

S.No.	TALUKAS AND AREA (SQ.KMS)	Population (in lakhs)				Density (persons per sq.km.)				Remarks
		1991	2001	2011	2021	1991	2001	2011	2021	
TALUKAS OF NORTH GOA DISTRICT										
1.	TISWADI (211)	1.47	1.60	2.04	2.76	696	758	967	1308	Coastal
2.	BARDEZ (264)	1.89	2.28	2.78	3.43	716	864	1053	1299	Coastal
3.	PERNEM (252)	0.67	0.72	0.78	0.86	266	286	310	341	Midland (partly along coast)
4.	BICHOLIM (239)	0.85	0.91	0.99	1.08	356	381	414	452	Midland
5.	PONDA (293)	1.28	1.49	1.78	2.18	436	509	608	747	Midland
6.	SATTARI (453)	0.50	0.59	0.71	0.94	110	130	157	208	Ghats
TALUKAS OF SOUTH GOA DISTRICT										
1	SALCETE (293)	2.20	2.62	3.22	4.08	751	894	1,119	1392	Coastal
2.	MORMUGAO (108)	1.21	1.45	1.74	2.09	1120	1343	1611	1935	Coastal
3.	Quepem (318)	0.65	0.74	0.86	1.01	204	233	380	429	Midlands (partly along coast)
4.	SANGUEM (787)	0.59	0.64	0.71	0.80	74	81	90	102	Ghats
5.	CANACONA (351)	0.41	0.44	0.48	0.54	117	125	137	153	Ghats (partly along coast)



4. The table below indicates the urban and rural gross densities for the talukas of Goa.

TABLE IV: EMERGING MUNICIPAL AND PANCHAYAT DENSITIES IN THE TALUKAS OF  
GOA -2021

S.No.	TALUKAS	AREA (Sq.kms) u-urban P- Panchayat	Population (in lakhs)				Density (persons per sq.kms.)				Remarks
			1991	2001	2011	2021	1991	2001	2011	2021	
TALUKAS OF NORTH GOA DISTRICT											
1.	Tiswadi	U 22.63	0.43	0.59	0.80	1.10	1900	2607	3535	4860	Coastal with Corporation of Panaji
		V 188.37	1.04	1.01	1.24	1.66	552	536	658	881	
2.,	Bardez	U 11.32	0.32	0.40	0.52	0.66	283	353	459	583	Coastal (Rural Density higher than Urban)
		V 252.68	1.57	1.88	2.26	3.42	623	743	893	1352	
3.	Pernem	U 2.52	0.05	0.06	0.07	0.08	2000	2400	2800	3200	Midland (Municipal area being extended)
		V 249.48	0.62	0.66	0.71	0.80	249	265	285	321	
4.	Bicholim	U 29.25	0.23	0.26	0.30	0.35	793	897	1035	1207	Midland ( 2 Municipalities)
		V   209.75	0.62	0.65	0.69	0.73	297	311	330	349	
5.	Ponda	U 5.22	0.15	0.18	0.21	0.26	287	345	402	498	Midland (Municipal area being extended)
		V   287.78	1.13	1.31	1.57	1.92	392	455	545	666	
6.	Satari	U 11.72	0.07	0.08	0.09	0.11	597	637	768	939	Ghats
		V   441.28	0.43	0.51	0.62	0.83	98	116	141	188	

TALUKAS OF SOUTH GOA DISTRICT											
1	Salcete	U 43.74	0.74	0.94	1.21	1.56	1692	2149	2766	3567	Coastal ( 2 Municipalities)
		P 249.26	1.46	1.68	2.01	2.52	586	675	807	1012	
2	Mormugao	U 27.37	0.84	0.97	1.13	1.32	3076	3544	4129	4823	Coastal
		P 80.63	0.37	0.48	0.61	0.77	459	600	753	963	
3	Quepem	U 36.69	0.29	0.34	0.39	0.45	783	919	1054	1216	Midland (2 Municipalities)
		P 281.31	0.36	0.40	0.47	0.56	128	142	167	199	
4	Sanguem	U 4.92	0.05	0.06	0.07	0.08	1016	1220	1423	1626	Ghats (Urban area needs being extended)
		P 782.08	0.54	0.58	0.64	0.72	69	74	82	92	
5	Canacona	U 18.69	0.10	0.12	0.14	0.16	535	642	749	856	Ghats
		P 332.31	0.31	0.32	0.34	0.38	93	96	102	114	

Urban areas are those with defined municipal jurisdictions. Each of the talukas have such jurisdictions. In addition, Salcete, Quepem and Bicholim have two municipalities each Tiswadi has Panaji, the Capital and which has the only Municipal Corporation in Goa: Pernem, Ponda and Valpoi have small geographic areas and this explains their relatively higher densities.

5. The average size of households in the Municipal and Panchayat component of talukas of Goa are indicated in the table below:

**TABLE V AVERAGE SIZE OF HOUSEHOLDS IN THE URBAN AND RURAL COMPONENTS OF THE TALUKAS OF GOA 2021.**

Sr. No.	Talukas	Density persons per sq.km				Average size of household (persons per hectare)				Remarks
		URBAN		RURAL		URBAN		RURAL		
		2001	2021	2001	2021	2001	2021	2001	2021	
TALUKAS OF NORTH GOA DISTRICT										
1.	Tiswadi	2607	4860	536	881	5.77	10.80	1.19	1.96	
2	Bardez	353	583	743	1352	0.78	1.30	1.65	3.00	Density is higher in rural Bardez than Urban
3.	Pernem	2400	3200	265	321	5.33	7.11	0.60	0.71	Urban is high due to constricted municipal area.
4.	Bicholim	897	1207	311	349	1.99	2.68	0.69	0.78	2 Municipalities
5.	Ponda	345	498	455	666	0.77	1.11	1.01	1.48	-
6.	Sattari	637	939	116	188	1.42	2.09	0.26	0.42	Sattari Urban is high due to constricted Urban areas

**TALUKAS OF SOUTH GOA DISTRICT**

1.	Salcete	2149	3567	675	1012	4.78	7.93	1.50	2.25	2 Mun
2.	Mormugao	3544	4823	600	963	7.88	10.72	1.33	2.14	-
3.	Quepem	919	1216	142	199	2.04	2.70	0.32	0.60	2 Mun
4.	Sanguem	1220	1626	74	92	2.71	3.61	0.16	0.20	-
5	Cana-cona	642	856	96	114	1.43	1.90	0.32	0.42	-

\* at 4.5 person per household, from above it would be seen that in the coastal talukas, urban density would be the highest i.e. 10 to 11 households per hectare in Tiswadi and Mormugao by 2021.

APPENDIX VII Views by TF to Government on SEZs

## **TASK FORCE - RP 2021**

Marquinez Palace Annexe, Old GMC Heritage Precinct  
D.B. Marg, Campal, Panaji, Goa

### **RESOLUTION**

27<sup>th</sup> Dec 2007

The Task Force – RP 2021 had a special meeting on 23<sup>rd</sup> December, 2007, wherein Developers of SEZs in Goa were heard. Among the Developers who presented before the Task Force RP 2021 were M/s. Meditab Speciality Pvt. Ltd, M/s.Paridigm Logistics and Distribution Pvt. Ltd, M/s. Inox Mercantile Company Pvt. Ltd, M/s. K. Raheja Corporation Pvt. Ltd., M/s. Peninsula Pharma Research Centre Pvt. Ltd, and M/s. Panchboomi Infrastructure Pvt. Ltd.

The Task Force – RP 2021 also had a special meeting on 26<sup>th</sup> December, 2007, wherein the Managing Director of Goa Industrial Development Corporation Limited and his team presented before the Task Force RP 2021 the modalities and procedures through which the GIDC allotted land to various SEZ developers. The exact powers and implications of the SEZ Act vis a vis Goa State was also presented by the GIDC team.

The Task Force – RP 2021 also met with Elected Representatives, Heads of Government Departments, NGOs and Individuals who represented before the Task Force with their submissions and specific views on SEZs in Goa. The Task Force has also considered all these submissions made before it.

The Task Force – RP 2021 has analyzed in detail the submissions made by all the above vis a vis its mandate to advise the Government on preparation of RP 2021 for Goa State. The Submissions made by GIDC team was also analyzed in minute detail and the implications of SEZs on Goa was deliberated upon.

Considering the submissions made, analysis done, deliberations undertaken, the Task Force – RP 2021, submits as follows:


1. It is perceived that Goa will not have a substantial revenue benefit by means of direct and indirect taxes through SEZs.
2. The State will have to incur expenditure to provide for infrastructure outside the SEZ area such as roads and other services. Also the State will be liable to provide for services such as water and power within the SEZ in case the Developer fails to do so. This would be an additional burden on the State exchequer.

3. The employment benefit derived through SEZs will not accrue largely to locals and it will lead to large scale migration of people thereby causing pressure on land and resources.
4. A huge amount of land has been blocked for product specific SEZs who seem to have invested on seemingly speculative grounds without specific data and analysis, for a large period of time, without any Government control. This will deprive genuine entrepreneurs and companies which require land for setting up industrial units which are not product specific and not dependent on Government incentives.
5. The entire process of land allotment to SEZs has also to be seen in light of government's role in land acquisition for government projects of "Public Purpose" vis-à-vis allotment of Government acquired land to private developers.
6. The process of permitting SEZs in Goa is in conflict with the letter and spirit of the 73<sup>rd</sup> Amendment to the Constitution of India.

We hereby conclude that the SEZs are detrimental to the overall interest of Goa. The intention of permitting SEZs which is that of industrialization and consequent employment generation can be served without SEZs, if incentives are extended to incoming industries. The required industrial development can be achieved if government focuses on providing excellent infrastructure in terms of roads, water and power to incoming industrial units.



(Charles Correa)  
Vice - Chairman



(Edgar Ribeiro)  
Advisor to Govt. of Goa

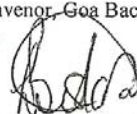
(Dr. S. P. Deshpande)



(Datta Naik)  
Rep. of Goa Chamber of Housing Industry



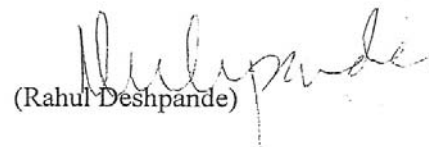
(Oscar Rebello)  
Convener, Goa Bachao Abhiyan



(Blaise Costa Bir)  
Rep. Goa Chamber of Commerce & Industry



(Dean D'cruz)  
Chairman, Indian Institute of Architects, Goa



(Rahul Deshpande)

27.12.2007

## APPENDIX VIII Conservation List

TABLE 1. MONUMENTS AND SITE OF NATIONAL IMPORTANCE UNDER ASI

Sr.No.	Name of the monuments/site	Taluka
1	Basilica of Bom Jesus, Old Goa.	Tiswadi
2	Se' Cathedral , Old Goa.	Tiswadi
3	Chapel of St.Cajetan, Old Goa	Tiswadi
4	Church and Convent of St.Francis of Assisi, Old Goa	Tiswadi
5	Chapel of St.Catherine, Old Goa.	Tiswadi
6	Church of Our lady of rosary, Old Goa.	Tiswadi
7	Church of St. Agustine, Old Goa	Tiswadi
8	Portal remains of St.Paul's College, Old Goa	Tiswadi
9	Arch of Viceroy, Old Goa.	Tiswadi
10	Arch of Adil shah's Palace, Old Goa	Tiswadi
11	Auguada Fortress (Upper), Candolim	Bardez
12	Safa Masjid , Ponda	Ponda
13	Rock cut caves, Arvalem	Bicholim
14	Mahadev Temple, Tambdisurla	Sanguem
15	Mahadev Temple, Kurdi	Sanguem
16	Excavated site, Chandor	Salcete
17	Fortification wall of Auguada Fortress (Lower), Candolim	Bardez
18	Chapel of St. Francis Xavier and connected buildings	Tiswadi
19	House of Bull	Tiswadi
20	Largo of St.Francis Xavier	Tiswadi
21	Largo of St. Cajetan together with other monuments	Tiswadi

TABLE 2. TALUKAWISE LIST OF PROTECTED MONUMENTS/SITES DECLARED AS PROTECTED UNDER THE STATE ACT.

Sr.No.	Name of the monuments/site	village	Taluka
1.	Ruins of Brahmapuri	Ella	Tiswadi
2.	Chapel of St.Xavier	Ella	Tiswadi
3.	Chapel of Our Lady of Monte	Ella	Tiswadi
4.	Convent of St.Monica and Chapel	Ella	Tiswadi
5.	Ruins of College of St.Populo	Ella	Tiswadi
6.	Church of St Peter	Ella	Tiswadi
7.	Casa da Polvora	Panvelim	Tiswadi
8.	Fort Naroa	Naroa Divadi	Tiswadi
9.	Site of the Temple of Saptakoteshwar	Naroa Divadi	Tiswadi
10.	Chapel of St. Jeronimus	Madel Chodan	Tiswadi
11.	British Cemetery at Dona Paula	Dona Paula	Tiswadi
12.	The site of Fortress at St. Estevam	St.Estevam	
13.	Site where the ancient image of Buddha was discovered at Colvale	Colvale	Bardez
14.	Fortress of Colvale	Colvale	Bardez
15.	Reis Magos Fort	Reis Magos	Bardez
16.	Church of Reis Magos	Reis Magos	Bardez
17.	Chapora Fort	Chapora (Kaisuv)	Bardez
18.	The Fortress of Khorjuve	Khorjuve	Bardez
19.	Caves at Naroa	Naroa	Dicholl
20.	Temple of Saptakoteshwar	Naroa	Dicholl
21.	Site of Gujir	Kudnem	Dicholl
22.	Fort of Sanquelim	Sanquelim	Dicholl
23.	Namazgah	Dicholim	Dicholl
24.	The Cave of Sidhanath at Tar Surla	Surla	Dicholl
25.	The Mosque and Tank at Tar Surla	Surla	Dicholl
26.	Site of Ruins of Manguesh Temple		
27.	Site of Ruins of Shantadurga Temple	Quelossim	Salcete
28.	Site of Ruins of Ramnath temple	Loutolom	Salcete
29.	Ruins including Tank of the Temple of Mahalsa	Verna	Salcete
30.	Gate of Rachol Fortress	rachol	Salcete
31.	Caves of Aquem	Margao	Salcete
32.	Frontispices of Sancoale	Sancoale	Mormugao
33.	The fort of Marmagoa	Vasco	Marmagoa
34.	The site of Kaivailya Math at Consua	Cortalim	Marmagoa
35.	Shri Chandranath Paroda	Paroda	Quepem
36.	Site of Rock Carvings of Kazur	Kazur-cavare	Quepem
37.	Cabo da Rama Fort	Cabo de Rama	Canacona
38.	Caves at Rivona	Rivona	Sanguem
39.	Site of Rock carving at Pansalmal	Colom, Rivona	Sanguem
40.	The cave at Shigao	Shigao	Sanguem
41.	The site of Narayandev at Vichundre	Vichundre	Sanguem
42.	Caves at Khandepar	Khandepar	Ponda
43.	Caves at Ishwarbhat	Khandepar	Ponda
44.	Cave at Magueshi	Mangueshi	Ponda
45.	Shri Nagesh Temple	Bandora	Ponda
46.	Shri Kamakshi Temple	Shiroda	Ponda
47.	Shri Saptakoteshwar	Khandepar	Ponda
48.	Shri Mahadeva Temple	Agapu	Ponda
49.	Ruins of Jaina Basti	Bandora	Ponda
50.	Fort of Alorna	aloma	Pernem
51.	Fort of Terekhol	Terekhol	Pernem

## APPENDIX IX: A PARTICIPATORY PLANNED DEVELOPMENT SYSTEM FOR GOA THROUGH RPG- 21

1. The state of Goa is disaggregated into FIVE distinct but inter-related legal geographic boundaries-
  - a) the State
  - b) the 2 Districts
  - c) the 11 Talukas
  - d) The 14 Municipalities (including one Corporation) and 189 Village Panchayats
  - e) The urban and rural wards of the Municipalities and Panchayats.
2. The State has two elected members in the Lok Sabha and forty in the State assembly. More importantly for participatory governance, the State has an elected representative for each ward (urban and rural) who constitute the Corporation with a Mayor or the Municipal Council with one of them as President or the Village Panchayat with one of them as Sarpanch. There is also provision to constitute a Taluka or sub-district Planning Committee (TPC) or equivalent so as to strengthen Participatory Governance.
3. The State has an effective State Planning Board (SPB) for disbursement and monitoring of Central and State development funds. However, as in most other States, there is little or no synergy between the SPB and the STCPB (State Town & Country Planning Board). Then issues between land usage on one hand and sectorally processed socio-economic investments on the other get increasingly skewed as demands for built space escalates. The 73<sup>rd</sup>/74<sup>th</sup> C.A. Acts '92, therefore pointedly addressed the need for this synergy through "SPATIAL CONTEXTS FOR INVESTMENTS", as best addressed through "THE PARTICIPATORY PROCESS THROUGH THE THIRD TIER OF GOVERNANCE".



In Goa, the need for this synergy typically stands out through increasing incidences of exceptions, violations and promotion of access to land outside spatial frameworks. RPG- 21 and its disaggregated layers of plans is required to address this anomaly right down to settlement and ward levels.

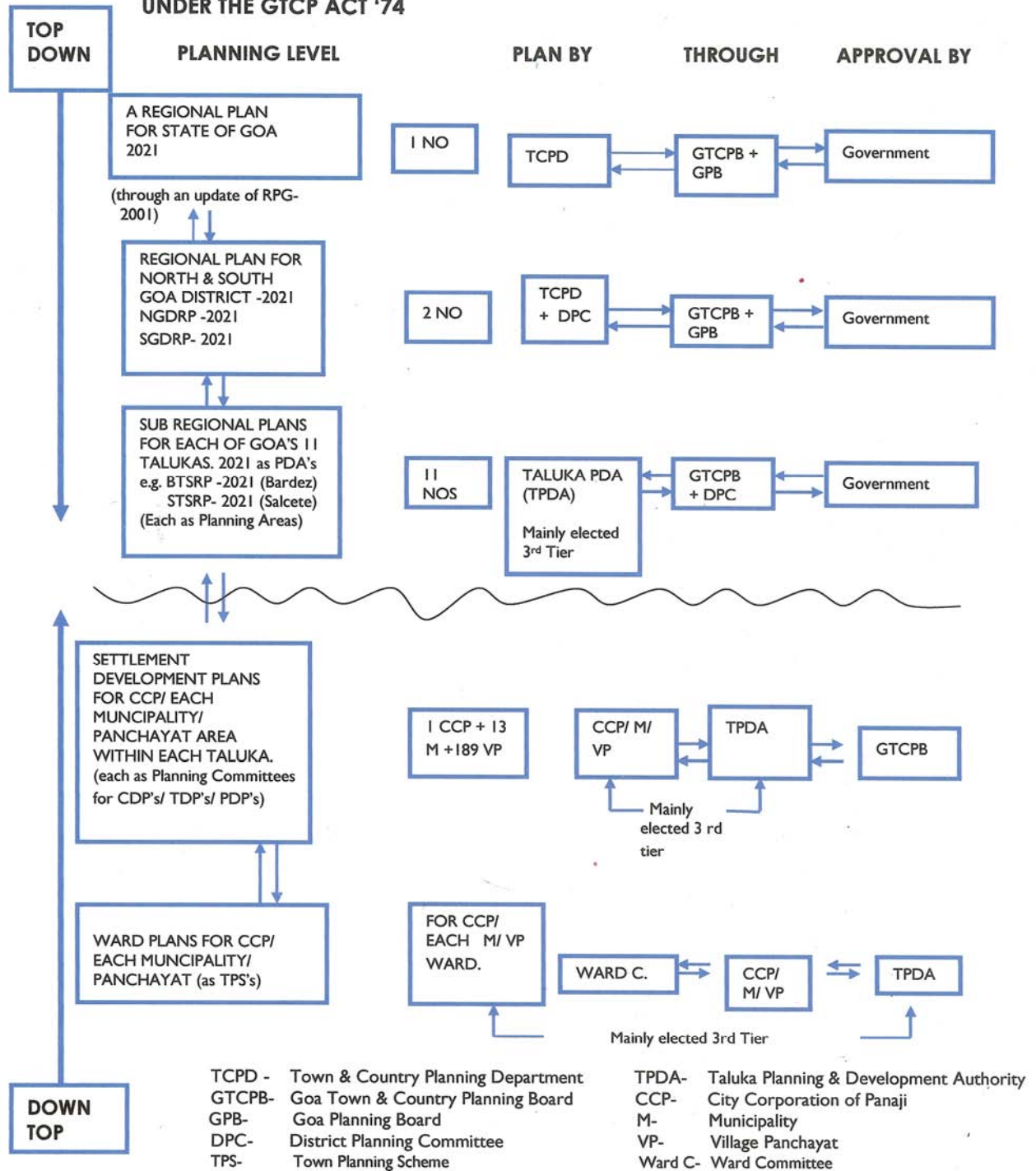
### Recommended Spatial Plans

1. As access to land and its regulated usage is in the state list of enabling instruments, the FOUR critical laws (as amended from time to time) in Goa for participatory planned development are:
  - i) THE GOA TOWN AND COUNTRY PLANNING ACT, 1974 (GTCP Act '74)
  - ii) THE GOA PANCHAYAT RAJ ACT, 1993 (GPR Act '93)
  - iii) THE GOA MUNICIPAL ACT, 1968 (GMA Act '68)
  - iv) THE GOA MUNICIPAL CORPORATION ACT, 2002 (GMC Act '82)-  
currently applicable only to Panaji.

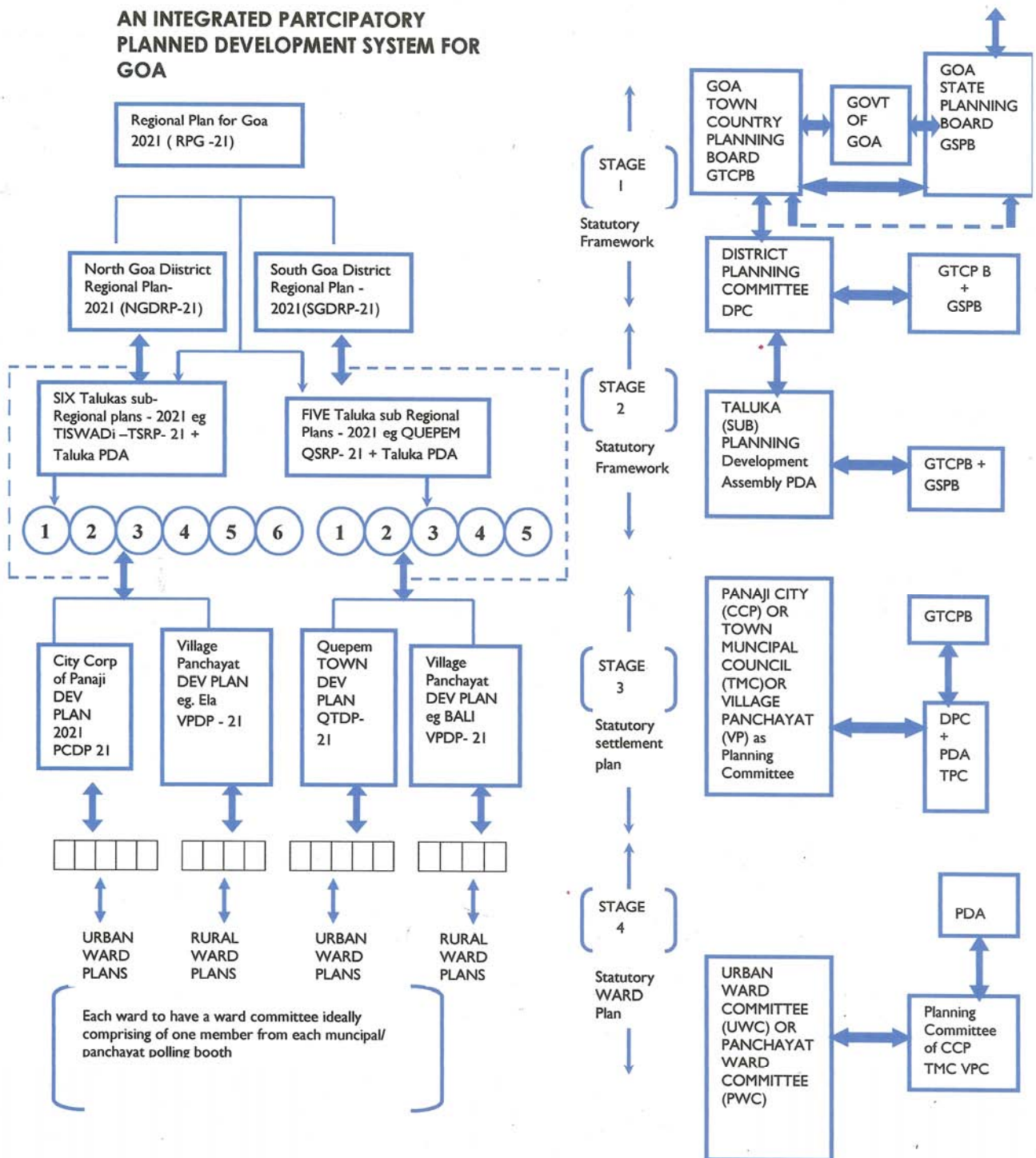
On issues on access to land, no other Act (central, concurrent or State list) can be out of sync with the GTCP Act '74 (unless if required for 'Operational Use' as strictly defined by the G.O.I.)

2. Therefore, as spatial plans are required to ensure a stakeholder acceptable built environment for integrated socio-economic investments. 5 INTER -RELATED LEVELS OF PLANS are required through processes of the GTCP Act '74 in synergy with constitutional provisions of the 73<sup>rd</sup>/74<sup>th</sup> C.A. Acts '92 and the other three local body acts. These levels are as explained below:

# AN INTEGRATED PARTICIPATORY PLANNING SYSTEM FOR DEVELOPMENT- 2021 UNDER THE GTCP ACT '74

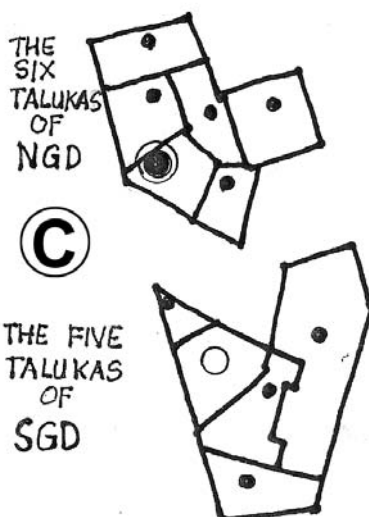
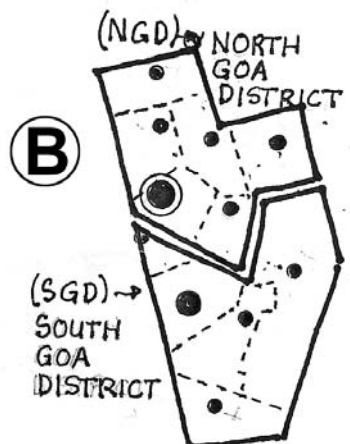


# AN INTEGRATED PARTICIPATORY PLANNED DEVELOPMENT SYSTEM FOR GOA

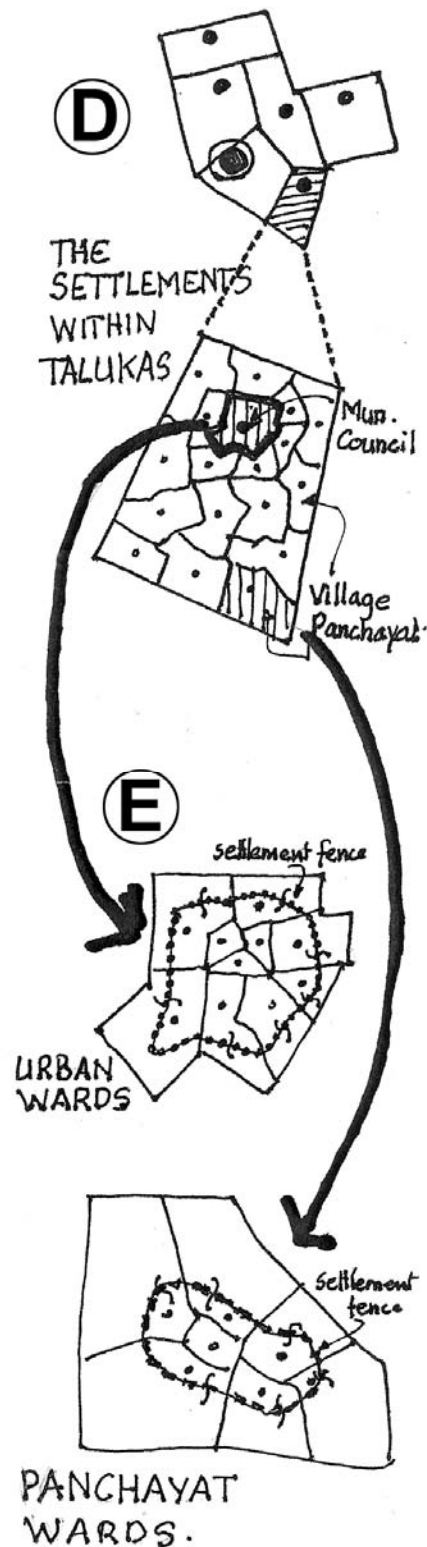


## GOA: THE SPATIAL CONTEXT FOR SOCIO-ECONOMIC INVESTMENT

(The diagrams are schematic)



- A.
  - a) Goa is India's smallest State ( 3,702 sq.Kms) with capital at Panaji (the State's only Mun. Corp.-PMC)
  - b) The statutory RPG with a horizon upto 2001 is being updated for a horizon upto 2001 as RPG 21 under the GTCP Act 74.
  - c) The Plan comprises of: written statements, a broad brush land use map ( surface utilisation map); matrix of uses prohibited in each land use zone with broad zoning regulations and guidelines for settlement plans (ODP's/ CDP's)
  - d) The land use map is to a scale of 1: 100,000.
  - e) The GTCP Act 74 caters to the plan being updated at least once every five years. Transparency is the key to this process.
  - f) Apart from the GTCPB, RPG-21 should also be approved by the State Planning Board.
- B.
  - a) Goa State is composed of two districts.
    - a) NORTH GOA DISTRICT ( 1,736 sq.Kms) H.Q. PANAJI
    - b) SOUTH GOA DISTRICT ( 1,966 sq.Kms) H.Q. MADGAON.
  - b) RPG-21 would therefore be enlarged into two disaggregated DISTRICT REGIONAL PLANS
    - a) N.G.D.R.P - 21
    - b) S.G.D.R.P - 21
  - c) The land use maps are to a scale of 1: 50, 000.
  - d) RPG-21 would thus establish through elected DISTRICT PLANNING COMMITTEES (DPC's), a synergy between investments as sectorally channelised and coordinated through DPC's
  - e) The two DRP's-21 can be processed under the GTCP Act as expanded Regional Plans.
- C.
  - a) NGD comprises of SIX talukas and SGD comprises of FIVE talukhas.
  - b) RPG- 21 can also be disaggregated into separate TALUKA SUB- REGIONAL PLANS each to a scale of 1: 25,000 for land use maps (as currently being done). e.g BARDEZ TALUKA SUB- REGIONAL PLAN (BTSRP -21)
  - c) Each SRP -21 will offer guidance to Municipal and Panchayat settlement Plans within the Taluka.
  - d) Each SRP-21 can be processed under the GTCP Act '74 as SUB- REGIONAL PLANS.
  - e) Under the GTCP Act 74, no Planning Area, ODP / CDP, PDA, Zoned Areas and the likes can operate if not in consonance with RPG and its disaggregation. (State, District, Taluka levels)
  - f) To ensure continuity between RPG-21 and all other settlements and wards, the TF recommends that all the 11 talukas of Goa be declared as "Planning Areas" under the GTCP Act '74 so that the entire State is covered by 11 PDAs.



- D.
- Talukas in Goa comprise of at least one municipality ( at Talukas H.Q. ) and several Village Panchayats (VP's).
  - To have settlement plans ( SP's) for each of these legal geographic areas the concerned local Authority be made a Planning Committee (PC) under the GTCP Act '74.
  - Settlement Plans have to be prepared for each of these areas by the PC, failing which by the PDA, failing which by the TCP Dept. The Plan would show basic land use Zones:- residential, commercial, institutional, government, industrial, recreational and heritage areas, transport linkages and services plus eco-sensitive and other L.U zones from RPG-21, DRP-21 and TRP -21 along with a matrix of uses allowed in each L.U zone and basic DCR's.
  - The L.U maps are to have the following scales:-  
Urban area: 1: 5,000  
V.P area : 1: 5,000
  - Each of these CDP's/ TDP's / VDP's is to have a 20 year framework with 5 yearly programmes;
- E.
- Every settlement within a Taluka ( urban and rural) is divided into WARDS each with an elected councillor who can constitute his/ her own WARD COMMITTEE. (One member from each polling booth is recommended).
  - Ward Plans (WP's) are PARTICIPATORY and iteratively add up to the Mun/ VP plan and on which regional plan land uses are superimposed.
  - The land use maps are to have the following scales:-  
Urban wards -1: 2,000  
VP wards - 1: 2,000
  - Each wards plan would have a 5 year programme within a 20 year perspective. Such plans are best processed as LOCAL AREA PLANS (LAP's) so as to stress their participatory inputs. Until this term is legally in place WP's can be processed as Town Planning Scheme (TP's) under GTCP Act '74.
  - The 3 Municipal and 6 VP pilot plans by the TF would give credence to Ward Plans as well.

## THE REVISED FORMAT FOR RPG - 21

1. The TF [thus](#) recommends a revised format for RPG -21 in the context of state instruments pertaining to Urban and Regional Planning and local Government – urban and rural and which may need appropriate amendments. RPG – 21 for the State of Goa will comprise of relevant mapped data and growth directives supported by written statements. Accordingly, RPG -21 will comprise of:
  - a. (i) – a broad brush existing surface utilization map (1:100.000 scale) and  
(ii) - a broad brush emerging surface utilization map 2021 (1:100.000 scale)
  - b. RPG 21 is to be disaggregated into two District Regional Plans - one for each of Goa's two districts, North Goa and South Goa ( NGDRP -21 and SGDRP -21 ). Each of these will comprise of components as per a(i) and a(ii) above but to a scale of 1 : 50.000. These plans are to be processed under the GTCP Act '74 but through their respective District Planning Committees (NGDPC and SGDPC).
  - c. NGDRP – 21 is to be disaggregated into 6 taluka plans and SGDRP – 21 into 5 taluka plans, each at a scale of 1:25.000 as per components at a(i) and a (ii) above. These taluka plans are to be promoted by the NGDPC and SGDPC as sub-regional plans respectively through 20 year perspectives and 5 yearly programmes that give credence to spatially approved national, state and district sectoral budgetary flows. Each of these plans would comprise of the municipal and village panchayat jurisdictions that constitute the taluka and would incorporate the regional State and District directives.
  - d. The City Corporation of Panaji (CCP), the 13 other municipalities and 189 village panchayats that constitute the State of Goa are within the State's 2 districts and 11 talukas. To incorporate the participatory input in Settlement and Ward level plans, it is necessary to declare each of these legal geographic areas as Planning

Areas under the GT& CP Act 74. Thereby, the CCP, the Municipalities and Village Panchayats would be the PDA or equivalent for spatial plans in their jurisdiction based on regional directives. As this would have to be a participatory input within the context of the 73<sup>rd</sup>. [and 74<sup>th</sup>](#) CA Act '92, the TF have initiated 3 municipal and 6 village panchayat model plans through citizen participation. Appropriate planning guidelines would emerge from this exercise.

2. The plans at para 1a (i) and 1a (ii) as also the plans at paras 1b and 1c are to be supported by a legend which gives credence to the new regional directives. These, in particular are (i) the eco-sensitive zones of Goa, (ii) the State and District level physical infrastructure projections, (iii) the regional transportation nodes that sift Goa's destined and non-destined traffic and (iv) the legal geographic areas of governance within the ambit of the 73<sup>rd</sup> CA '93.

The maps are also to be supported by a matrix of uses disallowed in each zone and the broad regional Development Control regulations.

3. Quite clearly for each level of plan, the following will have to be widely published and explained:
  - a) a land use plan (at the appropriate scale) with a clearly related legend.
  - b) a matrix of uses allowed or disallowed within each land use zone.
  - c) Development control regulations (DCRs) within each land use zone (particularly in terms of maximum plot coverage, maximum height, maximum FAR per plot, minimum set back lines per plot and minimum of parking within plots). It has to be understood that building bye-laws is a local body concern particularly in terms of health, building stability and fire safety and is over and above DCRs.

APPENDIX X : Rules for Government Projects under Section 16 of GTCP  
Act'74

Recommendations by Task Force for rules and procedures for Government projects w.r.t. spatial plans under the GTCP Act '74.

1. Section 16 of the GTCP Act 1974 is titled "Effect of Regional Plan" In April 2008, this section was amended to provide for an exemption to public projects/schemes/development works undertaken by the Central or State Government from provisions of the Regional Plan.
2. For this purpose section 16 and 16 A of the said Act have been expanded as below:-

(expanded portion shown in italics):-

Section 16: "Effect of Regional Plan:- On and from the date of Publication of the regional plan under section 15 for an area, all development programmes undertaken within that area by any private institution or by any other person shall conform to the provision of such regional plan. However, public projects/schemes/development works, undertaken by the Central Government or the Government, shall be in conformity with the rules framed and procedures laid down by the Government for such projects/schemes/development works".

Section 16 A (1) "Development to conform to regional plan":-

" No person shall undertake any work of development in contravention of any provision of the regional plan as in force, except the projects/schemes/development works undertaken by the Central Government or the Government, either by himself or through his servant or agent or any other person and all such development work shall be in conformity with the provisions of the regional plan".

3. From above, it would be seen that the amendment comes into force only on the basis of rules framed and procedures laid down by the Government for such public projects/schemes/development works.



4. The Chairman of the Task Force has asked the Task Force to send to him as Chief Minister Goa, recommendations for implementing this amendment through rules and procedures to be framed by Government.
5. These recommendations to the Chairman, Task Force are accordingly enclosed. They have been formulated to ensure that public purpose projects by the Central or State Government are not delayed but at the same time, the contents of the spatial plans under the GTCP Act '74 are not diluted.

Recommended rules and procedures for Government Projects w.r.t. spatial plans under the GTCP Act'74

Central Government and Government public projects /schemes /development works have often been delayed due to several provisions under the GTCP Act'74. Therefore to ensure that such public projects/schemes/development works are speeded up but at the same time, spatial plans and their implementation under the GTCP Act'74 are not diluted, the following rules and procedures are prescribed by Government and as required under Section 16 of the GTCP Act'74.

1. Under the Development Control Rules (Development Plan regulations, 2000) as currently updated so as to cover the entire State, the following provisions be incorporated.

" All government public projects/ schemes/ development works are exempt from processing of plans, provided the GTCP Board certify that DCR stipulations have not been exceeded and copies of such certified plans are available in the relevant local government office/offices for public information.

However 'operational areas' are exempt from these DCR's and their procedures. These areas 'mutatis mundatis' include sea port operations including dry docks; airport operations; rail -right- of ways and rail operations including rake –formation, stabling and rolling stock maintenance yards, National and State Highways, and major/other district roads for right

of ways as prescribed in spatial plans under the GTCP Act' 74, power stations, water works, sewage treatment plants, district level landfill sites and military operation areas. Housing and related uses is not covered under operational areas unless required for essential maintainance and watch and ward staff.

2. Under 'Zoning regulations of the DCR's', the category 'Public/semi-Public' be split into 2 categories.

- a) Government Offices

- b) Institutions.

The DCR regulations for both these categories could be similar as at present.

However, it would facilitate implementation of Sec 16 and 16 (A) of the GTCP Act '74.

3. All Central Government and government uses other than in the government offices use zone would be governed by DCR regulations as applicable to that use zone.
4. New Central Government and government uses not covered by spatial plans under the GTCP Act'74 are to be incorporated in the relevant spatial plans. If the land required exceeds 0.40 hectares (singly or in combination), a Committee is to decide on its locations.
5. The Committee could comprise of the Chief Secretary of the State, one representative each from the Goa chapters of the Indian Institute of Architects, Institute of Town Planners, India and the Institution of Engineers, a representative of civil society and the Chief Town Planner, of the State as convenor.
6. The Land Acquisition Act 1894 is to apply in the State strictly for Central Government and Government public projects /schemes/ development works. Land acquired under this Act has to vest with the Central

Government or government even if given on lease. If 'public purpose as defined in the Act ceases, the land should revert to the original owner/owners.