

Regional Media Briefing Workshop on Coasts, Coastal Populations and their Concerns

- *"Whither Ports or Beaches?"* -

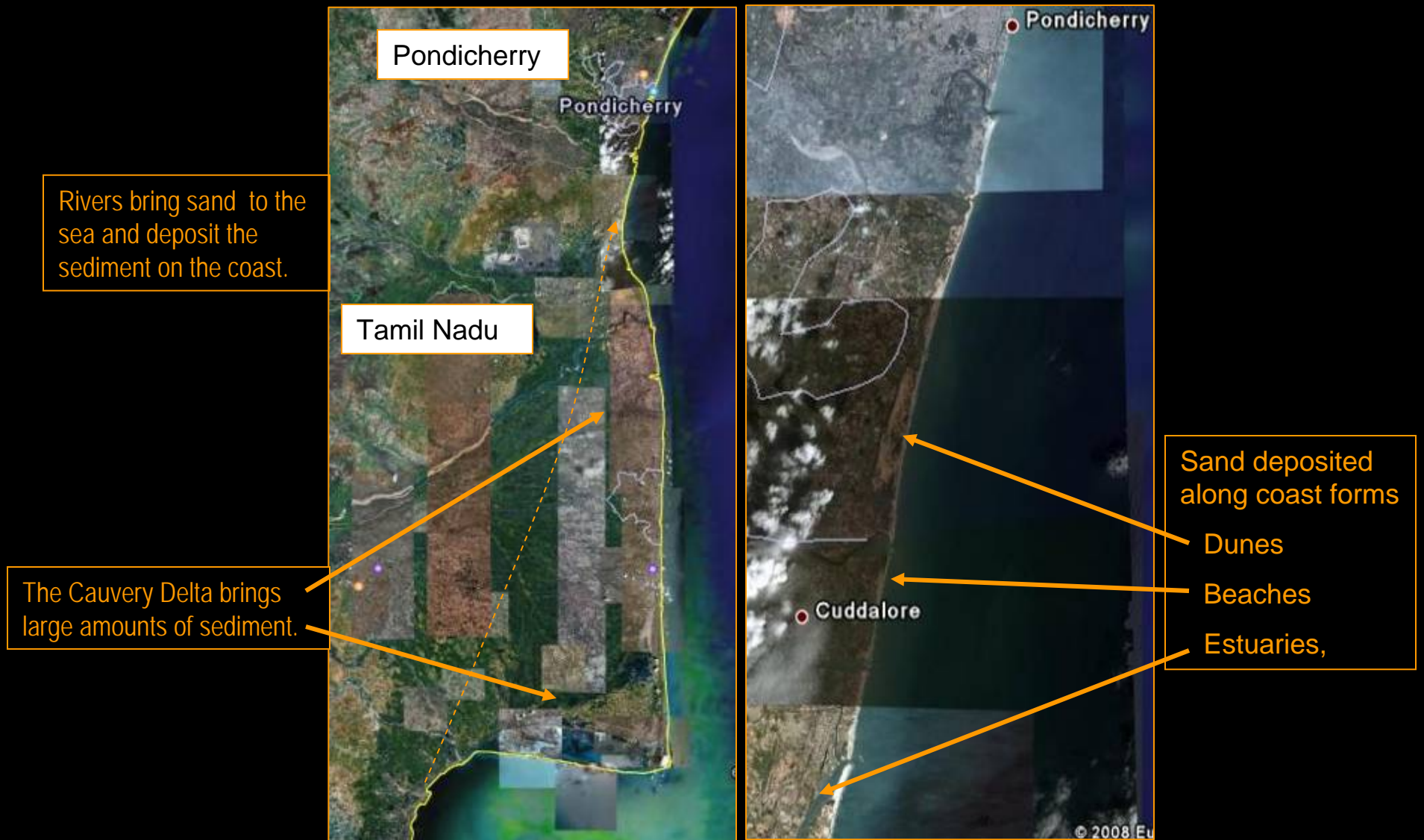
Goa

13th and 14th August 2010

PondyCAN!
Pondy Citizens' Action Network

-Coastal Dynamics -

FORMATION OF NATURAL SANDY BEACHES



NATURAL SAND MOVEMENT ALONG COASTLINE



Beaches are like rivers of sand.
This natural sand movement is a dynamic process
which plays a major role along our coast.



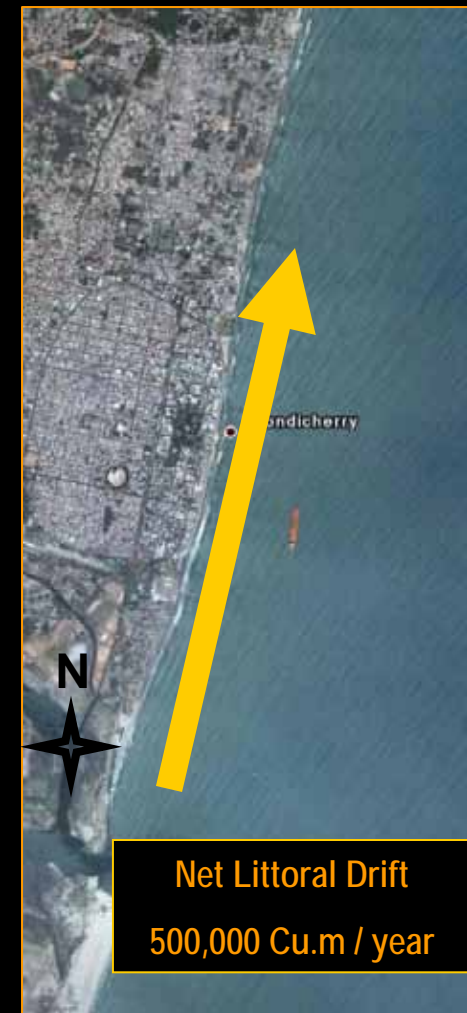
The Wind and Waves are
engines of sand transportation.

LITTORAL DRIFT EQUATION :

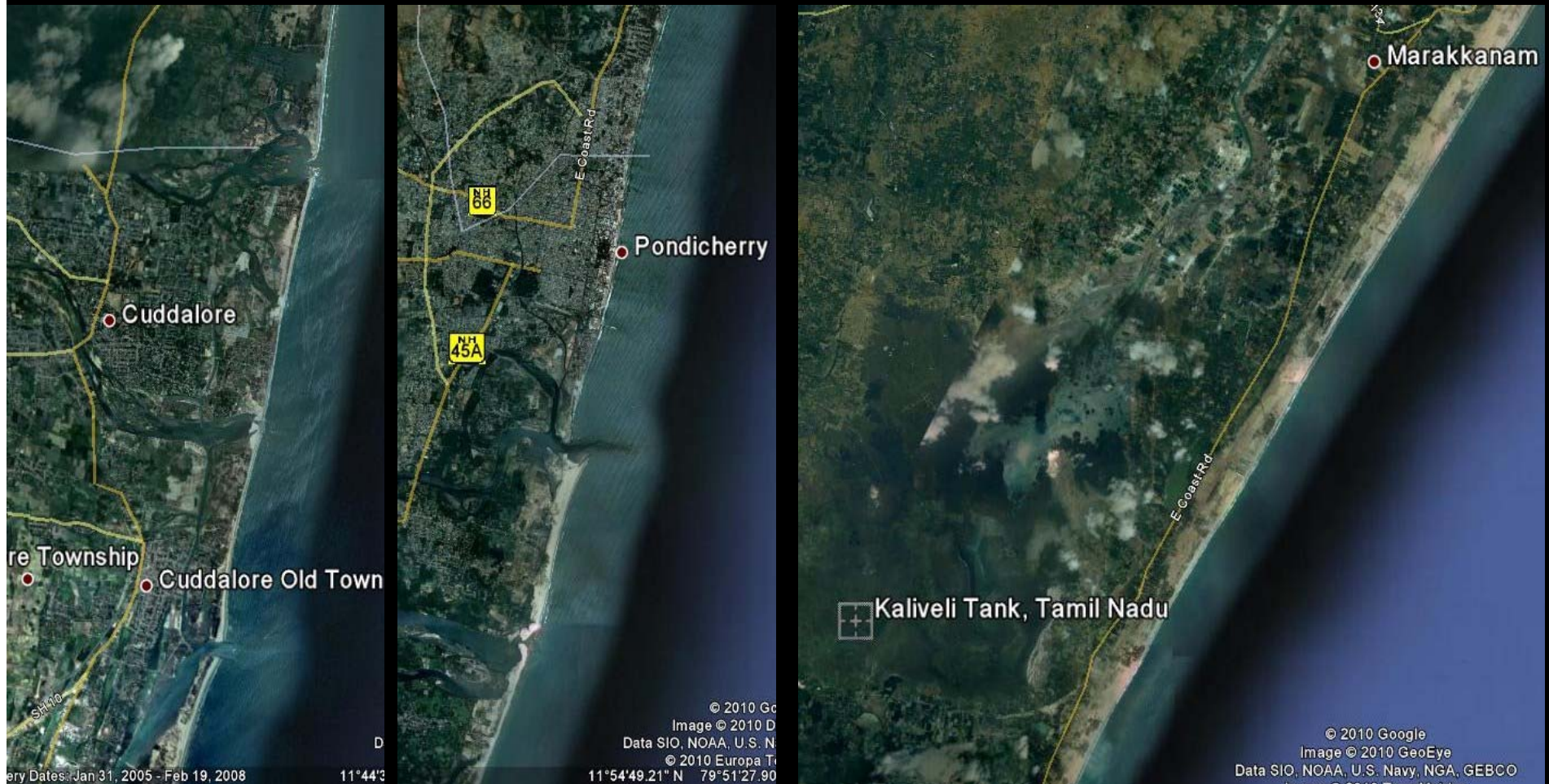
During SW Monsoon: 600,000 Cum.
(9 months)

During NE Monsoon: 100,000 Cum.
(3 months)

= Net displacement 500,000 Cum.
(northwards)



NATURAL COASTAL ECOSYSTEMS



Vital role in India's economy by virtue of the resources, productive habitats and rich biodiversity
Salt marshes & beaches support a diversity of plants, animals, & insects crucial to the food chain

NATURAL SANDY BEACHES - A PART OF OUR NATURAL AND CULTURAL HERITAGE

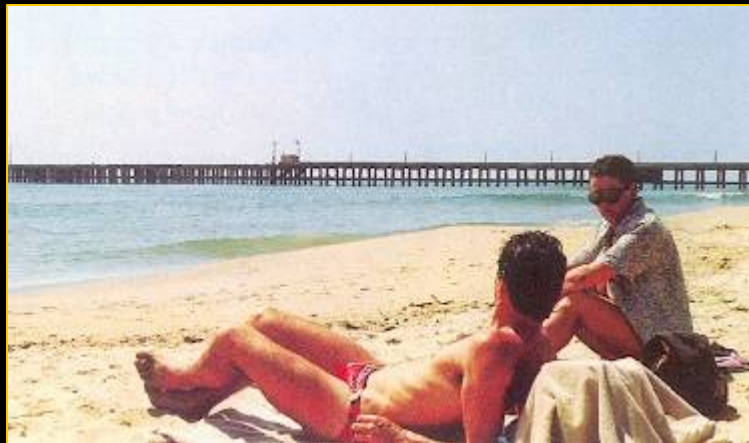
It protects us from cyclones and tsunamis



Sustains homes and livelihood of fishermen



Prevents ground water from becoming saline



Natural space for recreation,



tourism



festivals ...

INDIA'S COASTLINE - FACTS

- Total length of about 7500 km
- Supports almost 30% of the country's population
- Plays a vital role by virtue of the resources, productive habitats and rich biodiversity
- 7th largest fishing nation in the world
- Coastal vegetation habitats serve as buffers to protect the shore line from storms & modulates land-ocean interactions
- Provides many nutrients for marine life,
- Supports a diversity of plants, animals, and biota crucial to the food chain
- Beaches prevent salt water intrusion into the groundwater
- A crucial barrier against invaders, smugglers and illegal migrants
- Provides economic development opportunities such as ports and tourism



- The story of the Pondicherry Coast -

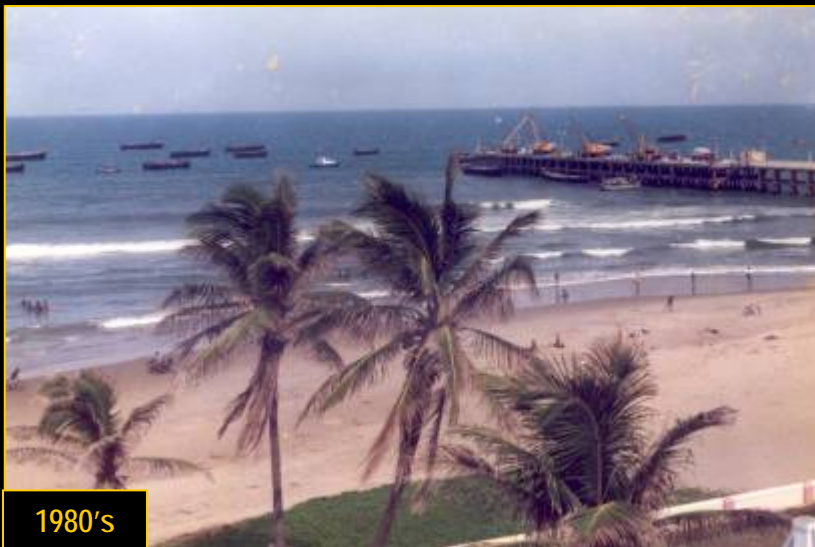
MEMORIES OF THE PONDICHERRY BEACH



1950's



1980's



1980's

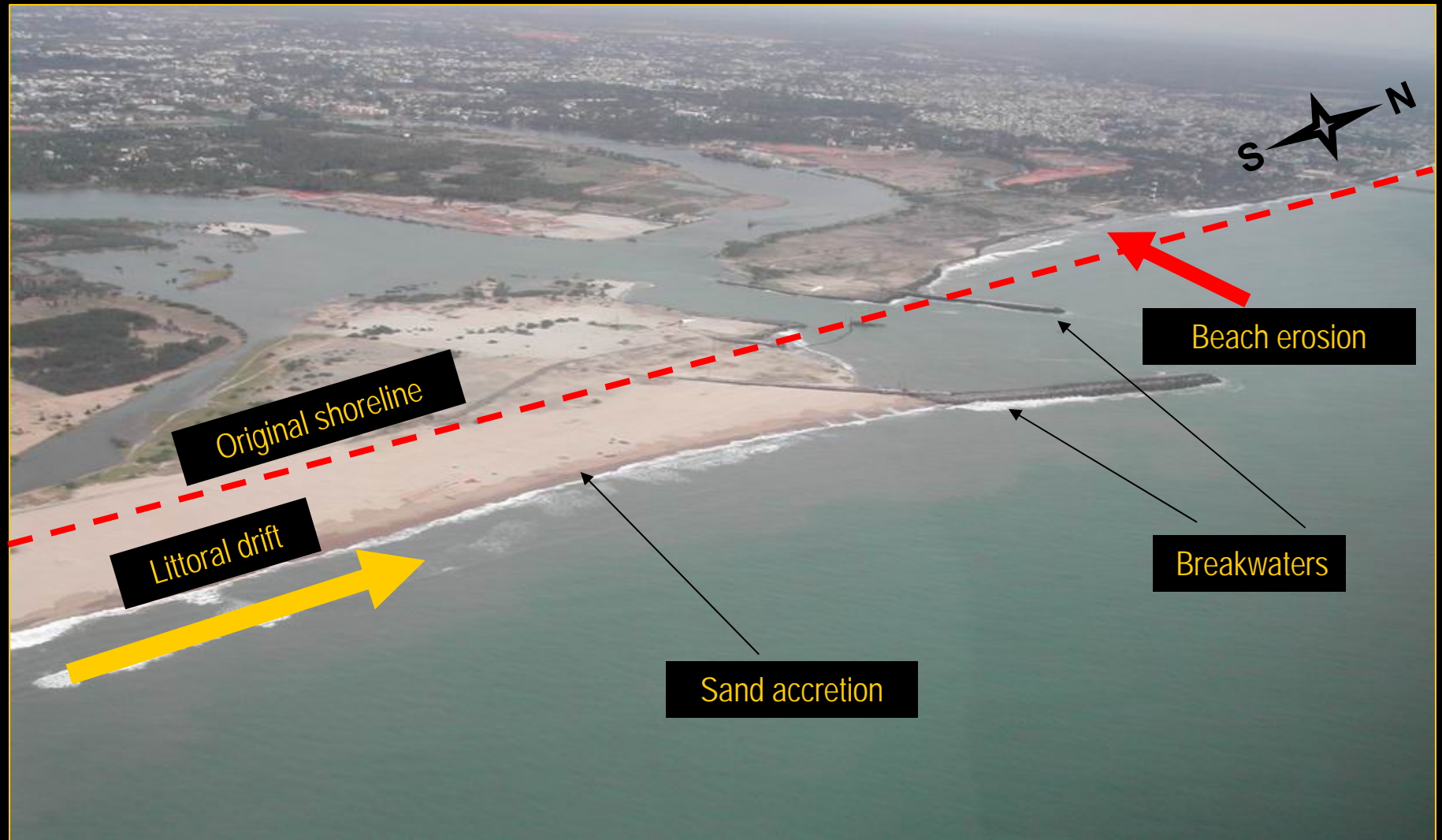


1980's

Wide natural sandy beaches, dunes, estuaries, livelihood opportunities...

HARBOUR BUILT IN 1986 BY THE GOVERNMENT OF PONDICHERRY

The harbour acts like a dam and blocks the natural movement of sand.



This man-made blockage of sand starves the beaches to the north of the harbour and triggers erosion.

PLANNED MITIGATION : SAND BY-PASSING SYSTEM

Proposed by: Central Water & Power Research Station (CWPRS), Pune, 1978.

Designed by: Consulting Engineering Services (CES), New Delhi, 1981.



EROSION CAUSED BY PONDICHERRY HARBOUR

BEFORE 1980



AFTER 2000



The Pondicherry Town lost all its beaches, dunes, estuaries, livelihood opportunities...

WIDESPREAD DESTRUCTION IN PONDICHERRY & TAMIL NADU COAST



INSTEAD OF SAND BY-PASSING THE GOVT BUILT SEAWALLS



Use of ad hoc, unscientific, poorly studied coastal protection measures.

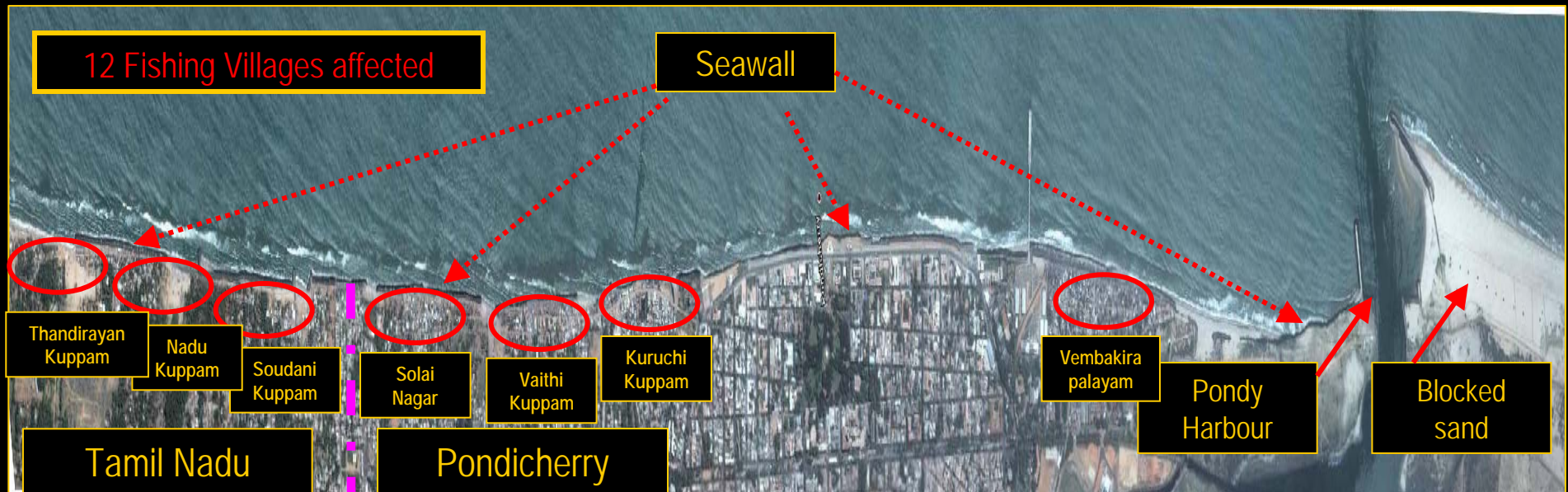
LOSS OF LIVELIHOOD OF TRADITIONAL FISHERFOLK



Open access to the sea, space for parking boats, repairing nets, drying fish, etc is lost



GoP REVENUE DEPT SURVEY: 7000 FAMILIES VULNERABLE TO INUNDATION



IMPACTS OF EROSION ALONG PONDICHERRY AND TAMIL NADU

- Since the construction of the harbour and seawalls:
- 10 km of coastline destroyed.
 - 30 km of coastline affected.
 - More than 200 acres of beach land worth hundreds of Crores lost -



The coast prone to cyclones and tsunamis



Loss of homes and livelihoods



Agricultural land turned to wasteland



Loss of space for recreation, tourism & natural coastal processes

Salt water intrusion has turned the ground water saline

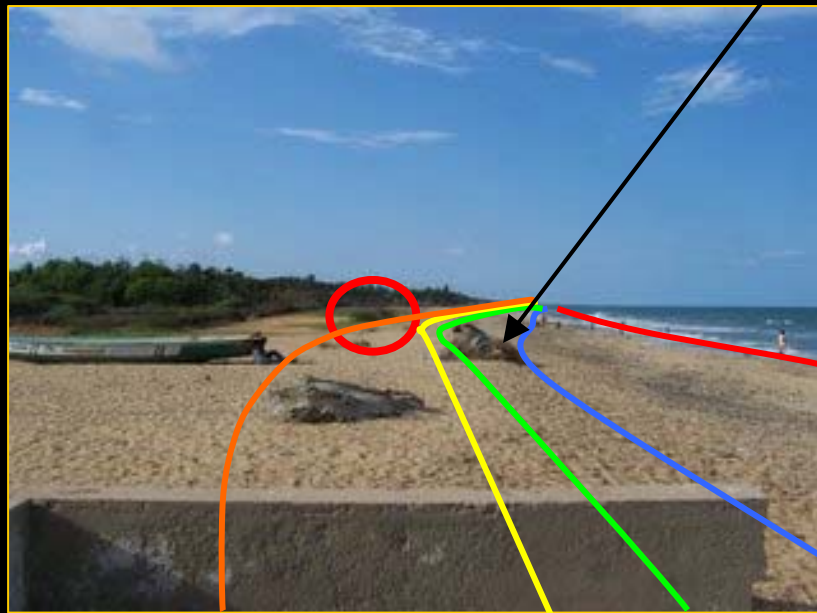
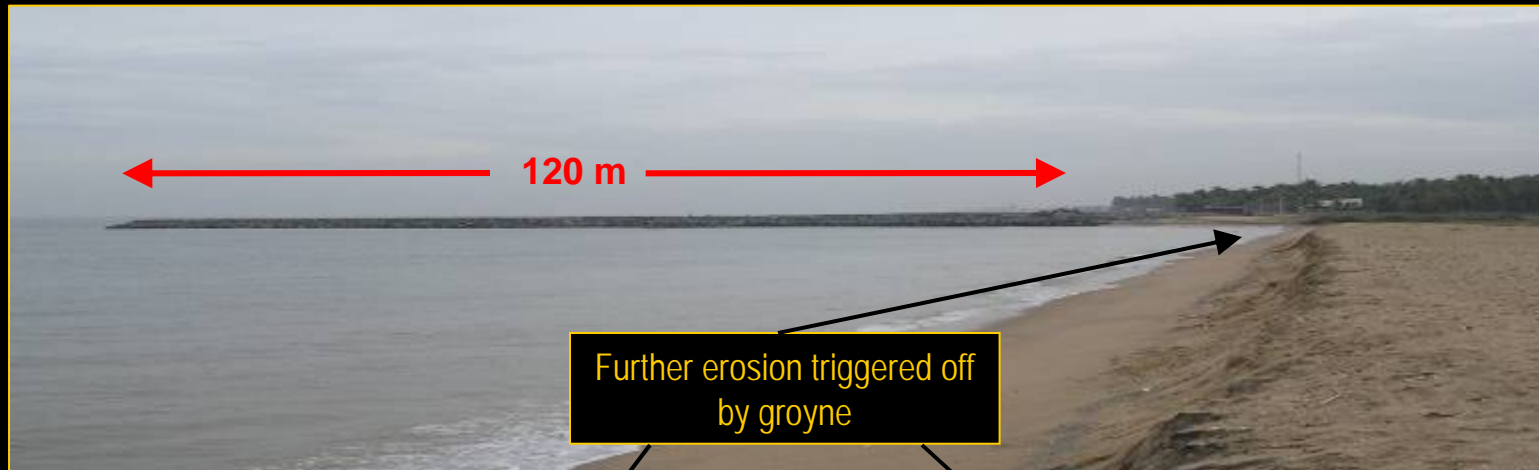
PONDICHERRY- AN EROSION HOTSPOT (EROSION > 1 M/Y)

Erosion along Pondicherry Coast is one of the highest in India
Long-shore erosion: 10 km in 20 years= 500 m/y = ~ 1.5 m/d
Mean cross-shore erosion: 70 m width in 20 years= ~ 3.5 m/y



.....shoreline recession in 3 months.....

FURTHER AGGRAVATION DUE TO CONSTRUCTION OF GROYNES



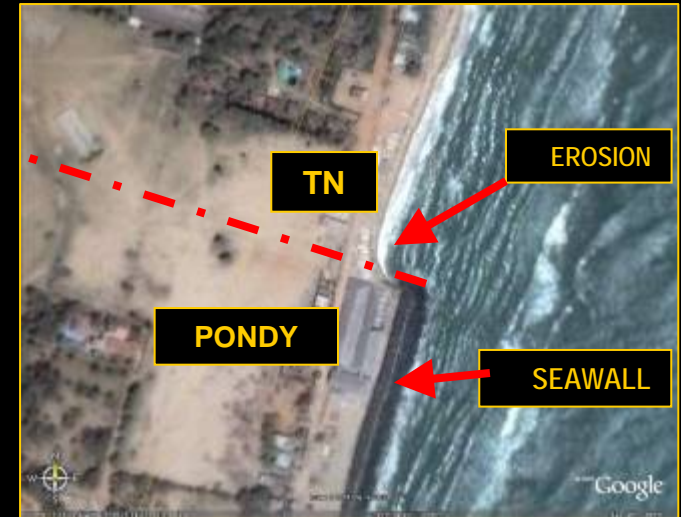
18th July '07 28th June '07 6th June '07



THE PROBLEMS WITH "HARD" STRUCTURES

- Disturbs Natural Movement of Sand
- Increases & accelerates erosion
- Transfers problem down the coast
- Has to continue forever as rocks keep sinking
- Changes the coastal ecosystems
- Hinders traditional fisher-folk
- Requires huge sums of public money
- Does not protect us from big waves
- Mountains have to be destroyed

Is this sustainable?



IN 2003 SAND NOURISHMENT HAD SHOWN POSITIVE RESULTS

Before Nourishment (2001)



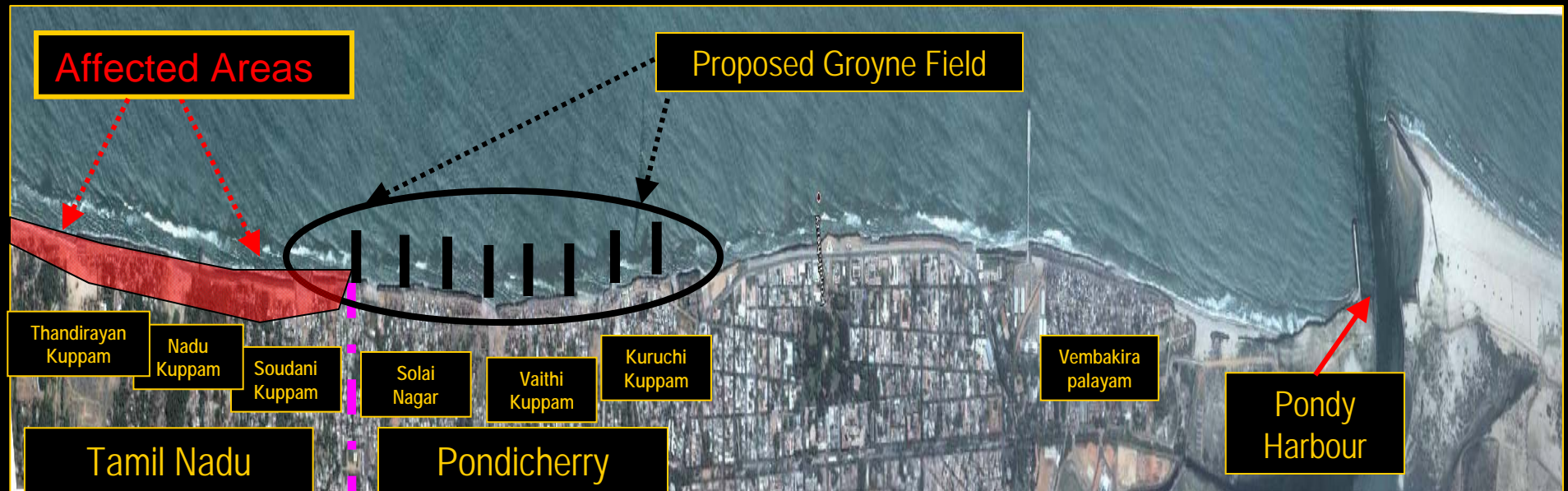
After Nourishment (2003)



Unfortunately it was abandoned soon after.

MORE "HARD" STRUCTURES PROPOSED

Govt. of Pondicherry now proposes more groynes to retain sand only along its shores.



If allowed, erosion will spread increasingly into neighboring Tamil Nadu.

- In search of Solutions -

Consultation with Experts, Government Officials & Coastal Communities

CONSULTATION MEET IN AUROVILLE, 3rd Nov'07

"Protection and Restoration of Pondicherry-TN coastline"



Experts on Coastal Management



Govt officials from Pondicherry and TN

It was unanimously agreed that the harbour was the cause of erosion. The Governments of Pondicherry and TN will work jointly for a holistic solution which is eco-friendly, livelihood sensitive and sustainable:

- Activate the sand by-pass system.
- Capital dredging to make up for the backlog of 20 years
- The harbor to be redesigned to minimize dredging costs

SOLUTION & IMMEDIATE REQUIREMENT:

Restoration of the coastal environment & livelihoods in Pondicherry & Tamil Nadu

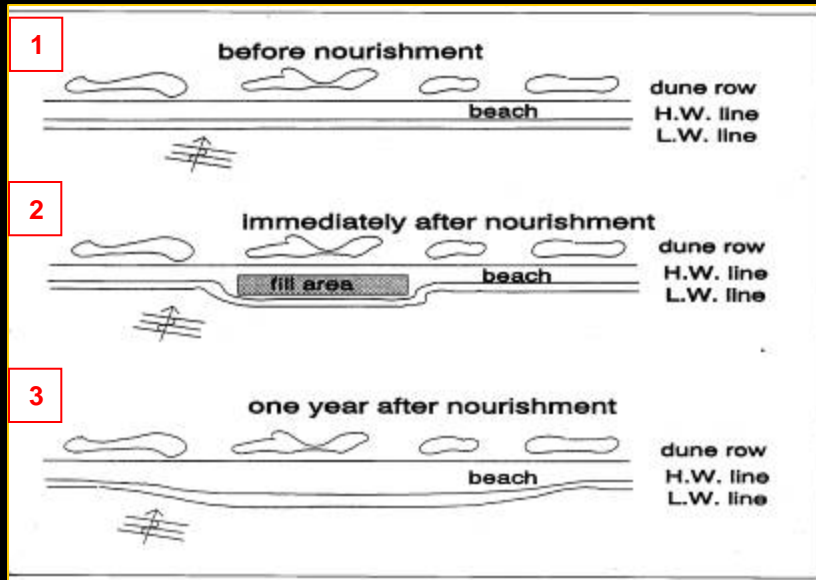


Capital dredging and beach nourishment.



Continuous sand by-passing.

EXAMPLE OF BEACH RESTORATION



CONSULTATION MEET IN PONDICHERRY, 4th May '09

"Government Policies on Ports & Harbours and its Impacts on Coastal Ecology, Livelihood Resources and Fishing Communities"



Experts on Coastal Management



Fishing Community Representatives, NGOs

RESOLUTION: Not to allow unplanned, indiscriminate and unjustified construction of coastal structures along our coastline until and unless:

- Damaged coastal areas are studied, restored and monitored.
- Affected coastal communities are consulted and rehabilitated.
- Fishing and coastal community land rights are recognized.

- *The proposed Deep Water Port in Pondicherry -*

An impending danger

INFLICTING FURTHER INJURY ON THE BATTERED COASTLINE

A small harbor caused such massive destruction, imagine the impact of a major port.

Existing Harbour



- Land area: 150 acres.
- Cargo handling: 0.05 MTA. (average)
- Breakwaters: 250 m long.
- Depth: Max. 4 m.

Proposed Port



- Land area: 400 acres (min.)
- Cargo handling capacity: 20 MTA.
- Breakwaters: 750 m long.
- Depth: Max. 14 m.

LEARNING FROM PAST EXPERIENCE

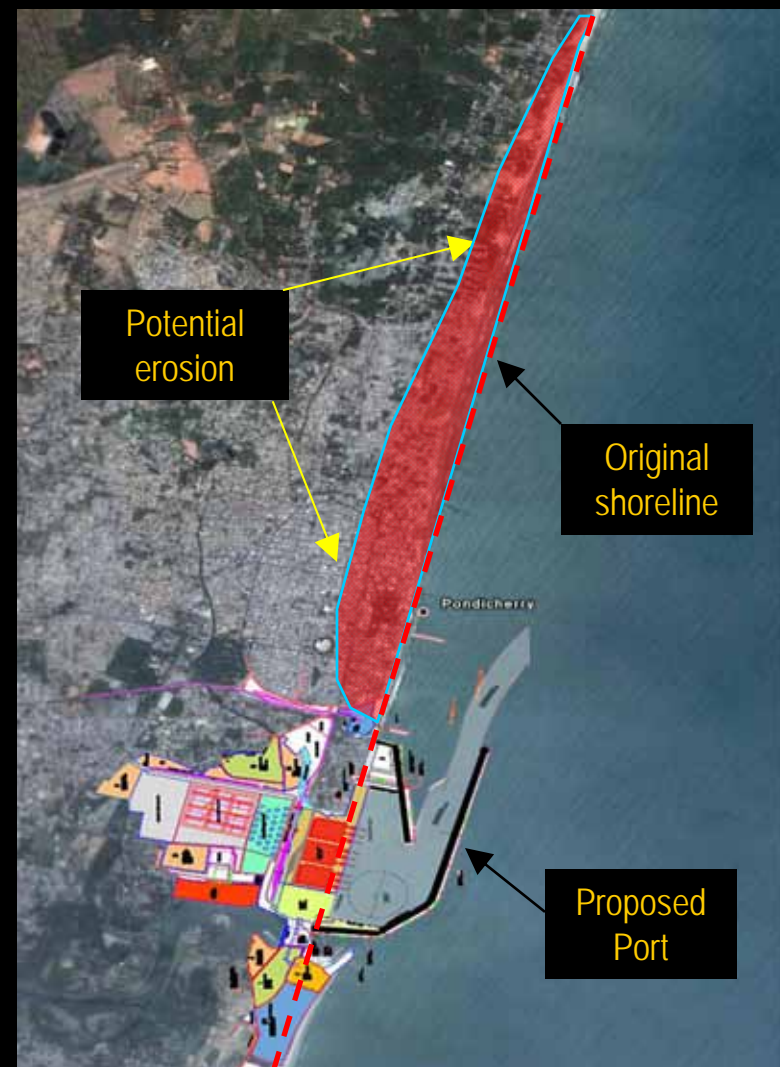
Chennai Port is in the north of the city.

Marina beach formed in the south
but the north side got severely eroded.

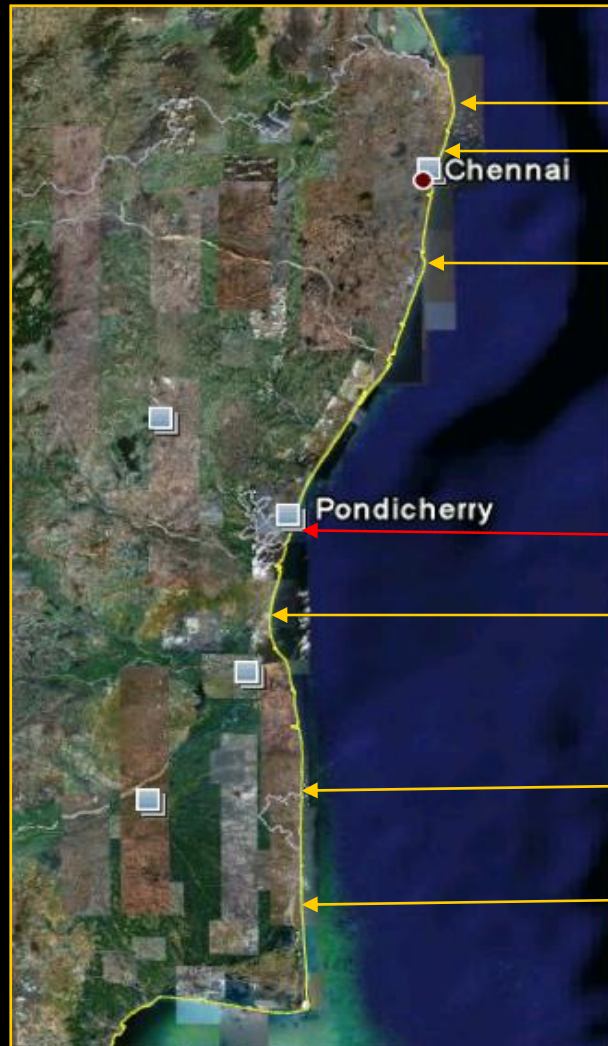


Port Proposed in Pondy is in the south.

The town is potentially under the risk
of getting inundated



DOES A SMALL HERITAGE TOWN NEED THIS LARGE PORT?



Ennore Port

Chennai Port

Cheyur Port

Pondicherry ?

Cuddalore Port

Karaikal Port

Nagapattinam Port



Erosion, Pollution and Congestion?



Or Beach, Fresh air and Peace?

This project will be an environmental, social and economic disaster for "Peaceful Pondicherry".
The port area could become a Marina cum Park for its citizens and visitors.

- The National Perspective -

Man-made erosion affecting India's coastline

DEVELOPMENT PRESSURES ON INDIAN COASTLINE

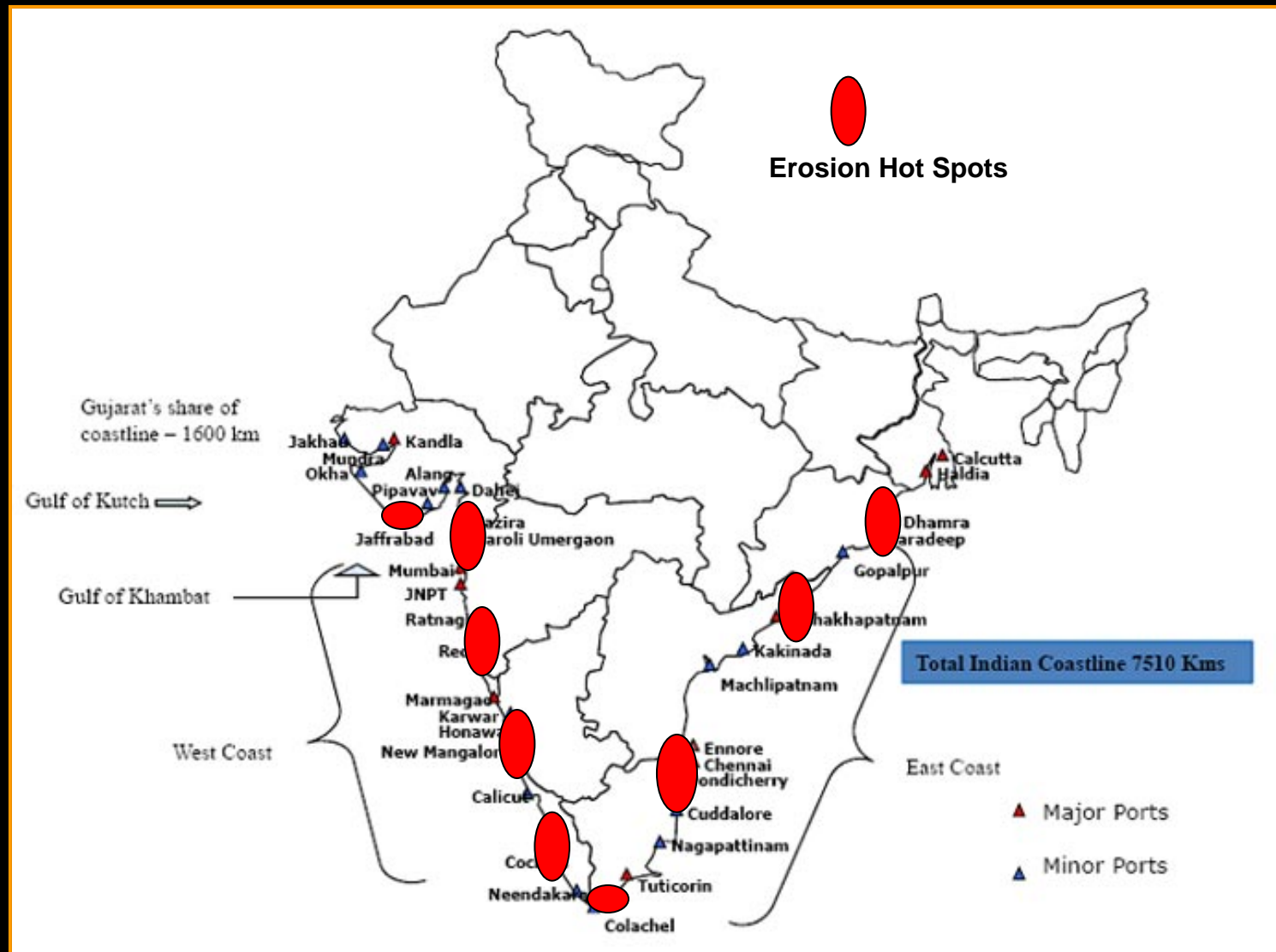
Till date 199 notified ports: - 13 Major
- 213 Minor Intermediate (currently around 70 are operational).

Port Development - 11th five year plan of Govt. of India: **331 ports identified for Development**
ONE PORT EVERY 20KMS!!!



MAN-MADE EROSION IS A NATIONAL CONCERN

ICMAM-INCOIS Study: ~ 25% Of India's Coastline is eroded!



DEVELOPMENTS THAT THREATEN INDIA'S COASTLINE



Ports & Harbours



Power Plants



**Commercial
Encroachments**



COASTAL EROSION



**Coastal
structures**



Sand mining



Large dams

REPORT OF THE EXPERT COMMITTEE CONSTITUTED BY MOEF

The Expert Committee on the draft CMZ notification constituted by the MoEF under the Chairmanship of Professor M.S. Swaminathan noted in its report "The Final Frontier":

"Currently, the shoreline of the country is undergoing a major change because of a large number of port and harbor projects. Experts are unanimous that each structure would impact the shoreline – particularly the beach formation. Already, many of these infrastructure have caused significant shoreline changes – like in Ennore, Puducherry, Alibag, Digha and Dahej.

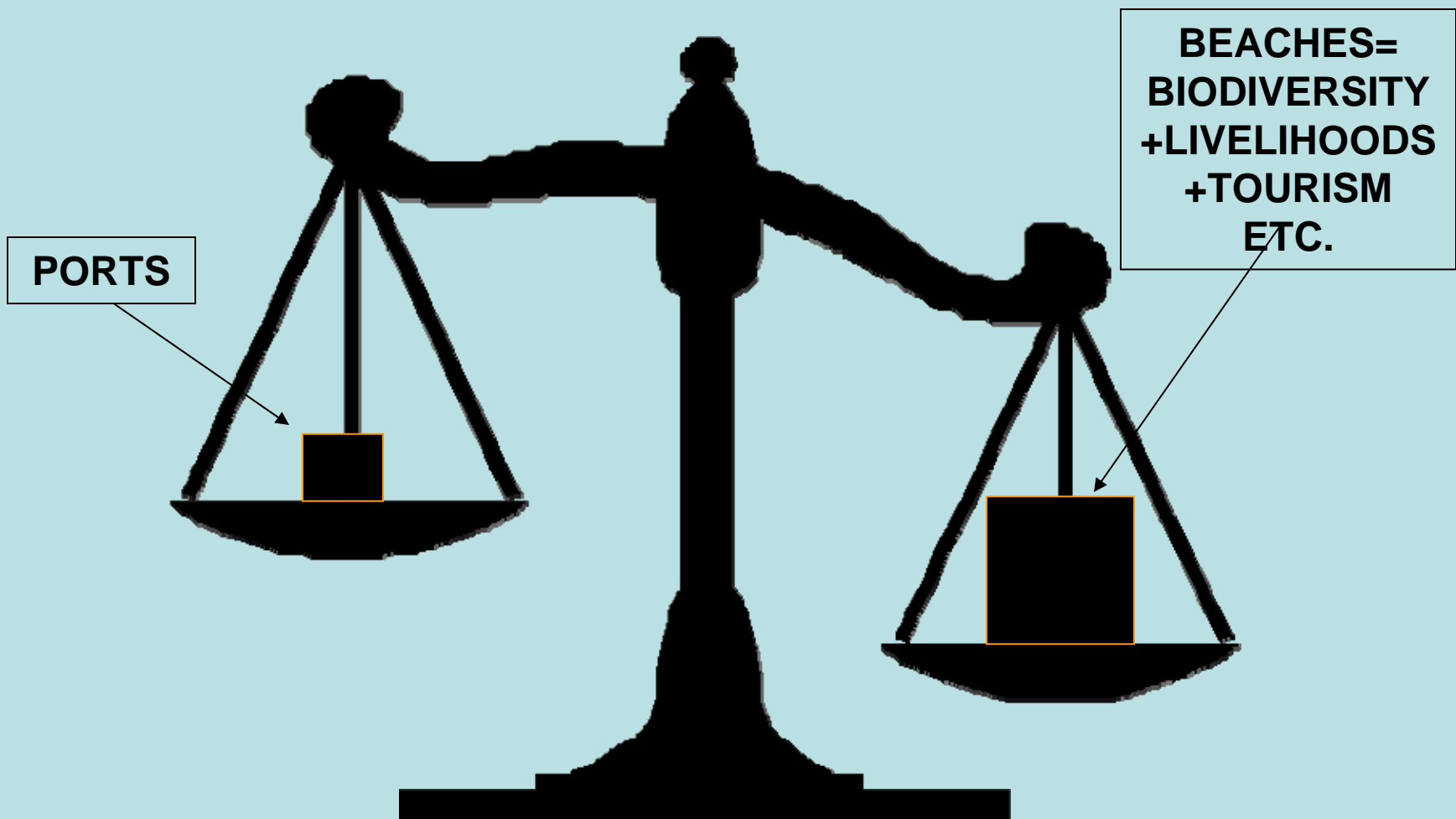
"These developments have all led to serious threats to the coast, as especially beaches face severe erosion and shorelines are visibly changing. Given that the Central and state governments propose to construct several ports and harbors all along the shore in the coming years, these projects could have irreversible adverse impacts on the coast."

The Committee recommended the following:

- The government must immediately study the cumulative impacts of the individual projects on the coastline, pending which there should be a moratorium on expansion of existing ports and initiation of new projects.
- The CRZ 1991 should be modified to include the seaward side so that port projects are regulated in terms of their impacts on the sea and its land interface.

- Coastal Development for a Sustainable Future -

WHITHER PORTS OR BEACHES



SUGGESTIONS AND RECOMMENDATIONS FOR A POLICY BY NCPC – an alliance for the protection of coastal environment and livelihoods

BASED ON NATIONAL DELIBERATIONS:

I) Assessment of existing ports and coastal structures

- Ecological, Social and Environmental impacts
- Cumulative impacts of ports
- Mitigation costs (derived from pilot projects)
- Current Efficiency and potential up gradation
- Improvement of infrastructure (road and rail connectivity etc)
- Declare affected areas as man-made "disasters"

II) Assessment of future port development

- Demands from all the sectors needing the coast
- Number of ports required and suitable locations
- Match port development with the carrying capacity of India's coastline

SUGGESTIONS AND RECOMMENDATIONS FOR A POLICY BY NCPC – an alliance for the protection of coastal environment and livelihoods

III) Liability

- Formulation of Liability Clauses
- Setting up a Liability Fund (based on cost of mitigation and restoration)
- Effective Enforcement Agency (to ensure compliance)

IV) Partnerships for effective implementation and monitoring

Central and State Governments, Experts, Coastal communities, Funding Agencies & Media

V) Funding

- Scientific Research of the coastal environment
- Awareness creation, training and capacity building
- Building local infrastructure for coastal zone management
- Restoration of affected coastlines

WE MUST PROTECT THIS PRECIOUS NATIONAL ASSET FOR FUTURE GENERATIONS
NO BEACHES = NO LIVELIHOODS, NO LIFE, NO PROSPERITY, NO HAPPINESS...

Thank you!

PondyCAN!
Pondy Citizens' Action Network

No 34, Rue Francois Martin, Pondicherry- 605012

Ph: 91-413-4201972

E-Mail: info@pondycan.org

Website : www.pondycan.org