

Total coast length :
7500 Km





COASTAL EROSION

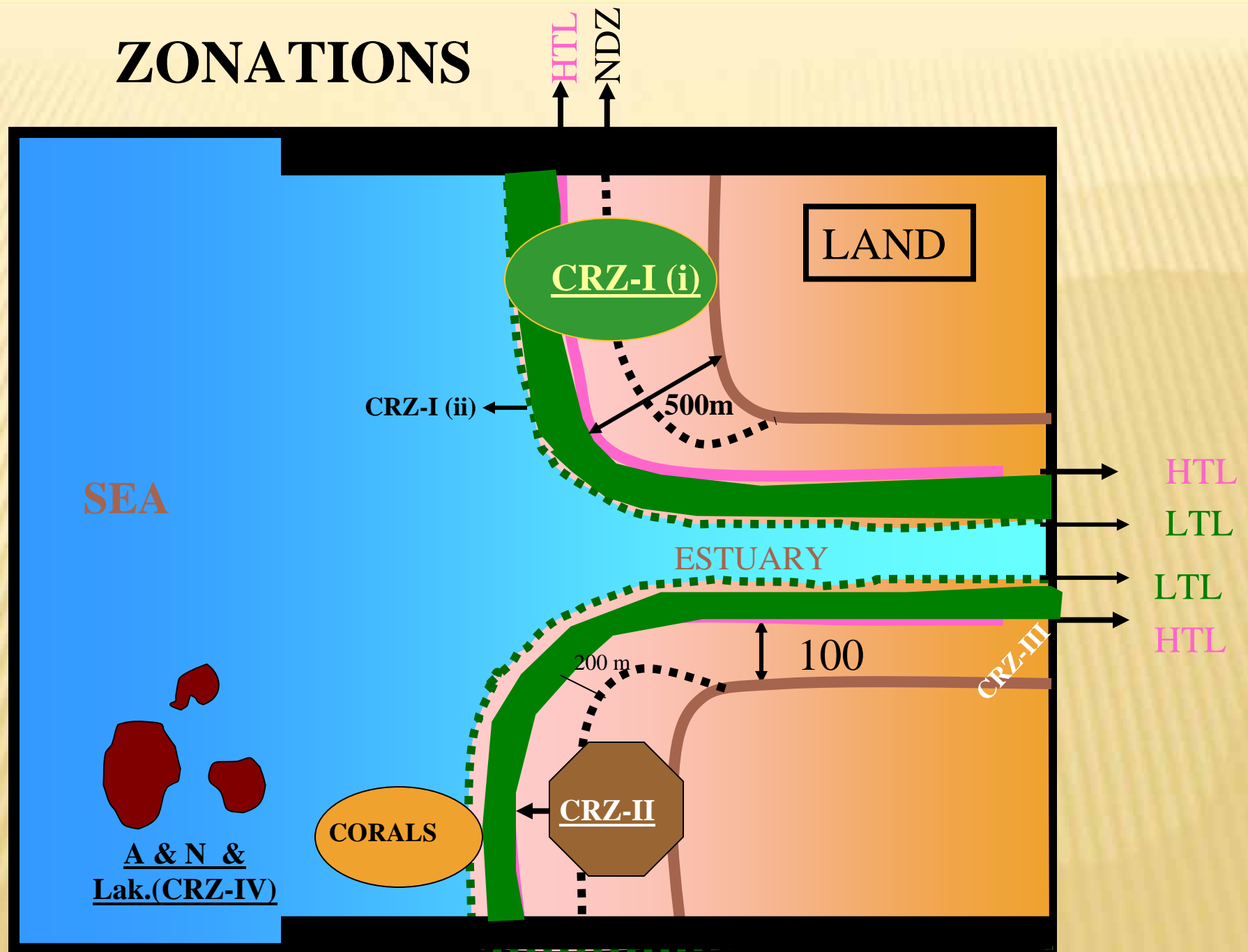




COASTAL REGULATION ZONE NOTIFICATION, 1991

- A directive Mrs. Indira Gandhi in 1981 to keep the beaches clean
- Beach guidelines issued by the then Department of Environment, 1987
- Draft Coastal Regulation Zone Notification issued in 1989 and reissued on 1990
- Final Coastal Regulation Zone Notification issued on 19.2.1991 under Environment (Protection) Act, 1986

ZONATIONS



ORDER OF 664 OF 1993

Writ Petition filed by Shri M. C. Mehta in the Hon'ble Supreme Court for non implementation of the Coastal Regulation Zone Notification

Order of Hon'ble Supreme Court dated April, 1996

- To set aside the amendment dated 1994 relaxing the No Development Zone to 50 mts
- To prepare the Coastal Zone Management Plans and to be approved within six months
- To establish National and State/UT level Coastal Zone Management Authorities under Environment (Protection) Act, 1986

COASTAL ZONE MANAGEMENT AUTHORITIES

- Constituted National Coastal Zone Management Authority and 13 State/Union territory level Coastal Zone Management Authority
- Coastal Zone Management Authorities are recommendatory authorities

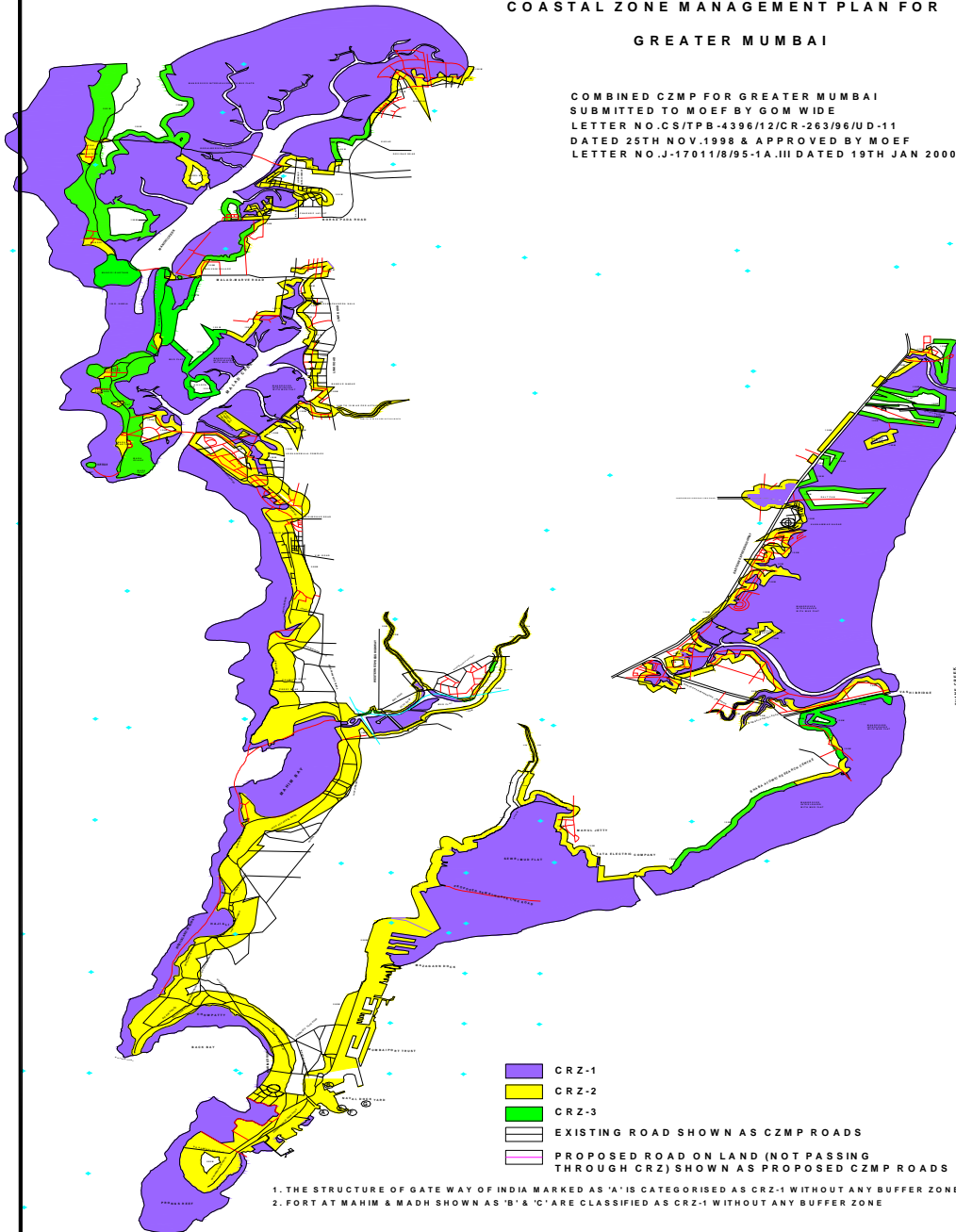
Functions

- To examine proposals for reclassification
- Enquire into violations
- Issue directions under Section 5
- File complaints under Section 19
- Take action under Section 10
- Shall identify eco-sensitive areas, erosion areas and prepare Integrated Coastal Zone Management Plan
- To recommend projects for clearance to MoEF/State Government

CZMP MAP

COASTAL ZONE MANAGEMENT PLAN FOR GREATER MUMBAI

COMBINED CZMP FOR GREATER MUMBAI
SUBMITTED TO MOEF BY GOM WIDE
LETTER NO.CS/TPB-4396/12/CR-263/96/UD-11
DATED 25TH NOV.1998 & APPROVED BY MOEF
LETTER NO.J-17011/8/95-1A.III DATED 19TH JAN 2000.



PARA 2 : PROHIBITED ACTIVITIES

- ✗ New industries and expansion of existing industries.
- ✗ Fish processing units.
- ✗ Waste disposal facilities.
- ✗ Land reclamation except within port areas.
- ✗ Mining of sands, rocks and other sub-strata except rare minerals.
- ✗ Drawal of groundwater within 200 mts.
- ✗ Construction within CRZ-I except as specified.
- ✗ Altering of sand dunes.
- ✗ Manufacture or handling or storage of hazardous substances except 14 PoL products.

REGULATION OF PERMISSIBLE ACTIVITIES

- Foreshore facilities.
- Operational components of Defence projects .
- Pipelines conveying systems.
- Exploration and extraction of oil and gas.
- Air strips in Lakshadweep and Andaman & Navi Mumbai
- Non-conventional energy resources.
- Special Economic Zone projects.
- Demolition and reconstruction of buildings including buildings of public use.
- All other activities with investment of Rs.5 crores.(includes buildings,townships etc in CRZ II)

CRZ I

Mangroves

Mud Flats

Horse Shoe Crab Habitats

Coral Reefs

Bird Sanctuary

Nesting ground of Birds

Creeks and Lakes

Sand Dunes

Sea Weeds

Turtle Nesting grounds

Salt Marsh

Sand Beach

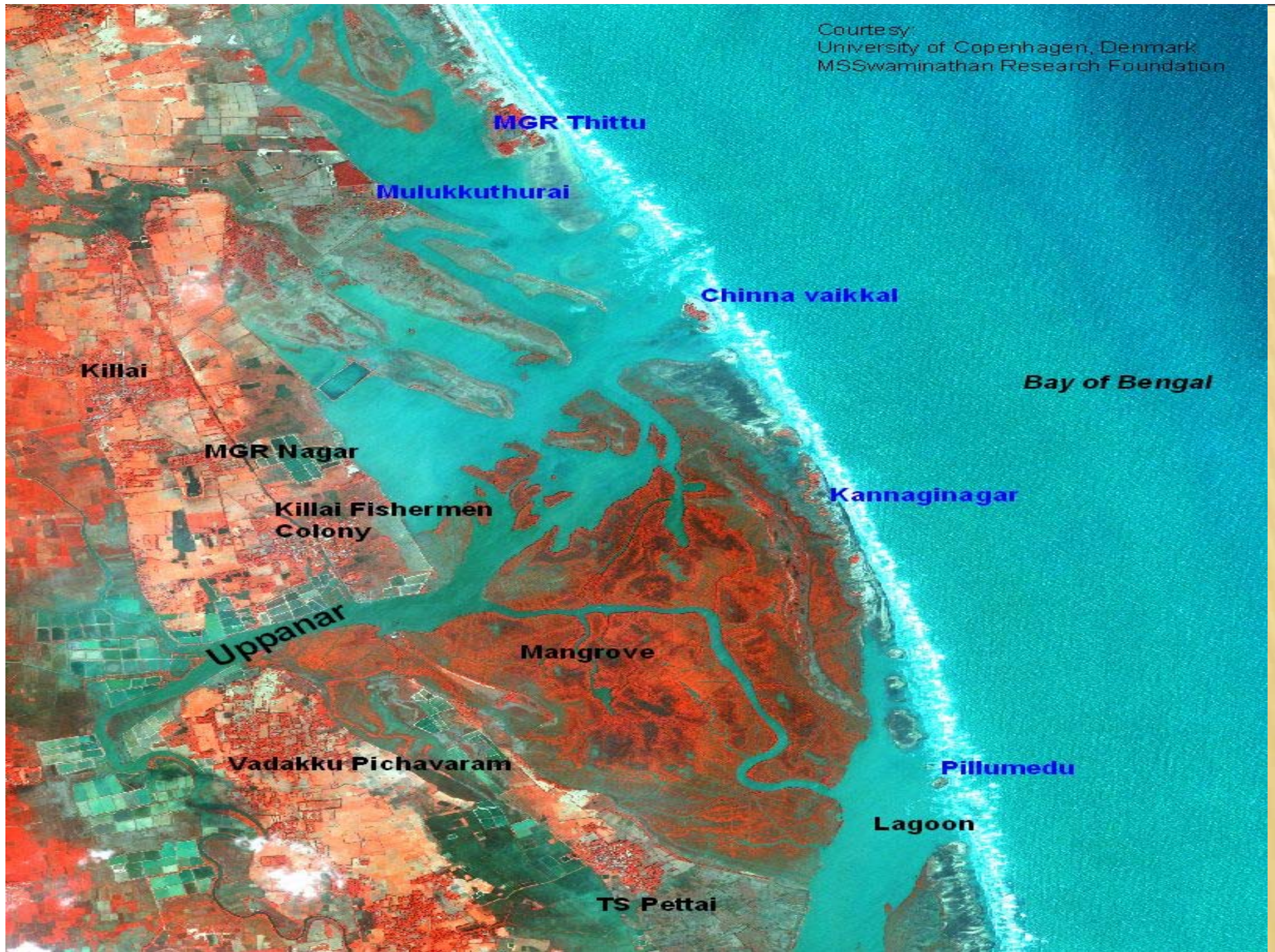
Reefs
Marine
Park



Coastal Regulation Zone - I



Courtesy:
University of Copenhagen, Denmark
MSSwaminathan Research Foundation





CTS No 1 / Survey 161 / Goregon (west) photo - 1992



CTS No 1 / Survey No 161 / Goregon (west) Mangroves chopped off
for development of golf course
photo - 1998.

Record of Change in Mangrove Habitat

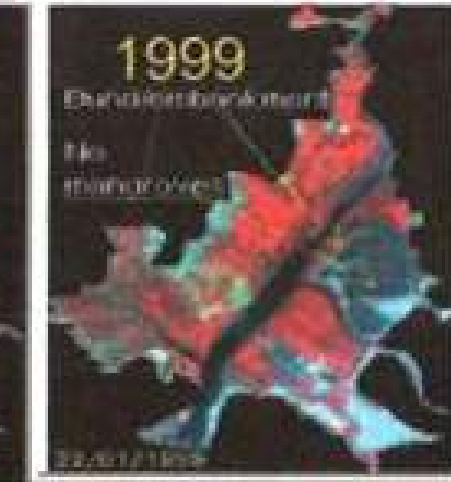
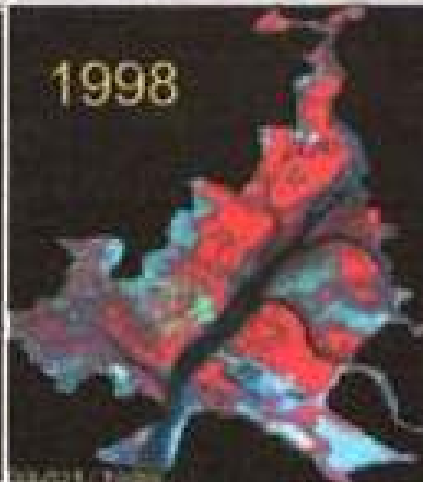
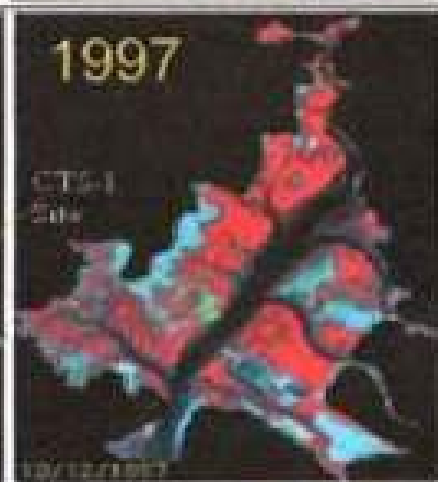
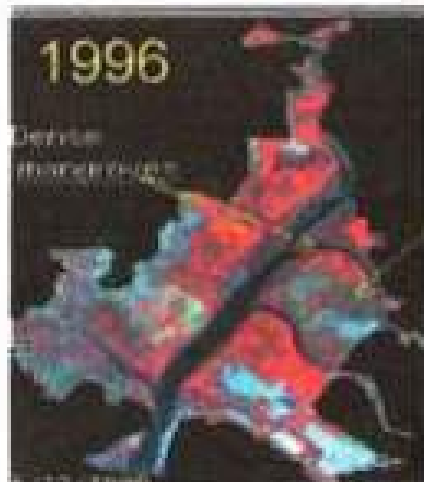
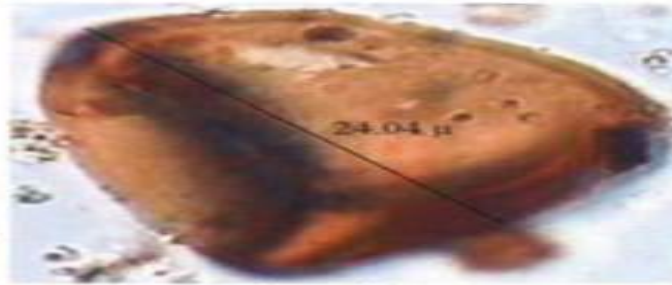


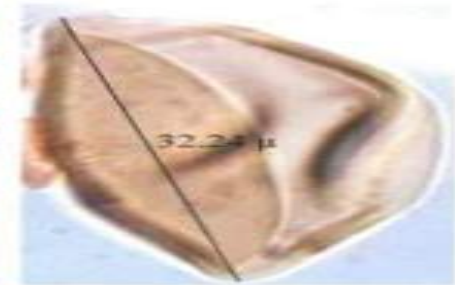
Plate I (Unstained acetolysed)



Spore



Lygodium sp.



Palm type



Cheno-Amaranthus



Cheno-Amaranthus



Cheno-Amaranthus



Rhizophora sp.



Bruguiera sp.



Avicennia sp.



Radermachera sp.



Ceriops sp.



Coix sp.



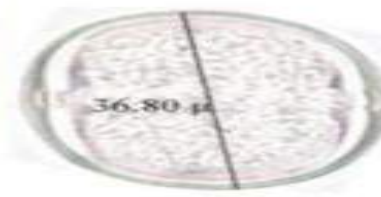
Heliotropium sp.



Strobilanthes sp.



Cleome sp.



Garuga pinnata



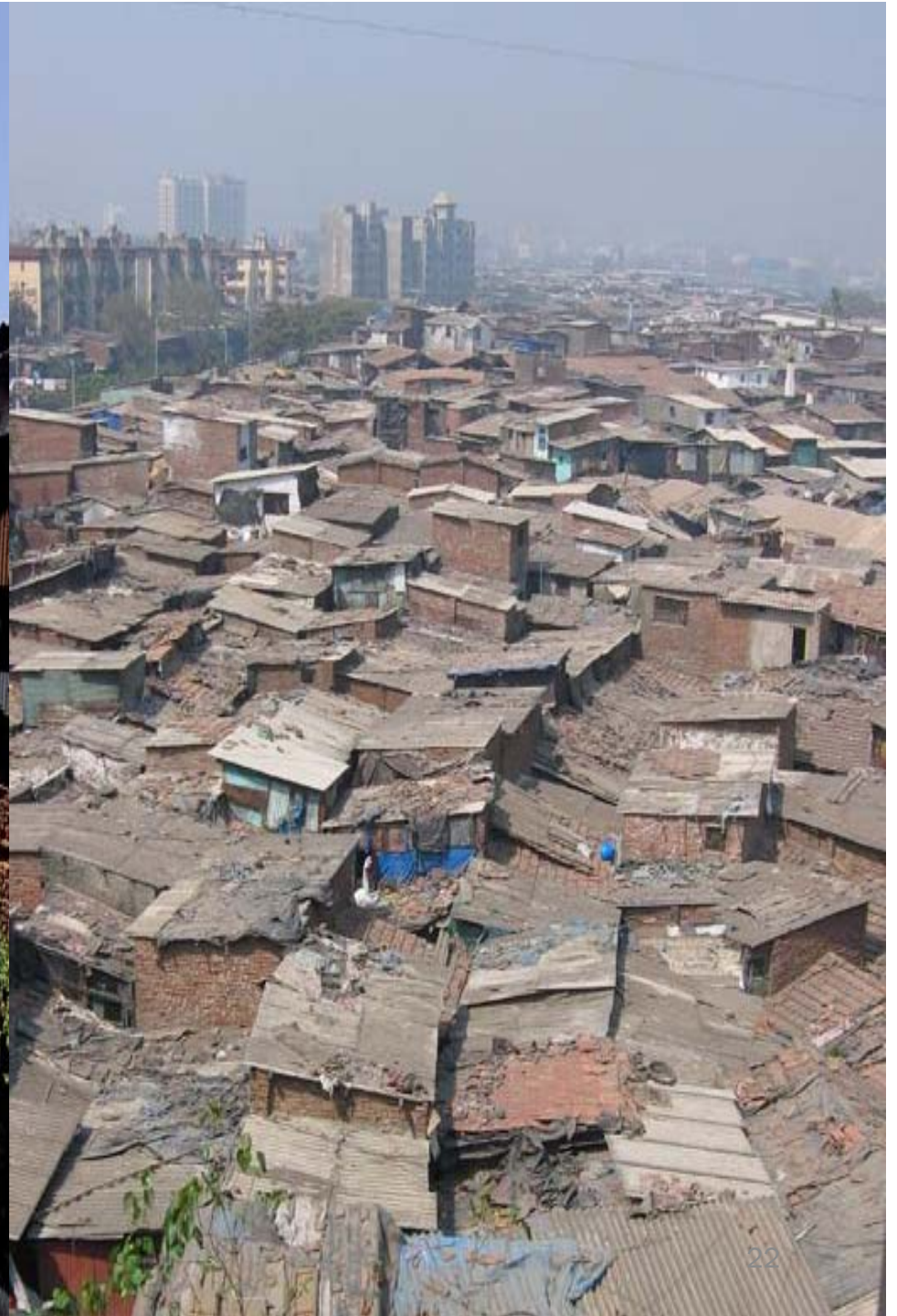
Clerodendrum sp.

COASTAL REGULATION ZONE-II



Coastal Regulation Zone - II





- 
- All other open areas including coastal waters and tidal influenced inland water bodies, i.e. all areas excluding those classified as CMZ - I, II and IV.

CRZ III

- NDZ provision removed. No new development on the seaward side of the setback line.
- Allows new tourism infrastructure everywhere.

Andaman and Nicobar Islands & Lakshadweep Islands and other offshore islands

In coral reefs, mangroves spawning and breeding areas of endangered species only 'minimal activities' which are essential for the local population are permitted



ACTIVITIES PERMITTED IN CRZ

Sl. No.	Activities	CRZ-I(i)	CRZ-I(ii)	CRZ-II	CRZ-III (HTL-200)	CRZ-III (200-500)	CRZ-IV
1	New industries	X	X	X	X	X	X
2	Mining of Sand/Rock	X	X	X	X	X	X
3	Beach resorts	X	X	√	X	√	√
4	Dwelling units	X	X	√	X	√	√
5	Expansion of industries	X	X	X	X	X	X
6	Atomic energy projects	√	√	√	√	√	√

Sl. No.	Activities	CRZ-I	CRZ-II	CRZ-III (HTL-200)	CRZ-III (200-500)	CRZ-IV
1.	New industries	X	X	X	X	X
2.	Expansion of industries	X	X	X	X	X
3.	Atomic energy projects	✓	✓	✓	✓	✓
4.	IT	X	X	X	✓ (sez)	✓ (sez)
5.	SEZ Projects	X	X	X	✓ (sez)	✓ (sez)
6.	Non conventional energy	X	X	X		✓
7.	Desalination	X	X	✓	✓	✓
8.	Air strips	X	X	X		✓ (LAK)
9.	POL products	X	X	X	✓	✓
10.	L&G	✓	✓	✓	✓	✓
11.	Fish processing	X	X	X	X	X
12.	Hatchery	X	X	✓	✓	X
13.	Fish drying	X	X	✓	✓	✓
14.	Treated effluents	X	X	✓	✓	✓
15.	Storm water drains	X	X	✓	✓	✓
16.	Municipal waste	X	X	X	X	X
17.	Landfill	X	X	X	X	X
18.	Ash from TPS	X	X	X	X	X
19.	Land reclamation	X	✓ (P&H)	✓ (P&H)	✓ (P&H)	✓ (P&H)
20.	Expansion of Ports/Harbours	X	✓	✓	✓	✓
21.	Jetty	X	✓	✓	✓	✓
22.	Wharves	X	✓	✓	✓	✓
23.	Quays	X	✓	✓	✓	✓
24.	Slipways	X	✓	✓	✓	✓
25.	Bridges	X	✓	✓	✓	✓
26.	Sea-links	✓	✓	✓	✓	✓
27.	Erosion control	X	✓	✓	✓	✓
28.	Tidal regulators	X	✓	✓	✓	✓
29.	Prevention of salinity ingress	X	✓	✓	✓	✓
30.	Commercial Complex	X	X	✓	X	X
31.	Mining of Sand/Rock	X	X	X	X	X
32.	Rare mineral	X	X	✓	✓	✓
33.	of Oil and Gas	✓	✓	✓	✓	✓
34.	Groundwater drawl	X	X	✓	X	✓
35.	Horticulture	X	✓	✓	✓	✓
36.	Agriculture	X	✓	✓	✓	✓
37.	Fisheries (Aquaculture)	X	X	X	X	✓
38.	Pipelines	✓	✓	✓	✓	✓
39.	Altering sand dunes	X	X	X	X	X
40.	Defense Projects	X	✓	✓	✓	✓
41.	Conveying systems	✓	✓	✓	✓	✓
42.	Transmission lines	✓	✓	✓	✓	✓
43.	Embankment facility	X	X	X	X	✓ (LAK)
44.	Thermal power plant	X	X	X	X	X
45.	Housing schemes	X	X	✓	X	X
46.	Weather radars	✓	✓	✓	✓	✓
47.	Demolishing/Reconstruction of Archeological, heritage, public	X	X	✓	X	X
48.	Dispensaries	✓ (SB)	X	✓	✓	X
49.	Schools	✓ (SB)	X	✓	✓	X
50.	Public rain shelters	✓ (SB)	X	✓	✓	X
51.	Community toilets	✓ (SB)	X	✓	✓	X
52.	Roads	X	X	✓	✓	X
53.	Water supply	X	✓	✓	✓	✓
54.	Drainage	X	X	✓	✓	✓
55.	Sewerage	X	X	✓	✓	✓
56.	Saltpan	X	✓	✓	✓	✓
57.	Storage of food grains	X	✓	✓	✓	✓
58.	Storage of fertilizers	X	✓	✓	✓	✓
59.	Storage edible oil	X	✓	✓	✓	✓
60.	Parks	X	X	✓	✓	✓
61.	Play fields	X	X	✓	✓	✓
62.	Forestry	X	X	✓	✓	✓
63.	Beach resorts	X	X	✓	X	✓
64.	Coral mining	X	X	X	X	X
65.	Underwater blasting	X	X	X	X	X
66.	Dwelling units	X	X	✓	X	✓
67.	Reconstruction of structures	X	X	✓	✓	✓

Note: The above details are subject to approved CZMP of respective States/UTs, Court Judgments, interpretations with respect to local regulations, etc.

Activities less than Rs.5 crores are approved by the concerned State Government.

Activities more than Rs.5 crores to be cleared by MoEF.

Amendments to the Coastal Regulation Zone Notification

1.	S.O.595(E), dated the 18 th August, 1994	High Tide Line was defined and Coastal Regulation Zone boundary for creeks, backwaters etc., laid
2.	S.O.73(E), dated the 31 st January, 1997	Relaxation for A&N sand mining
3.	S.O.494(E), dated the 9 th July, 1997	Storage of POL, drawal of groundwater, operation of ports and harbour, etc.
4.	S.O.334(E), dated the 20 th April, 1998	A&N sand mining
5.	S.O.873(E), dated the 30 th September, 1998	A&N sand mining
6.	S.O.1122(E), dated the 29 th December, 1998	Seven authorised agencies for High Tide Line demarcation with guidelines

Amendments to the Coastal Regulation Zone Notification

7.	S.O.998(E), dated the 29 th September, 1999	A&N sand mining
8.	S.O.730(E), dated the 4 th August, 2000	LNG in Coastal Regulation Zone-I
9.	S.O.900(E), dated the 29 th September, 2000	A&N sand mining
10.	S.O.329(E), dated the 12 th April, 2001	LNG, atomic power, dwellings in biosphere reserves of Sunderbans
11.	S.O.988(E), dated the 3 rd October, 2001	A&N sand mining
12.	S.O.550(E), dated the 21 st May, 2002	Extent of CRZ upto 5ppt in creeks, SEZs for IT and non-polluting industries

Amendments to the Coastal Regulation Zone Notification

13.	S.O.1100(E), dated the 19 th October, 2002	Airstrips in A&N and Lakshadweep
14.	S.O.52(E), dated the 16 th January, 2003	A&N sand mining
15.	S.O.460(E), dated the 22 nd April, 2003	Permission for demolition and reconstruction of archaeological and heritage buildings, powers for more than Rs.5 crores with MoEF
16.	S.O.635(E), dated the 30 th May, 2003	A&N sand mining
17.	S.O.636(E), dated the 30 th May, 2003	Embarkation facility in Lakshadweep in Coastal Regulation Zone-I area
18.	S.O.725(E), dated the 24 th June, 2003	Storage of non-hazardous cargo, trans-harbour sea links, facilities for water treatment from hotels

Amendments to the Coastal Regulation Zone Notification

19.	S.O.838(E), dated the 24 th July, 2003	Reduction of NDZ to 50mts in A&N
20.	S.O.86(E), dated the 25 th January, 2005	A&N sand mining
21.	S.O.451(E), dated the 26 th March, 2007	A&N sand mining
22.	S.O.1243(E), dated the 15 th May, 2009	Navi Mumbai airport

RECOMMENDATIONS OF THE EXPERT COMMITTEE TO REVIEW THE COMMENTS RECEIVED ON THE DRAFT COASTAL MANAGEMENT ZONE NOTIFICATION, 2008

- ✖ The four member Committee chaired by Prof. M. S. Swaminathan was constituted on 15.6.2009.
- ✖ The Committee after hearing the Central and State Government officials, industrial representatives, NGOs and fishermen submitted its Report titled “Final Frontier” on 16.7.2009
- ✖ Major recommendations are,-
- ✖ Let the Coastal Management Zone Notification lapse.
- ✖ Strengthen Coastal Regulation Zone Notification after taking into consideration the following:-
 - (a) Identify violations through improved space technology
 - (b) enhance protection of fisher families and their livelihood.
 - (c) Resolve issues of Mumbai
 - (d) Regulate port developments
 - (e) Tighter standards for effluents discharge in coastal waters.
 - (f) New management regime for Andaman & Nicobar and Lakshadweep Islands
 - (g) Identify critical vulnerable coastal areas.
 - (h) Strengthen research and regulatory capacity
 - (i) Introduce policies to cope to future dangers of sea level rise.



Gandhi statue

Pondicherry

Pier (Old Port)

New Port

Image © 2007 DigitalGlobe
© 2007 Europa Technologies

©2007 Google™

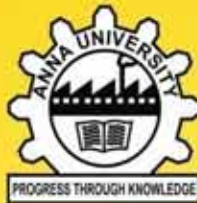
32

Pointer 11°55'31.18" N 79°50'04.00" E elev 0 ft Streaming 100%

Eye alt 20762 ft

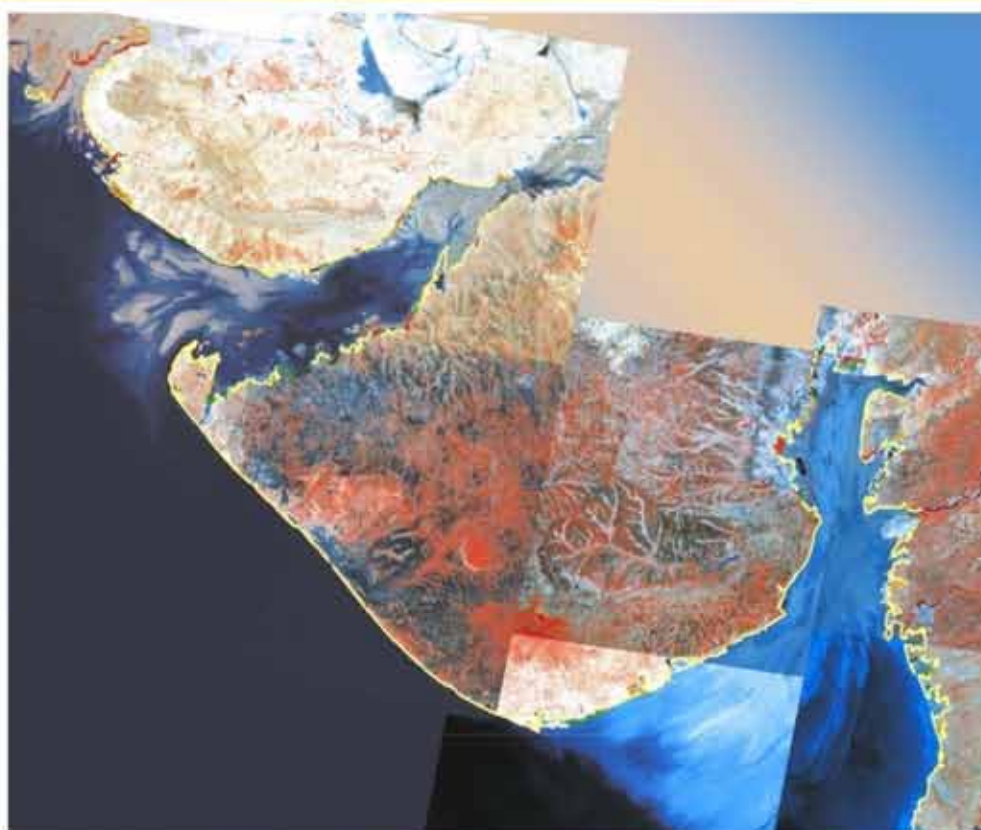
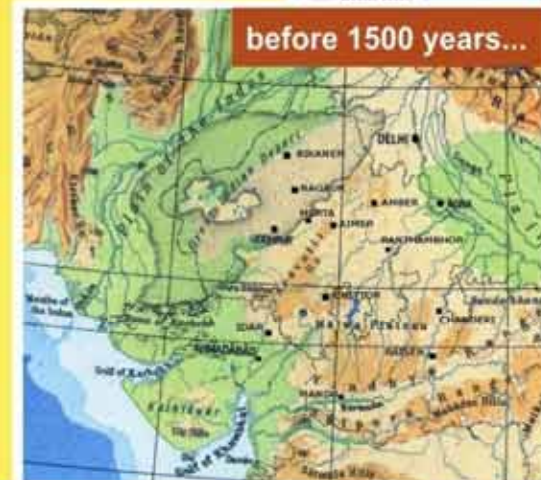
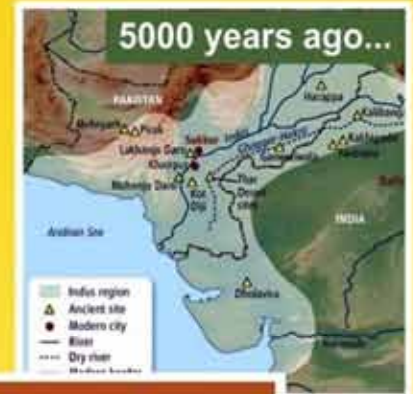


अहाँ है हरियाली ।
वहाँ है सूर्याहली ॥

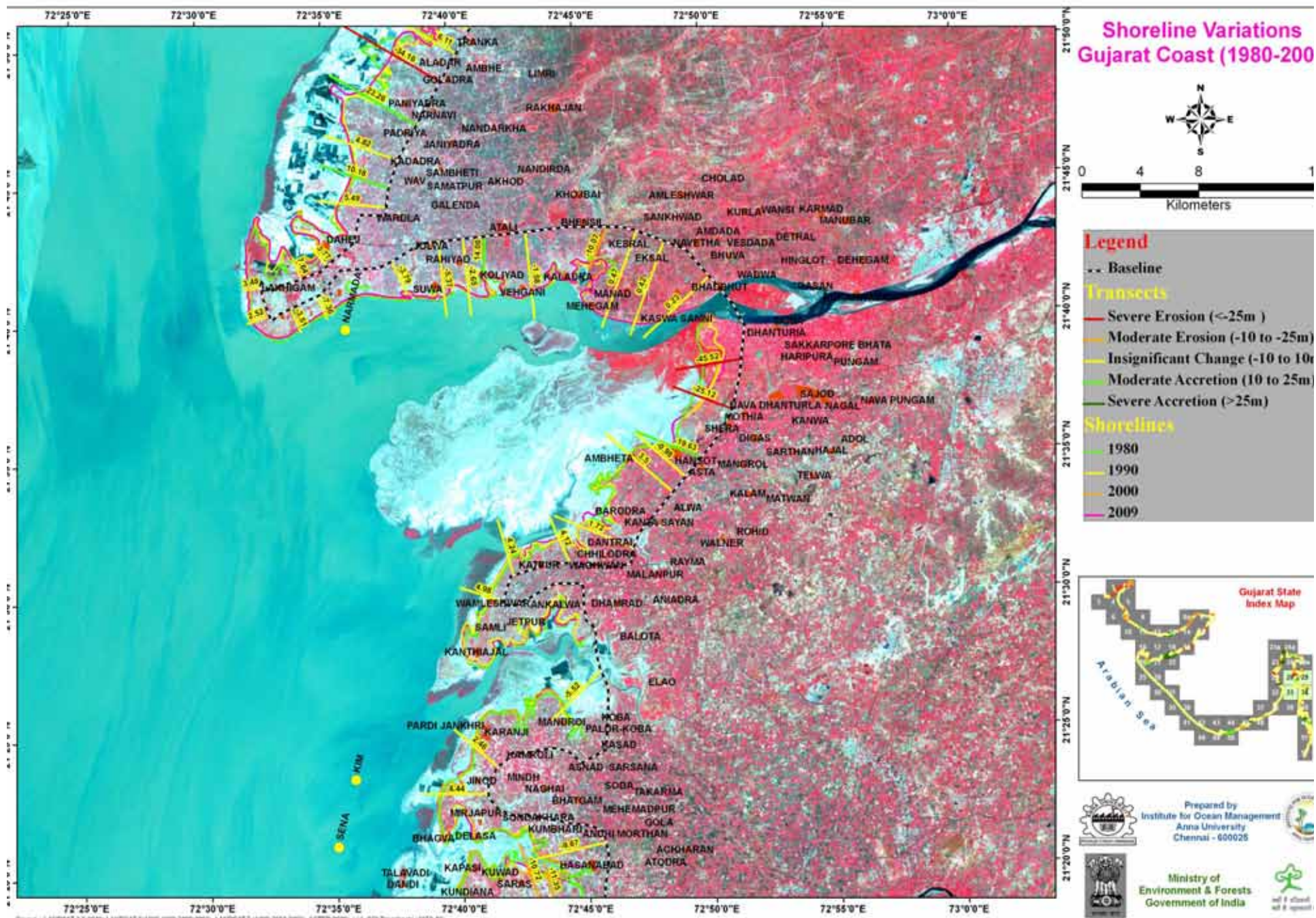


National Assessment of Shoreline Change

I. GUJARAT Coast



Prepared by: Institute for Ocean Management, Anna University Chennai





Revised cell boundaries. Vishakhapatnam is identified as a major boundary mainly due to its harbour defences and lack of sediment input from its river. The boundary at the Devi delta is probably a pulse boundary allowing some sediment bypassing and therefore may be defined as a sub-cell boundary. However, the relatively massive input of sediment from the Devi means that the cell to the west could be regarded as a closed unit.



IMPLEMENTATION OF COASTAL REGULATION ZONE

✘ Today for implementation of the Coastal Regulation Zone common man has to study,-

(i) Coastal Regulation Zone Notification, 1991 with its 25 amendments

(ii) The Coastal Zone Management Plans approved in 26.9.1997 and others

(iii) Orders of Hon'ble Courts

(iv) Office Orders/circulars issued from time to time from MoEF and State Governments

(V) EIA notification 2006

PRE-DRAFT CRZ NOTIFICATION, 2010

Made available in 9 local languages and comments sought
CRZ notification 1991 as the template .Following are inserted.

- ✘ Para 2(iii), hazard mapping introduced
- ✘ Para 3, prohibited activities retained and insertions made for,-
 - (a) time bound action plan for pollution mitigation
 - (b) shoreline mapping
- ✘ Permissible activity maintained and insertions made for,-
 - (a) streamlining clearance with EIA
 - (b) construction and township projects as per EIA

Contd./-

Para 4.2, procedure for clearance introduced

- (a) Compressive EIA for ports based on shoreline study.
 - (b) Mapping 1:4000 upto 7 Km radius
 - (c) Recommendation of Coastal Zone Management Authority
 - (d) Approval as per EIA notification
-
- Post clearance monitoring
 - (a) Mandatory half yearly compliance report on web site
 - Transparency in clearance

- Preparation of Coastal Zone Management Plan

- (a) Hazard mapping with 0.5 m interval upto 7 km from HTL
- (b) Time period 1 year
- (c) Coastal Regulation Zone I, II, III & IV
- (d) Local level map 1:4000 and macro level map in 1:25000
- (e) Fishing villages to be mapped, and fishing zones
- (f) Polluted area to be mapped
- (g) Disaster mitigation like cyclone shelter, helipad etc.
- (h) Coastal Zone Management Plan prepared by National Centre for Sustainable Coastal Management and scientific institutions
- (i) Draft CZMPs shall be finalized only after public comments as per Environment (Protection) Act, 1986
- (j) Coastal Zone Management Plan on the website

- Enforcement of the notification
 - (a) Details of National Coastal Zone Management Authority and Coastal Zone Management Authority
 - (b) Classification of CRZ-I
- Coastal Regulation Zone-IV water area introduced
- Areas requiring special consideration
 - (a) Areas of Mumbai and Navi Mumbai – Floor Space Index relaxation for slum redevelopment
 - (b) Kerala – NDZ relaxation for backwater islands
 - (c) Goa – reconstruction, repairs of structures of local communities
- Ecologically important areas – To be declared as Critical Vulnerable Coastal Areas after taking public views and notifying the management plan

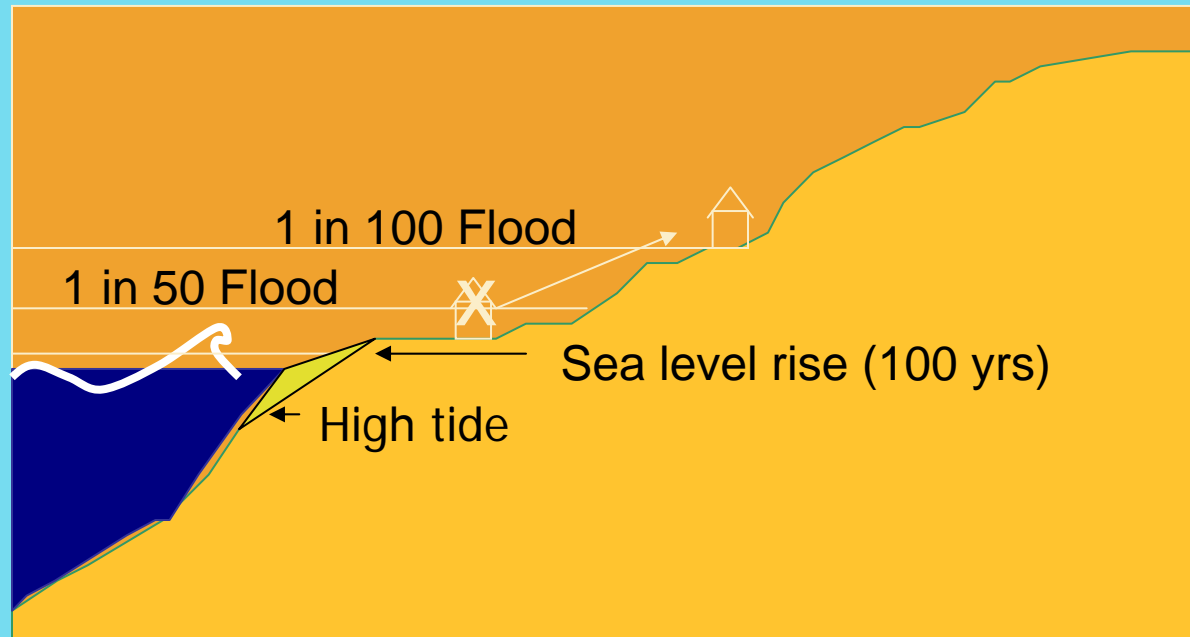
COMMENTS RECEIVED ON THE PRE-DRAFT CRZ NOTIFICATION, 2010

- (a) Why SEZ, atomic power, Navi Mumbai airport etc.,?
- (b) Construction and township projects more than 20,000sq mts.
- (c) Rights of fishermen community not addressed
- (d) To include A&N and Lakshadweep Islands within CRZ Notification, 1991
- (e) The 25amendments issued so far to the CRZ Notification, 1991 should be withdrawn and the original CRZ Notification, 1991 as issued on 19.2.1991 should be implemented.
- (f) Why special dispensation to Kerala, Mumbai, Navi Mumbai and Goa?

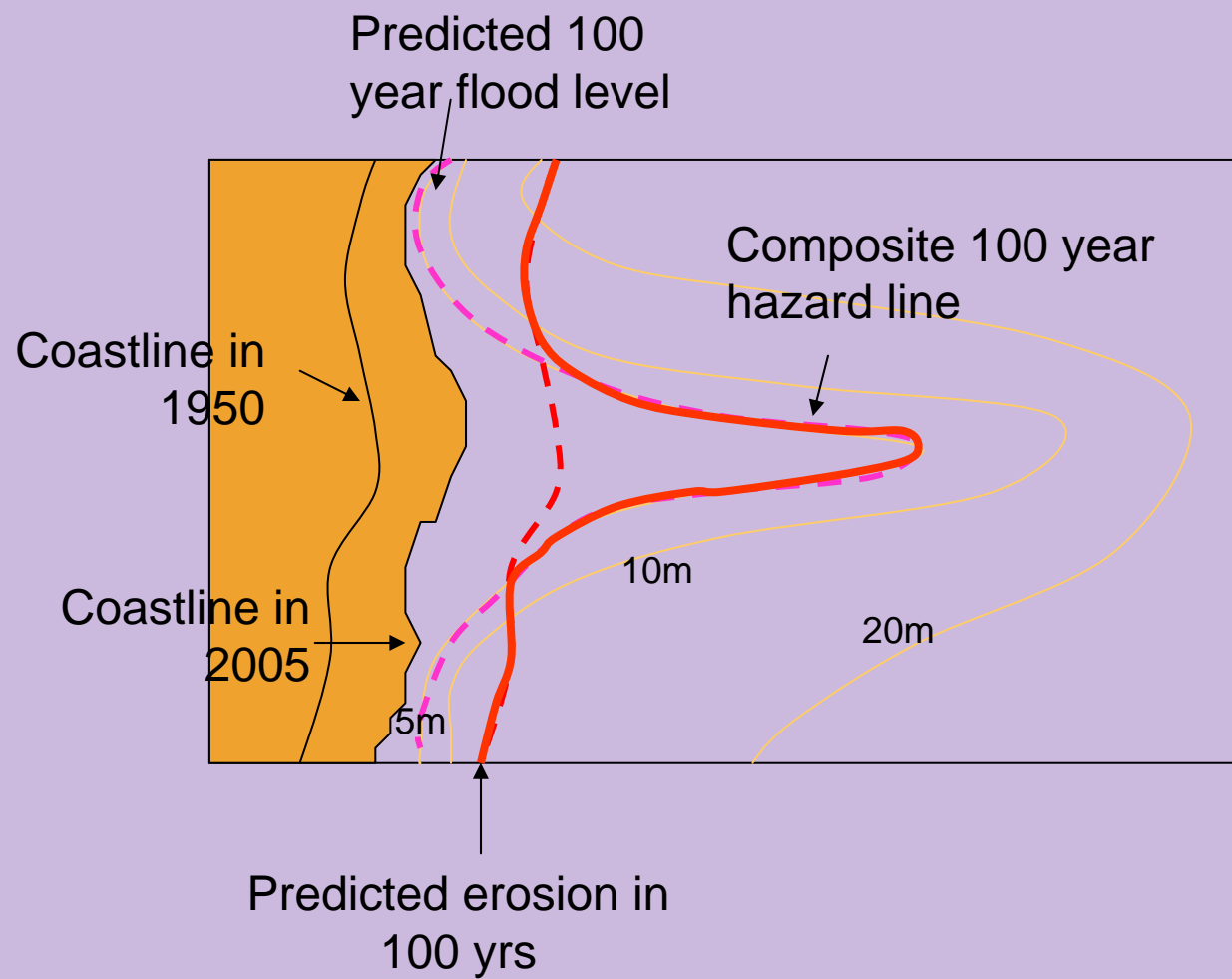
- (g) Adequate time for taking action against the violations
- (h) Enforcement mechanism of NCZMA and SCZMA should be strengthened with experts
- (i) Fishermen Associations have expressed fear that the dwelling units constructed in violations will be the first target
- (j) The hazard line concept is not clear and how it is going to regulate the activities.
- (k) Inclusion of water area has been initiated, clarify restrictions, classification of the coastal waters
- (l) With regard to Bombay the public finance for slum redevelopment to be defined

HAZARD MAPPING

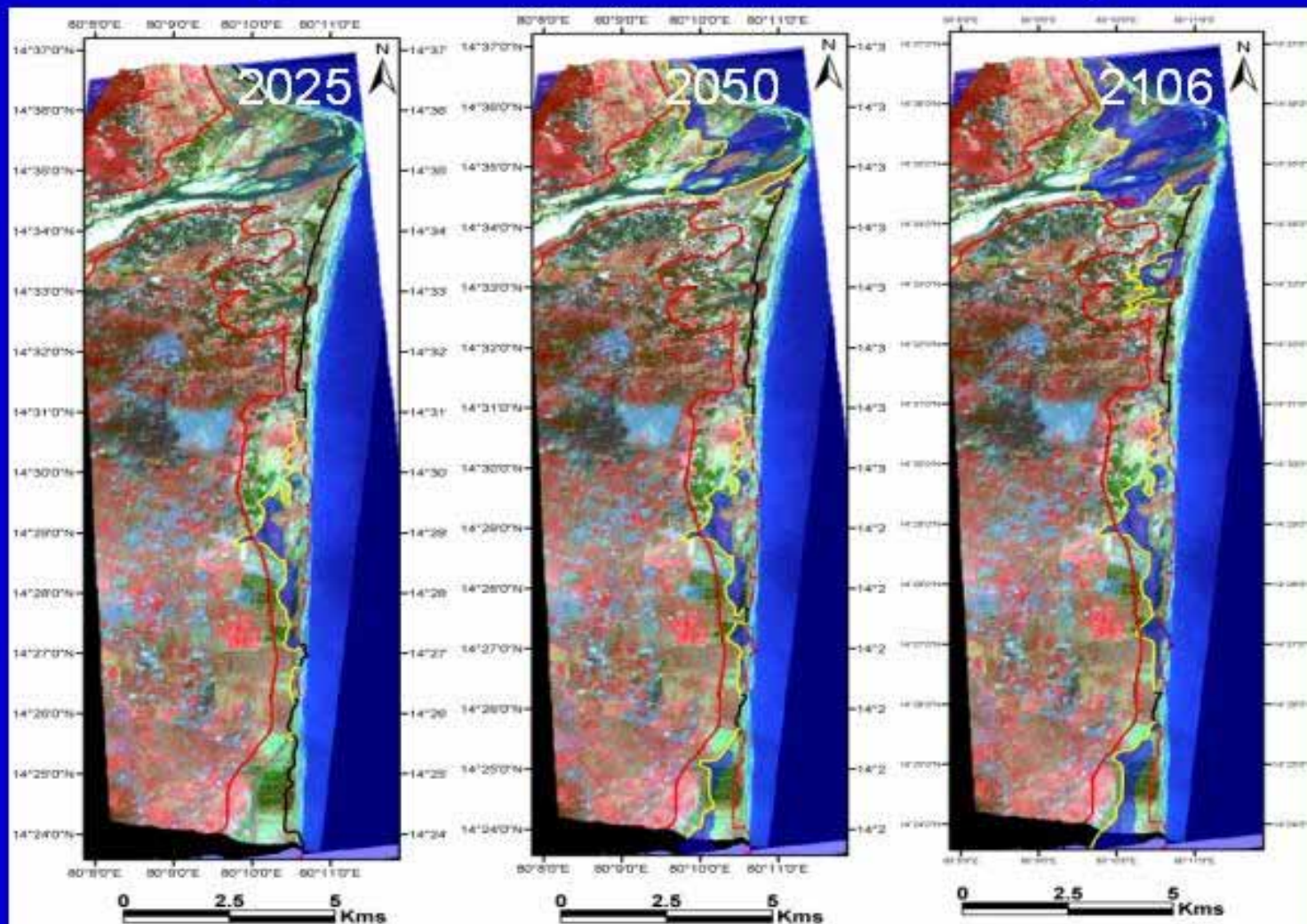
For the purpose of mapping the Hazard line of the coast 4 parameters are taken into account: - sea level trends, horizontal shoreline displacement (erosion/accretion), tidal ranges and wave heights.



Basic principles of hazard
return-interval zonation



Vulnerability Line for Nellore Coast, Andhra Pradesh (Normal Conditions)



Vulnerability
Line
(flood
segment)

Vulnerability
Line
(hazard
segment)

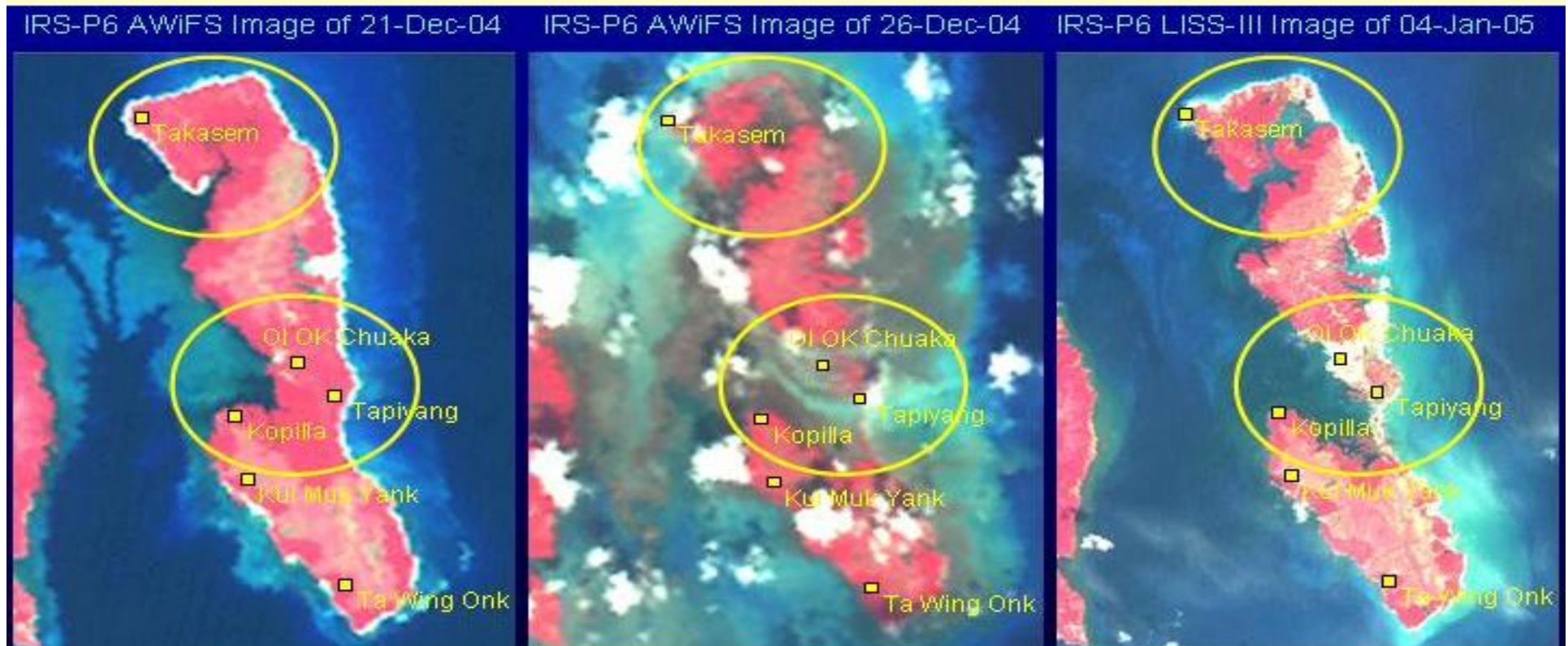
CRZ Line

Union of Hazard (shoreline displacement) and Flood line (Highest high tide + Projected Sea Level Rise)

THE 100 YEAR RISK LINE



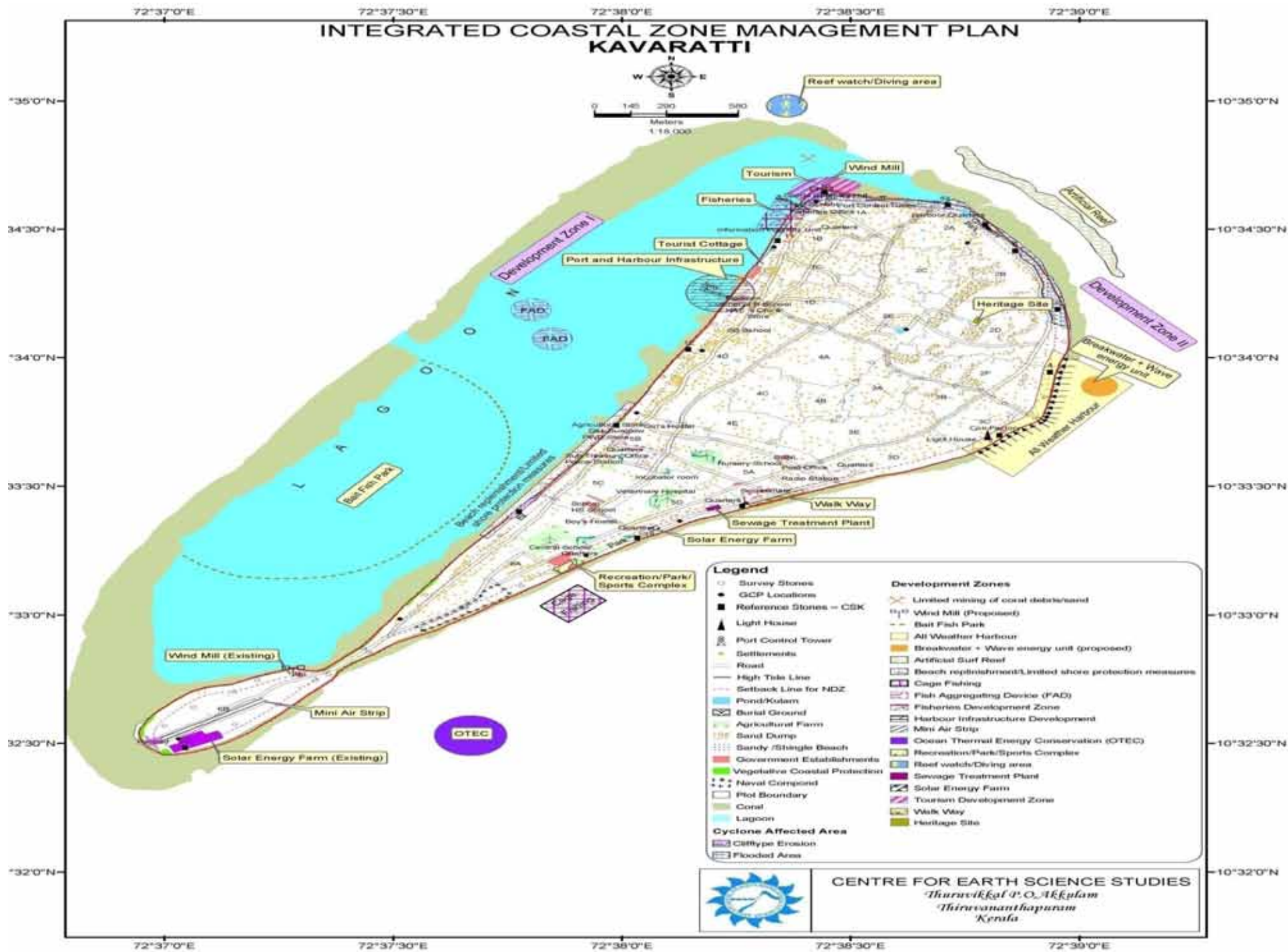
A Close View of Trinkat Island



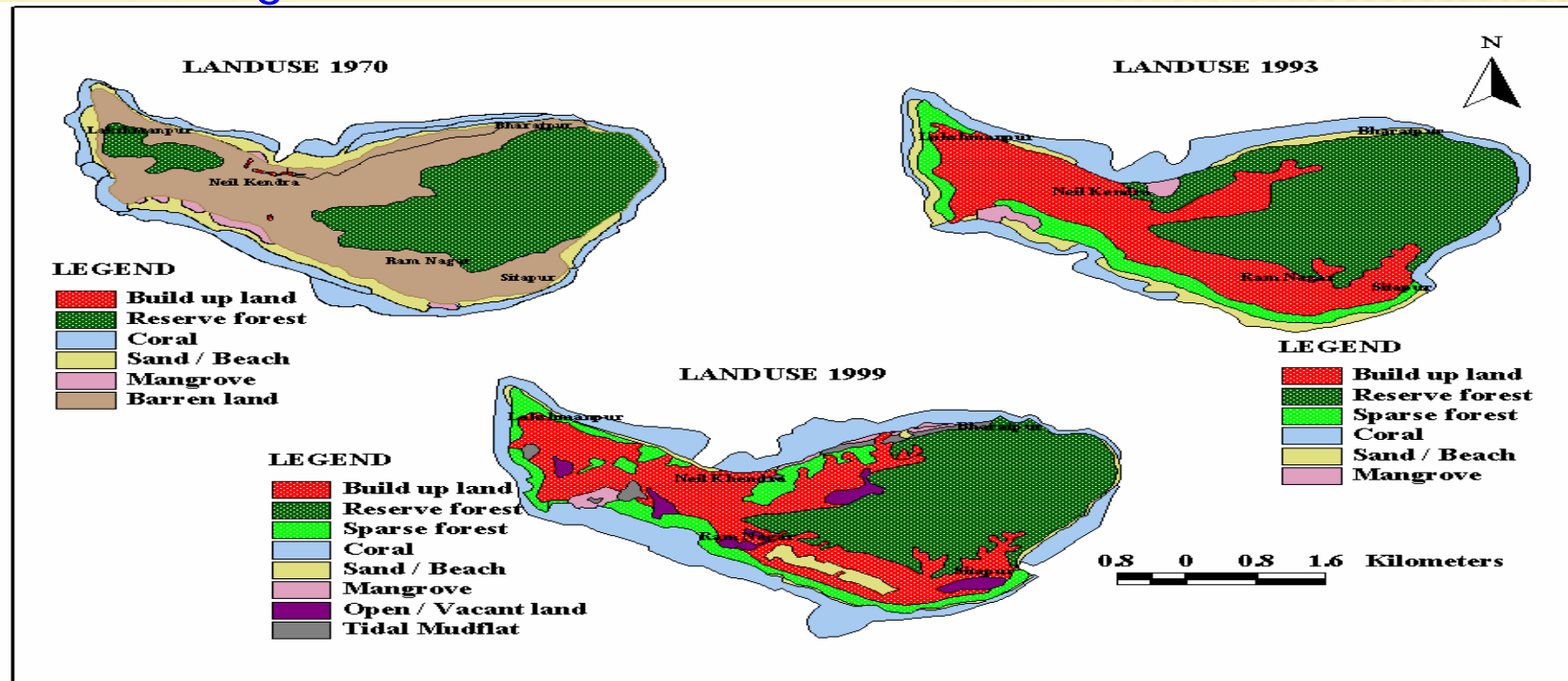
Courtesy – National Remote Sensing Agency

DRAFT ISLAND PROTECTION ZONE NOTIFICATION ISSUED ON 25.2.2010

- ✗ Integrated Coastal Zone Management Plan to be prepared within one year
- ✗ The Plan shall specify existing and proposed development, conservation and preservation schemes, dwelling units, infrastructure, schools, markets, hospitals, public facilities etc.
- ✗ The plan shall be prepared through research institutions as per the guidelines in Schedule-I and II
- ✗ The management plan shall be put up for public comments in accordance with Environment (Protection) Act, 1986 and thereafter within 30 days shall be finalised
- ✗ The implementation of the plans will be the responsibilities of Island Coastal Zone Management Authorities and National Coastal Zone Management Authority
- ✗ The plan shall be valid for a period of five years



Landuse Change in Neil Island



Class	Area in ha. (1970)	Area in ha. (1993)	Area in ha. (1999)
Coral reefs	300.01	270.47	391.61
Sand / beach	159.49	117.94	59.77
Sparse forest	-	138.17	171.94
Built up	3.23	516.03	454.98
Reserve forest	658.78	648.67	562.23
Mangrove	23.11	22.30	21.32
Barren land	704.02	-	46.83
Tidal mudflat	-	-	27.14
Total area	1848.64	1713.58	1735.82

World Bank assisted Integrated Coastal Zone Management Project

Major components

(i) National component

(a) Hazard mapping through Sol	- Rs.125.01 crores
(b) NCSCZM	- Rs.166.28 crores
(c) Mapping of ecological sensitive areas	- Rs. 24.00 crores
(d) MoEF and State capacity building	- Rs. 10.00 crores
(e) Sediment cell	- Rs. 2.30 crores
(f) Society for Coastal Zone Management	- Rs. 27.83 crores

• **Total** **- Rs 355.42 crores**

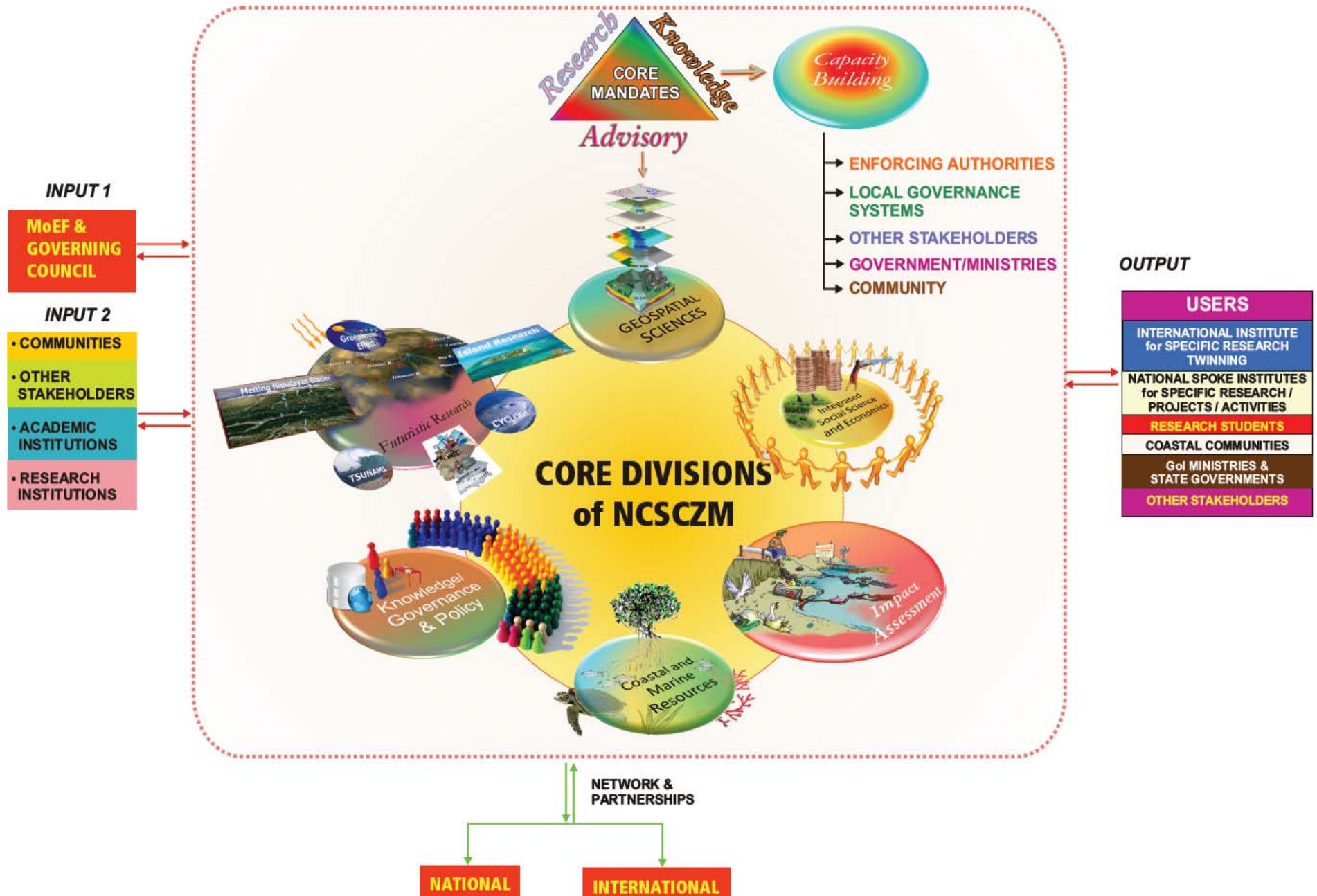
(ii) State component

(a) ICZM for Gujarat	- Rs.298.34 crores
(b) ICZM for Orissa	- Rs.201.62 crores
(c) ICZM for West Bengal	- Rs.300.26 crores

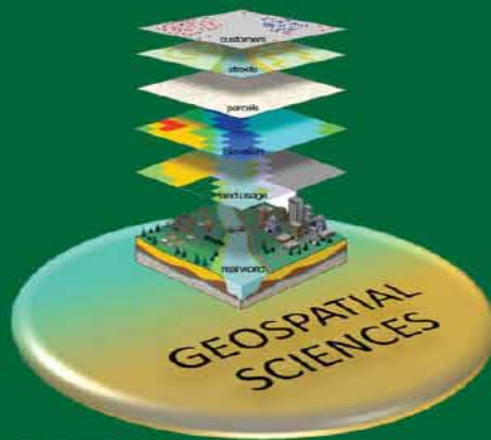
• **Total** **- Rs 800.22**

Total project cost [(i) + (ii)] = Rs.1155.63/-

Major Divisions of National Centre for Sustainable Coastal Management



Major Divisions of National Centre for Sustainable Coastal Management



GEOSPATIAL SCIENCES
DIVISION (GEO)



INTEGRATED SOCIAL SCIENCES
AND ECONOMICS DIVISION (ISE)



COASTAL IMPACT
ASSESSMENT DIVISION (CIA)



CONSERVATION OF COASTAL
AND MARINE RESOURCES
DIVISION (CMR)

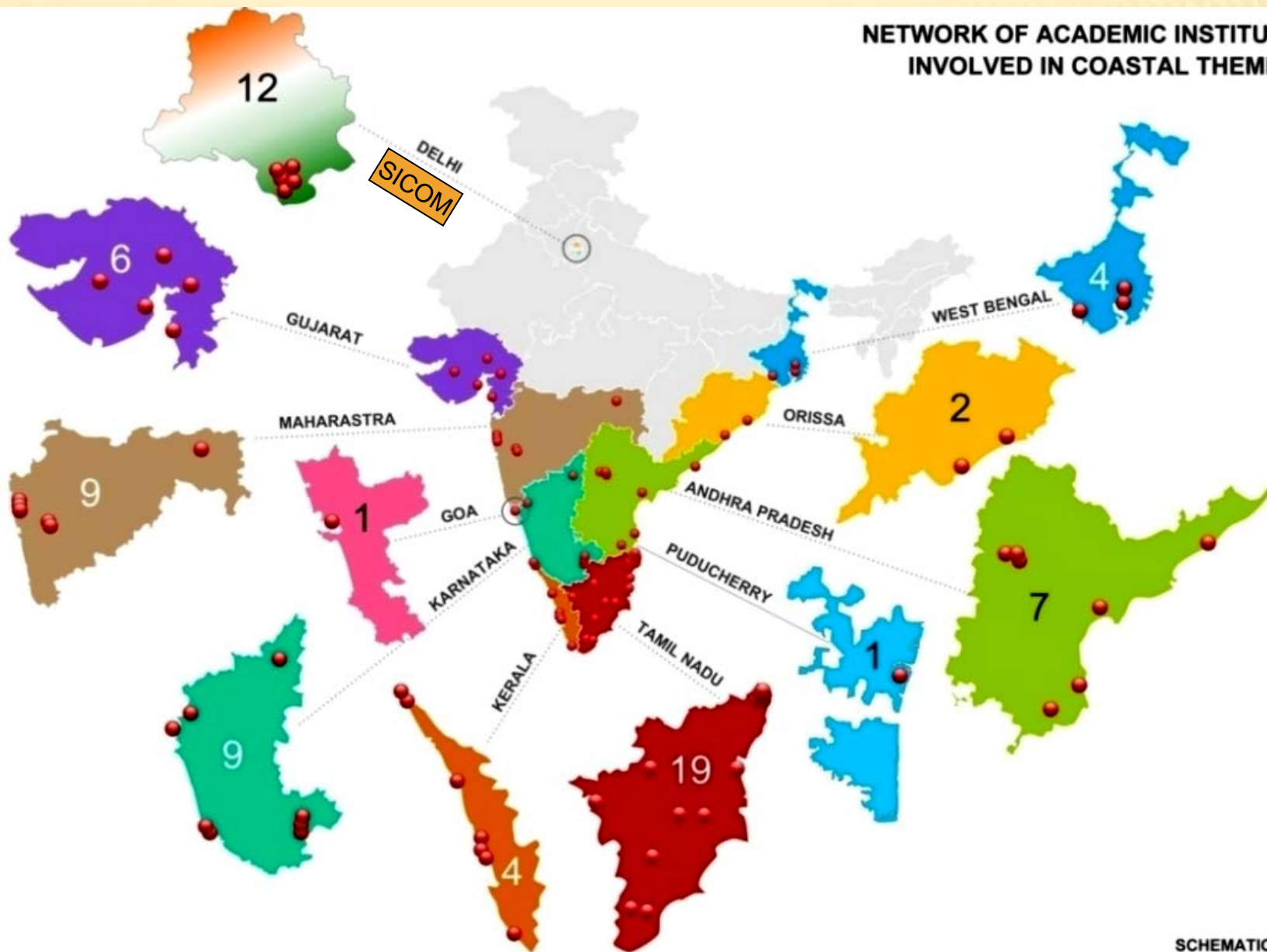


KNOWLEDGE, GOVERNANCE
AND POLICY DIVISION
(KGP)



FUTURISTIC RESEARCH
DIVISION (FTR)

NETWORK OF ACADEMIC INSTITUTIONS INVOLVED IN COASTAL THEMES



SCHEMATIC DIAGRAM
NOT TO SCALE

INTEGRATED COASTAL ZONE MANAGEMENT PROJECT

State Component in Gujarat – Gulf of Kachchh

State Project Management Unit –	Rs. 20.64 crore
ICZM Plan, SPMU	Rs. 13.43 crore
Coastal geo-spatial information system,	Rs. 5.76 crore
Socio-economic development of villages	Rs. 27 crore
Mangrove restoration,	Rs. 35.37 crore
Mangrove restoration, Marine National Park	Rs. 26.35 crore
Mangrove-coral reef regeneration, MNP	Rs. 10 crore
Marine oceanarium,	Rs. 30 crore
Ecotourism & livelihood improvement	Rs. 1 crore
Coral transplantation,	Rs. 15.74 crore
Underground sewerage system, JMC	Rs. 88 crore
Monitoring of Gulf of Kutchh, GPCB	Rs. 25 crore
Total	Rs. 298.34

INTEGRATED COASTAL ZONE MANAGEMENT PROJECT

State component in Orissa : Paradeep–Dhamra and Gopalpur-Chilka

State Project Management Unit	Rs. 14.72 crore
ICZM plan preparation,	Rs. 7.22 crore
Regional coastal studies,	Rs. 1101 crore
Capacity building wetland species research, CDA	Rs. 13.88 crore
Construction of embankment at Pentha Village	Rs. 18.90 crore
Capacity building Orissa State Pollution Control Board	Rs. 12.98 crore
Fisheries based livelihood option	Rs. 24.10 crore
Conservation archaeological and cultural assets (8 sites)	Rs. 7.42 crore
Construction of Multipurpose Cyclone Shelters	Rs. 13.89 crore
Livelihood Improvement through alternate option:	Rs. 3.61 crore
Tourism-based livelihood opportunity	Rs. 17.13 crore
Establishment of solid waste landfill	Rs. 14.38 crore
Mangroves Plantation and Protection of Wildlife	Rs. 18.51 crore
Ecotourism Bhitarkanika, Gahirmatha, Chilika	Rs. 23.82 crore
Total	Rs. 201.62

INTEGRATED COASTAL ZONE MANAGEMENT PROJECT

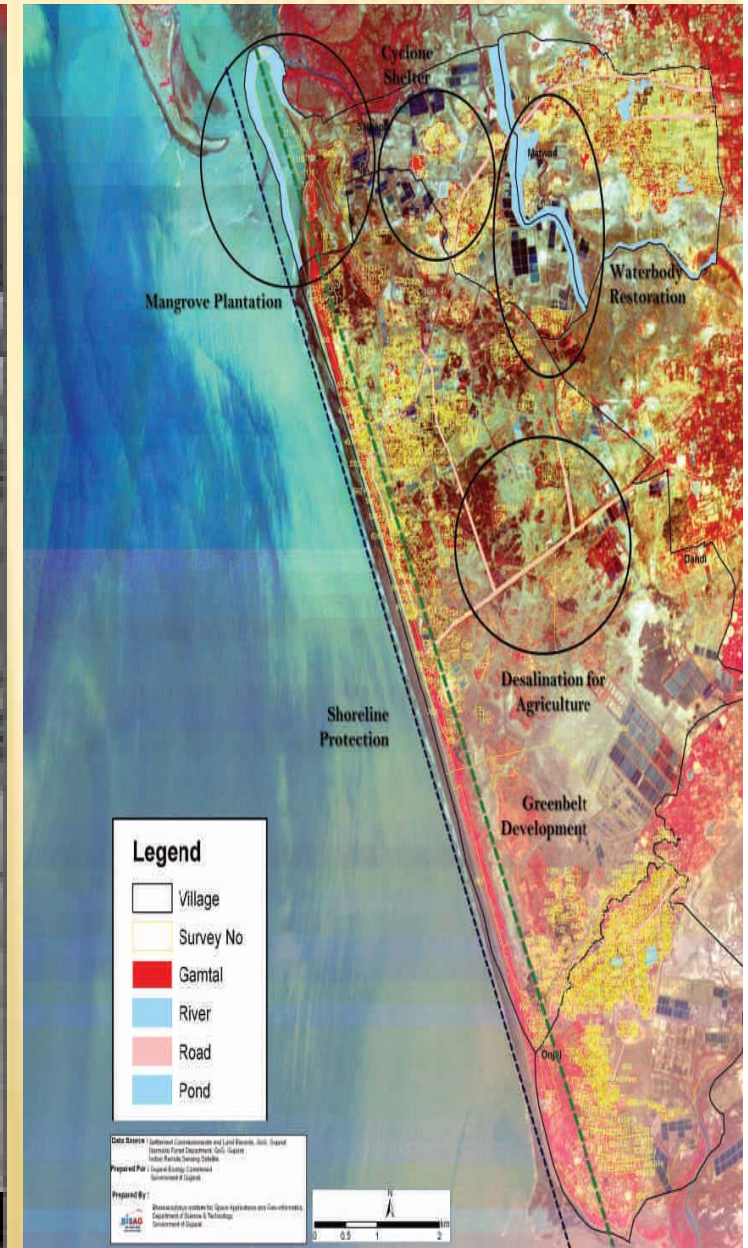
State component in West Bengal – Sagar Island, Digha - Shankarpur

1.	State project management unit	Rs. 22.13 crore
2.	ICZM plan preparation, SPMU	Rs. 13.66 crore
3.	Capacity building, E&F department and SPMU	Rs. 11.48 crore
4.	Development of ecotourism	Rs. 36.84 crore
5.	100 % household electrification in Sagar	Rs. 34.24 crore
6.	Afforestation programme towards coastal protection	Rs. 4.39 crore
7.	Marine aquarium cum research centre, Digha,	Rs. 2.68 crore
8.	Renovation of sanitary sewerage scheme for Digha area,	Rs. 30.08 crore
9.	Post harvest handling and fish auction centre at Digha Mohana,	Rs. 6.01 crore
10.	Beach cleaning & sanitation, beach beautification	Rs. 40.92 crore
11.	Solid waste management	Rs. 9.22 crore
12.	Development of drainage system	Rs. 14.93 crore
13.	Livelihood improvements & market access in Sagar island,	Rs. 30.10 crore
14.	Capacity building for remote sensing & GIS laboratory	Rs. 8.24 crore
15.	Capacity building for ICZM with regard to climate change studies	Rs. 1.28 crore
16.	Construction of cyclone shelter facilities in Sunderban –	Rs. 34.00 crore

Total =

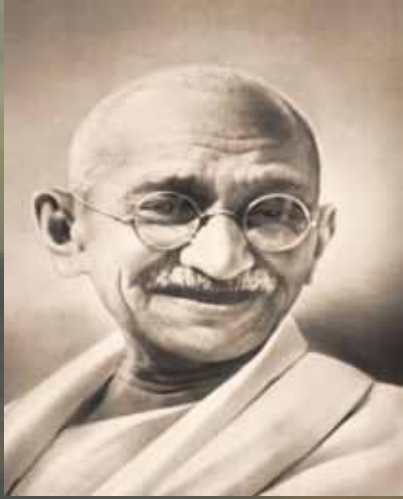
Rs. 300.26

Green Action for National Dandi Heritage Initiative (G.A.N.D.H.I.) Memorial



Green Action for National Dandi Heritage Initiative (G.A.N.D.H.I.) Memorial

- ✘ Conservation of the Coast and coastal resources
- ✘ Adopting Nature-based Development of Resources
- ✘ Promoting Integrated Village and Community Development.
- ✘ Promoting Eco-Tourism and “Environment-Positive” Branding of Destination Dandi



**“Nature provides for
everyone's need, but
not for everyone's
greed”**

- Mahatma Gandhi

A background image of a sunset over the ocean. The sun is low on the horizon, creating a warm, golden glow. Several sailboats with dark sails are visible on the water. In the foreground, there are dark, rocky outcrops.

THANK YOU