Building up Resilience for Climate Change in a Coastal Community of Tamil Nadu, India

Guilherme M. O. Abuchahla[1], Wilhelm Windhorst[2], and Yara Schaeffer-Novelli[3]

[1] Post-Graduation Program in Environment Science, University of São Paulo, São Paulo, Brazil
E-mail: abuchahla@usp.br

[2] Ecology Centre, Christian-Albrechts-Universität zu Kiel, Kiel, Germany

[3] Oceanographic Institute, University of São Paulo, São Paulo, Brazil

Summary

Community-based ICZM

In today's world the urge for economic growth overwhelms the need to consider sustainable development

In order to ensure the sustainable use of the coastal resources, it is important to facilitate alignment of interests of the many stakeholders over the issue

Community-based ICZM

Several studies stress the importance of applying traditional knowledge in the implementation of ICZM (Integrated Coastal Zone Management) plans within a region

(PONS & FISELIER, 1991; ARMITAGE, 2002; LINTON & WARNER, 2003; WILKINSON *et al.*, 2006; BARBIER, 2007)

Resilience and sustainability

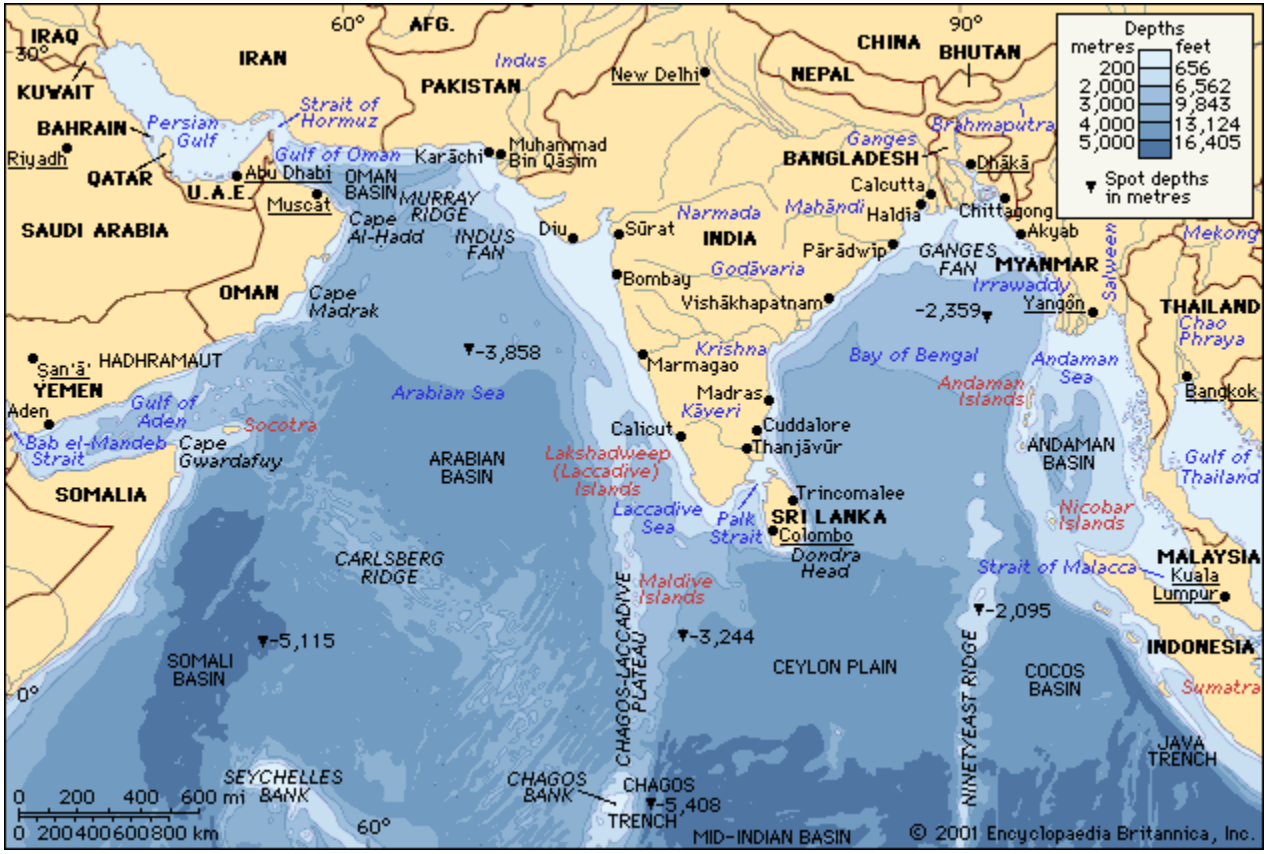
Resilience is a key concept in order to reach sustainability

Sustainability can only be reached when society start conserving coastal ecosystems' productivity, capacity, and resilience

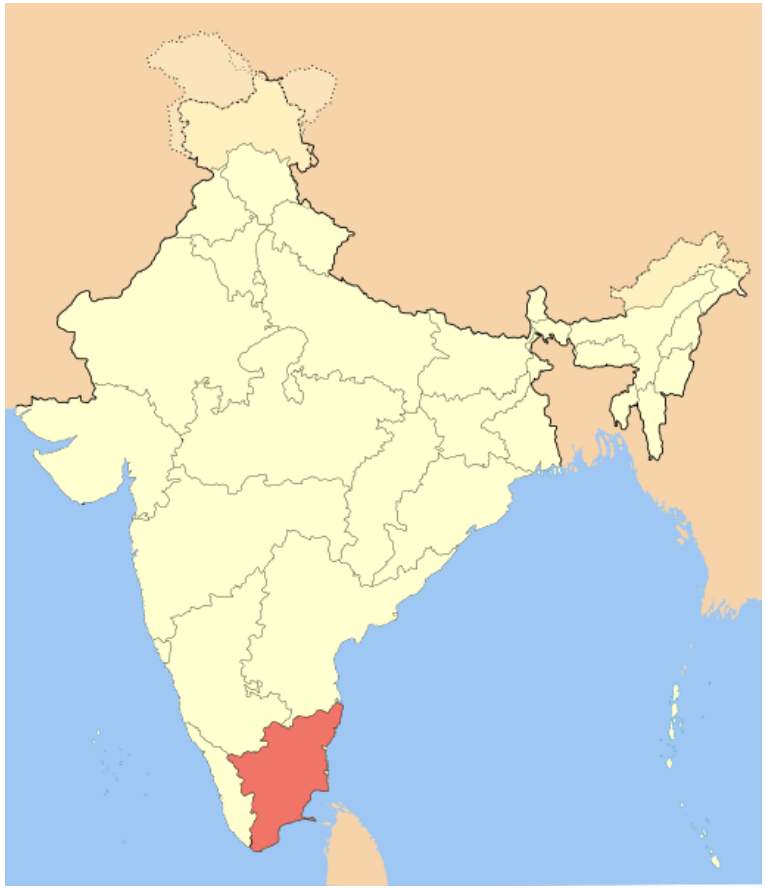
Given the current uncertainty about climate change and the growth of weather catastrophes, it is advisable to proceed cautiously

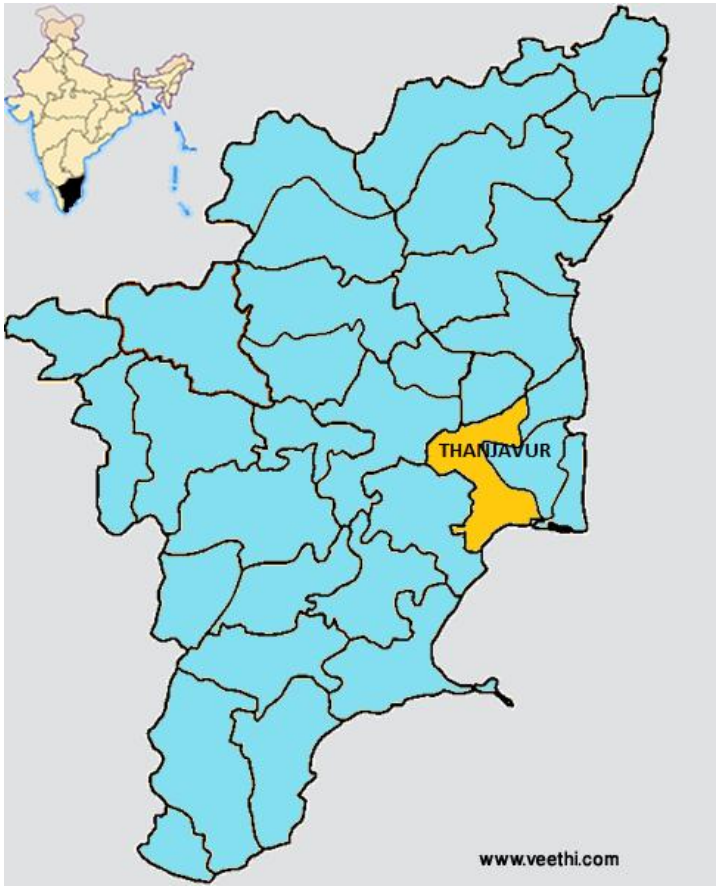
(CINTRÓN-MOLERO & SCHAEFFER-NOVELLI, 2005)

The village of Keezhathottam

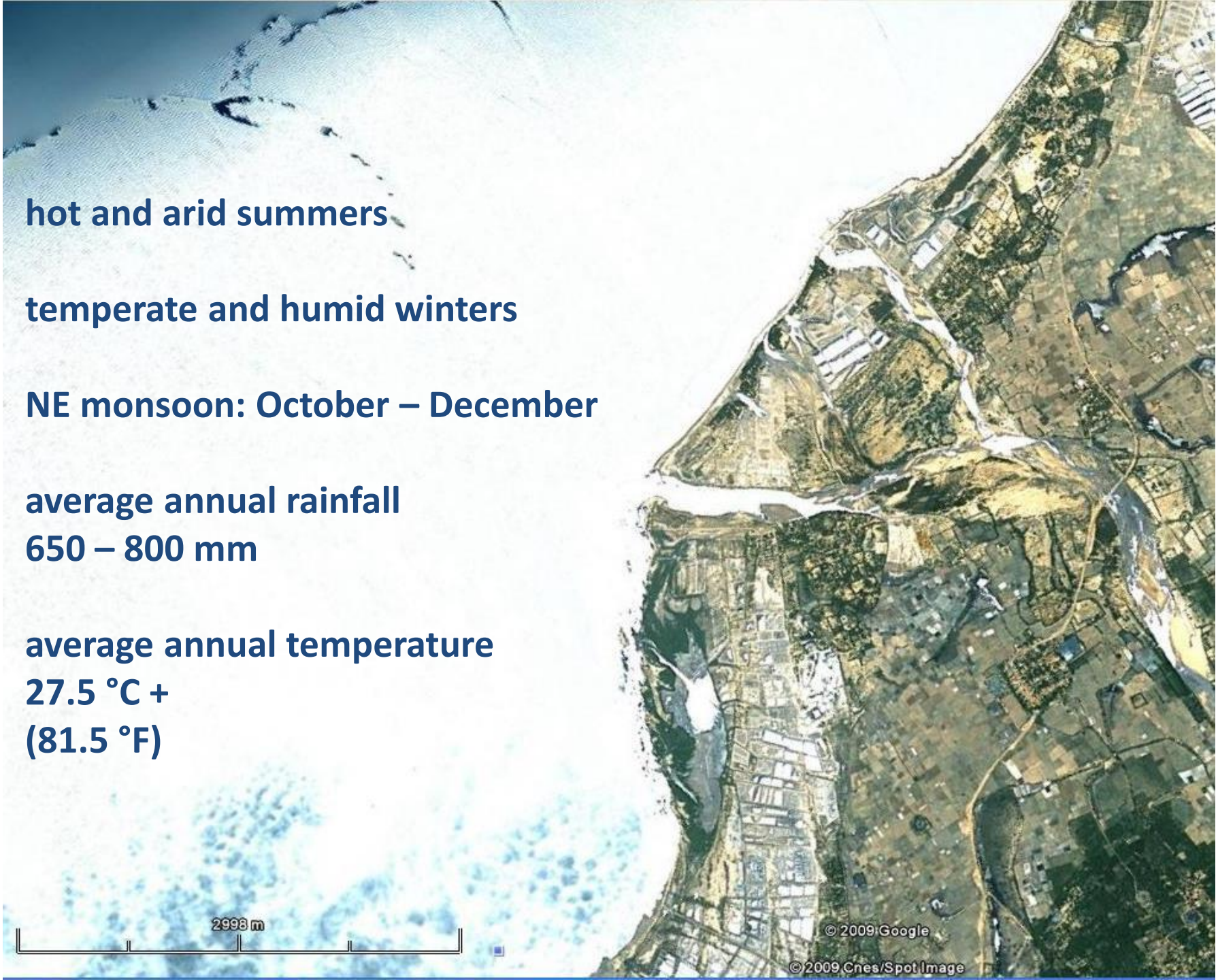


The village of Keezhathottam






PALK BAY
10°17’N 079°21’E



hot and arid summers

temperate and humid winters

NE monsoon: October – December

average annual rainfall
650 – 800 mm

average annual temperature
27.5 °C +
(81.5 °F)

70% informal jobs
fishing, agricultural activities, and manufacturing of coconut thatches

handpicking of fish, crabs and molluscs in the mangroves

First step

Listening to people's priority issues

Free survey carried on by OMCAR (BALAJI, 2005)

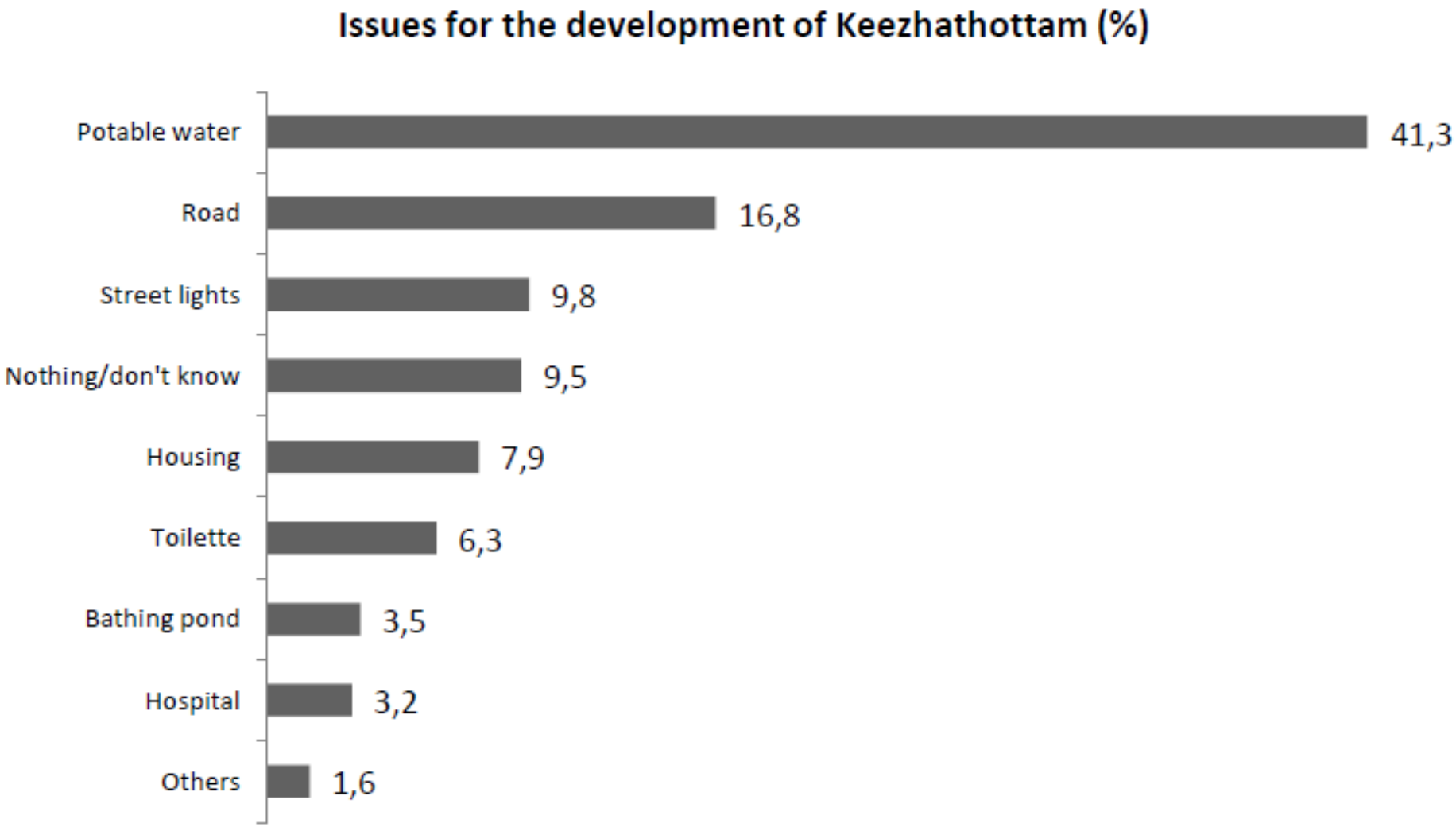
(Organisation for Marine Conservation, Awareness and Research)

NGO based in Pattukkottai, India

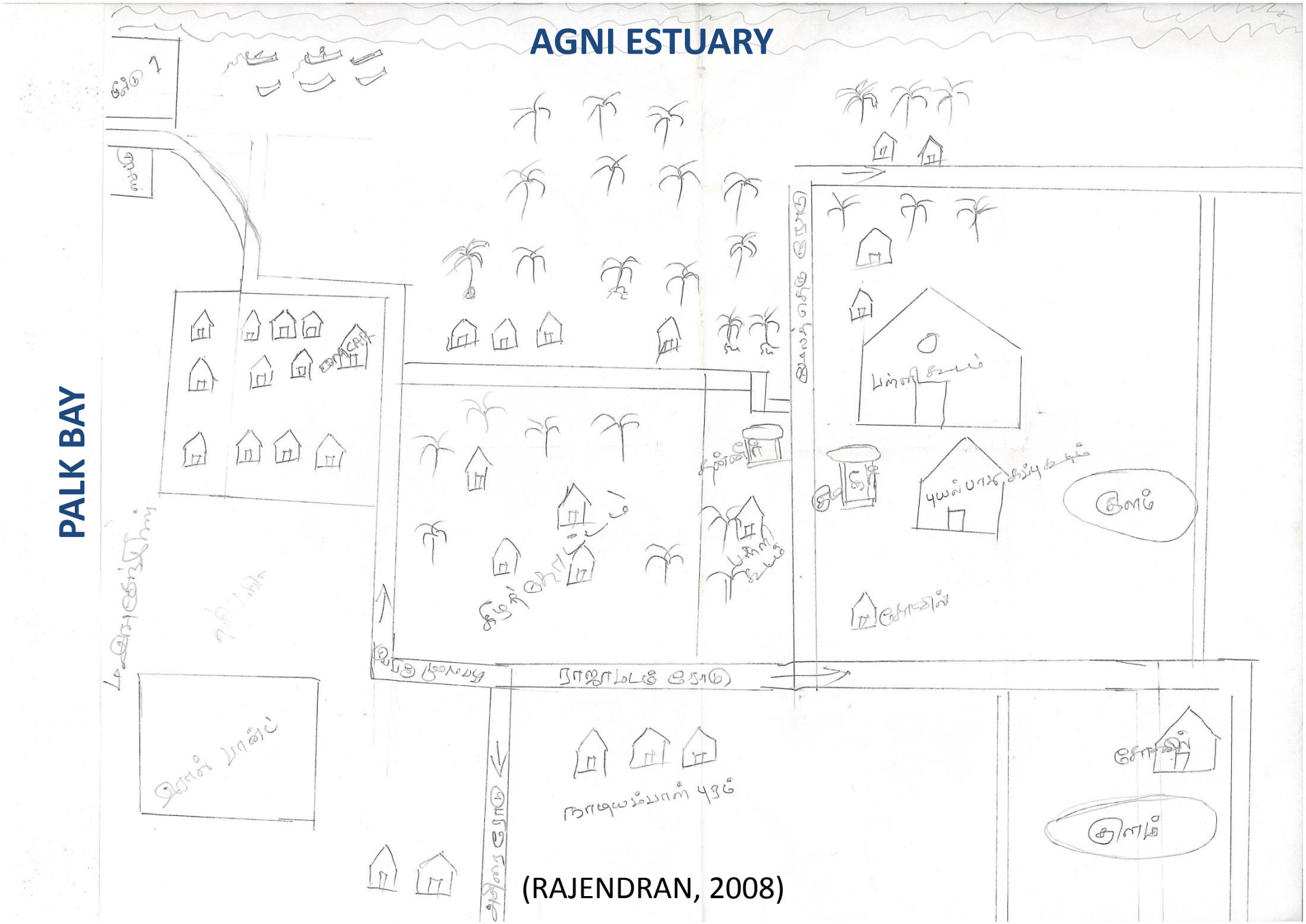
colaboration of Deepwave Organisation and Lighthouse Foundation







(ABUCHAHLA, 2009)



(RAJENDRAN, 2008)

Second step

Adding Climate Change to the equation

Questioned about the impact that the 2004 tsunami in their lives

in the 26th day of every month there is no fishing activity

All fishermen are concerned about the depletion of fish stocks

“the rhythm of animals is changing”





Third step

Management proposal

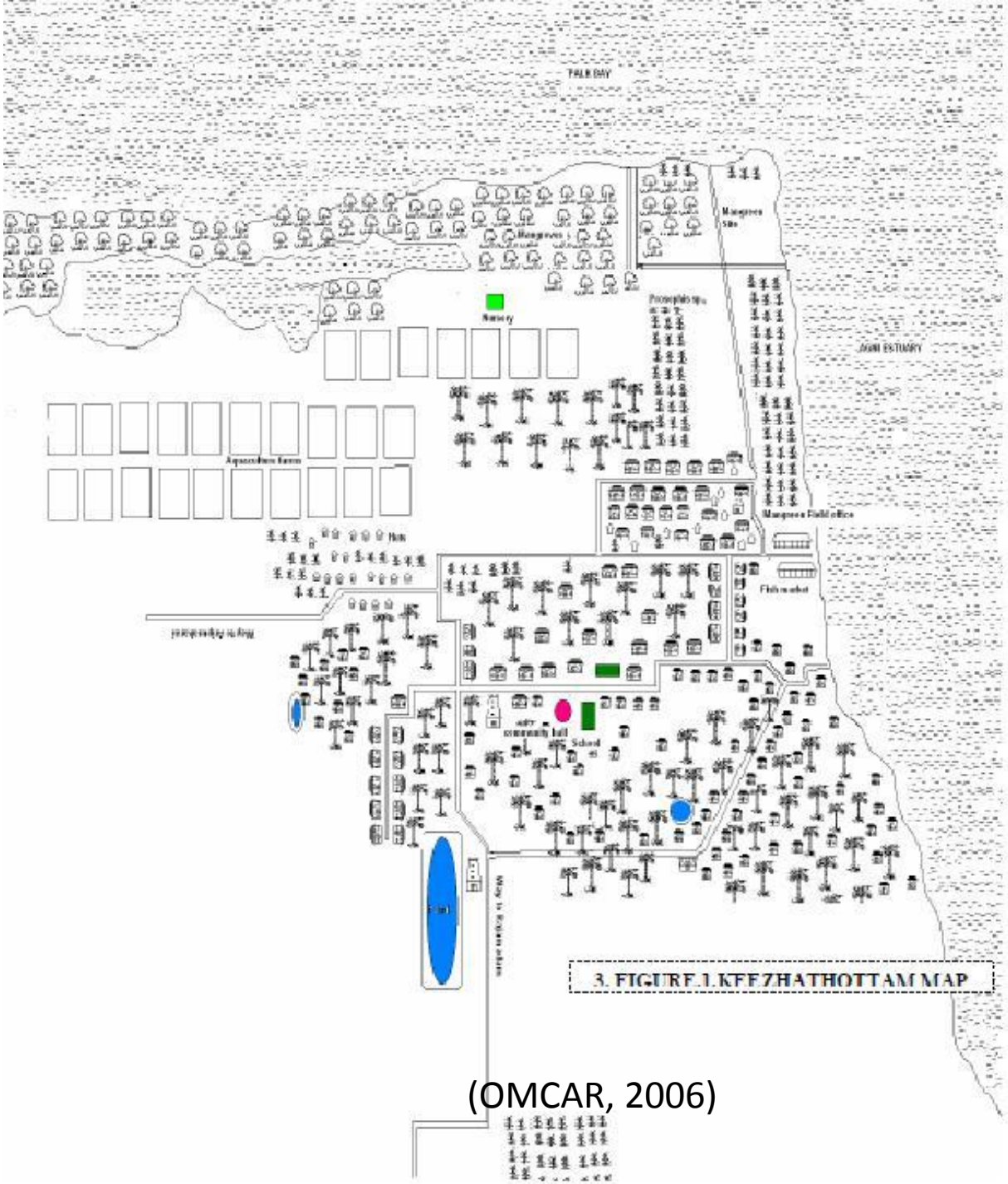
DPSIR

Drivers – Pressure – State – Impacts – Responses

Structural model

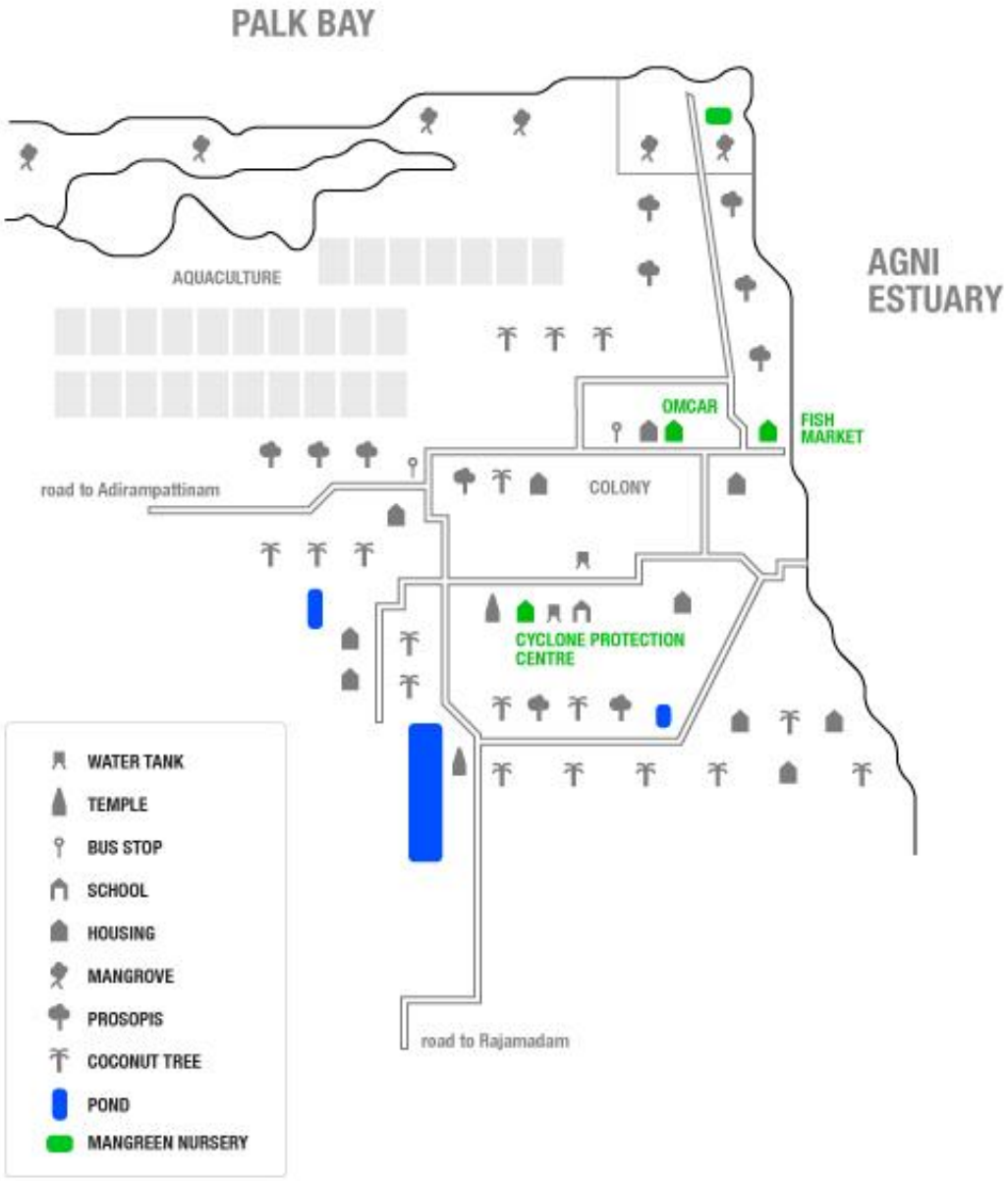
Better understanding of the model and its hierarchical settings

DRIVERS / PRESSURE	STATE / IMPACT	RESPONSES
Natural:	Natural:	
Variable precipitation (spatially and temporally); Variable sea-surface currents; Global climate change; Changing water supply.	Scarce and stressed seafood and water; Variable groundwater recharge; Increase in extreme weather events; Coastal ecosystem/habitat loss.	(1) Ecosystem conservation and restoration; (2) Sustainable small-scale forestry and aquaculture;
Social:	Social/economic/political:	(3) Training programs;
Population growth; Changing lifestyle; Increasing demand for water.	Poverty; Starvation and thirst; Human health deterioration; Backlog of service delivery; Depletion of water supply.	(4) Awareness, education and research programs.
Economic		(5) Improvement of infrastructure.
Inefficient pricing of sea products; Absence or lack of trading markets; High costs of supplies in marginalized areas.		(6) Tourism investments. (7) Accession to international protocols on climate change.

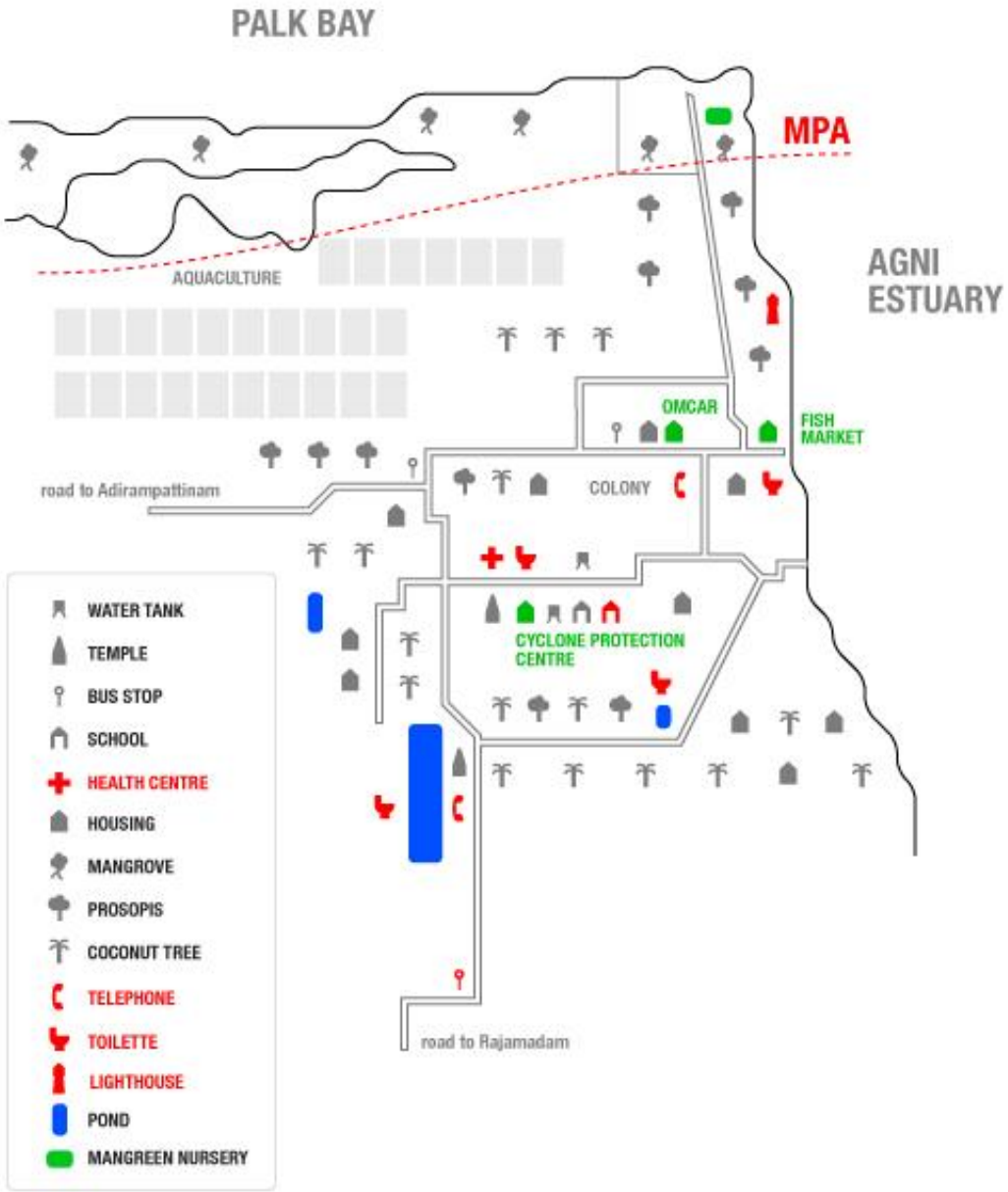


3. FIGURE.1.KEEZHATHOTTAM MAP

(OMCAR, 2006)



(ABUCHAHLA, 2009)



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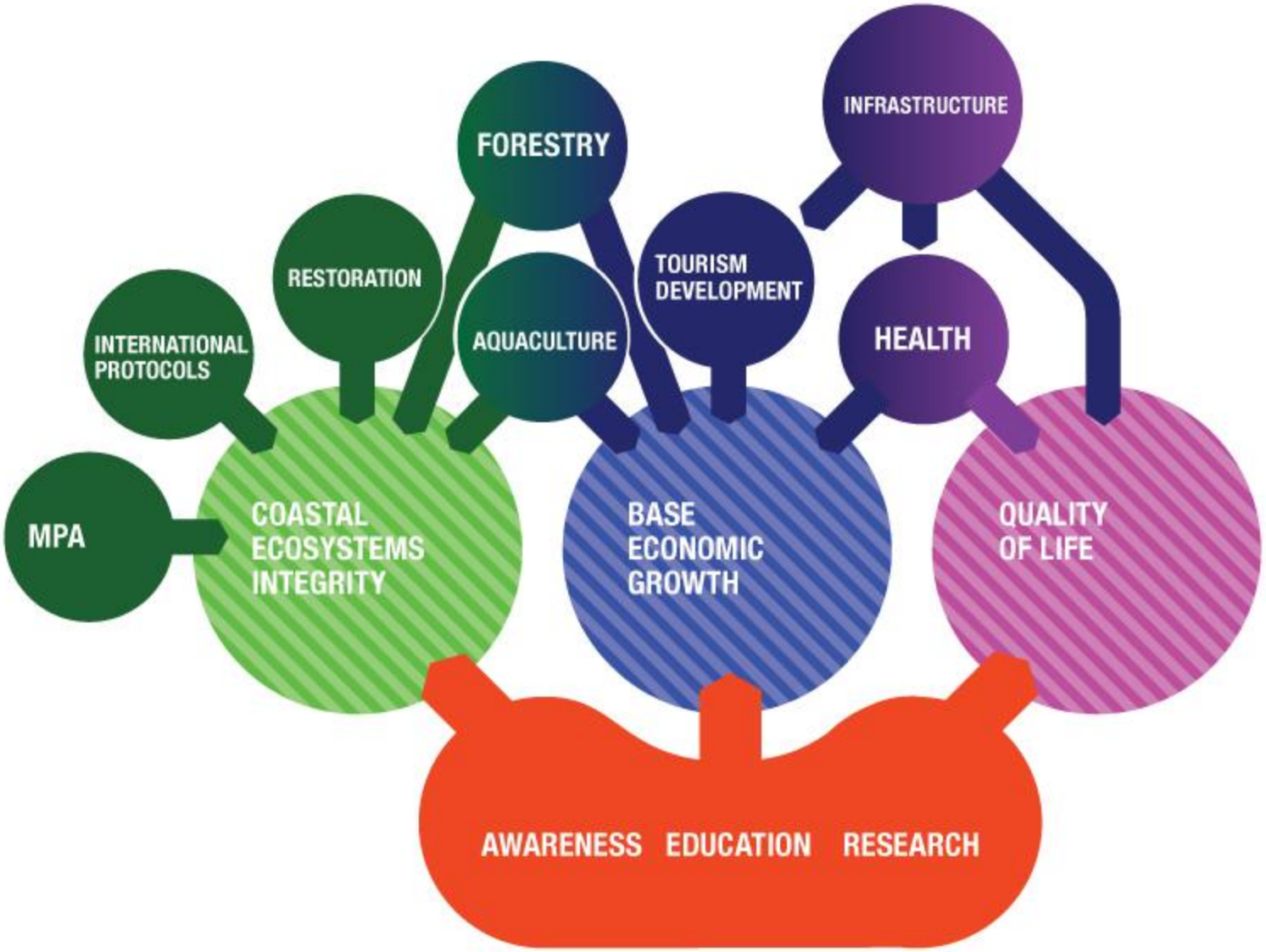

(ABUCHAHLA, 2009)

The current status

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நன்றி !
Thank you!
Obrigado!