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BOBLME ICM pilot site – Pondicherry

Final Report
May 2015

Probir Banerjee

PondyCAN!
Pondy Citizens’ Action Network

14, Marawadi Street, Kurchikuppam, Pondicherry 605012, India
Ph: +91-413-2335233, pondycan@gmail.com, www.pondycan.org

Food and Agriculture Organization of the United Nations
Global Environment Facility
“This we know...the earth does not belong to man, man belongs to earth. All things are connected, like blood which connects one family. Whatever befalls the earth befalls the children of the earth. Man did not weave the web of life – he is merely a strand in it. Whatever he does to the web, he does to himself.”

- Chief Seattle, 1854
Executive summary

The coast plays a significant role in sustaining ecological functions and thus in ensuring food, nutrition and water security and sustaining livelihoods of millions of people including large coastal fishing communities. Economic development in the current context of globalization and urbanization is leading to massive human and environmental crises in India, especially on the coast. Current practices of planning and development are localized and compartmentalized and totally disregard the enormous environmental, sociological, cultural and economic impacts. There are multiple interests of stake holders and the major concerns today are lack of a holistic understanding of the coast as a natural capital, the absence of institutional mechanism to monitor the impacts of projects and lack of enforcement of laws and regulations. PondyCAN believes in an integrated approach and that it is vital to correlate all issues in totality and create societal ownership by the coastal communities for sustainable co-management of the rich coastal and marine resources. For the past 10 years, PondyCAN has been actively involved in coastal issues in Pondicherry and working in collaboration with the Government and civil society organizations for a holistic development of this coastal region. PondyCAN is a member of the Techno-Commercial Evaluation Committee (TCEC) for the appointment of technical consultant for design and assistance in the implementation of Puducherry beach restoration project.

A Coastal Stewardship Centre (CSC) with state-of-the-art facilities and resource materials has been set up with funding support from FAO-GEF Bay of Bengal Large Marine Ecosystems (BOBLME) Project, to conduct capacity building/learning in action programs. A resource team has been formed consisting of experts who are knowledgeable about the coast, GIS mapping etc. The project covered 25 villages: 5 villages from each of the 5 districts - Kancheepuram, Villupuram, Pondicherry, Karaikal and Nagapattinam. The first step was to involve the Panchayat leaders as without their support nothing can be done in the village. From each district one person was identified, trained and given the responsibility to:

a. organize workshops in the 5 villages in their district where selected local youth were sensitized in coastal ecology, processes, laws, and impacts of projects and trained in GPS so that they could collect information about the natural assets, physical assets (structure and infrastructure) and activity areas in their village.

b. prepare GIS maps at the Coastal Stewardship Centre.

c. organize the 1st village meeting to involve the entire community in validating the maps through a consultation process. After getting the feedback and making necessary corrections in the GIS maps, organize the 2nd village meeting to present the revised map and get their approval.

In spite of all the challenges, the mapping exercise was successfully completed in all the 25 villages with the involvement of the community who felt a sense of empowerment.

Templates have been developed for mapping and programs have been designed for the training workshops and village meetings and can now be used to take up similar stewardship program in other coastal villages of India. Sharing the experience in various forums has opened up new possibilities of partnership as people realize the potential power of this approach.

Considering that the biggest killer of the coast is the problem of erosion, a 15 minute documentary film has been made “India’s disappearing beaches – A wake up call” produced by Shekar Dattatri, an award winning documentary maker.
The stewardship program will result in creating societal ownership of coastal and marine resources which will ensure the future sustainability of this coastal region. This could pave the way for better coastal governance for a healthier coast and the wellbeing of the coastal communities.
Acknowledgements

We would like to express our deep sense of gratitude to all the wonderful people who have made this journey possible.

First and foremost, we would like to pay tribute to the BOBLME team, Chris, Rudy and Murali, for their confidence in our capability to take up this initiative of creating societal ownership for the coastal resources and also giving valuable guidance throughout the project.

Our profound appreciation goes to the team from ICMAM, (under Ministry of Earth Sciences) for conducting the training programs free of charge and also hosting the participants in their lovely campus.

We are immensely grateful to Ilango, chairman of National Fishworkers’ Forum (NFF), Gilbert from GUIDE and Jesu from SNEHA for their unstinting support. They played a crucial role as resource people for the workshops and in mobilizing the community.

We would like to sincerely acknowledge the Panchayat leaders of all the 25 villages for understanding the value of this project, appreciating our efforts and extending their full support.

Our heartfelt thanks go to Saravanan, a fisherman who has mastered GIS on his own and deeply committed to the cause of empowering the community for protecting the coast. He is an inspiration to everyone.

We would like to recognize all the efforts put in by the District Coordinators, Parasaran, Govind, Kumaran, Rajendran and Kumaravel in learning GIS mapping and organizing the workshops and village meetings.

For the production of the documentary “India’s disappearing Beaches,” without Shekar Dattatri’s and Ramnath Chanadrashkar’s contribution of their time and experience such a high quality documentary would not have been possible within the available budget. Nicholas Chorier’s generous offer to make several of his photos available free of cost is also greatly appreciated.

Last but not the least we would like to place on record our deep appreciation for the untiring efforts of Swamynathan and Azhagappan from PondyCAN, whose relentless efforts made this project possible.
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Acronyms used

ADB  Asian Development Bank
BOBLME Bay of Bengal Large Marine Ecosystem
CBO  Community Based Organisations
CMFRI Central Marine Fisheries Research Institute
CRZ  Coastal Regulation Zone
CSC  Coastal Stewardship Centre
CSE  Centre for Science and Environment
CZMA Coastal Zone Management Authority
CZMP Coastal Zone Management Plan
DLC  District Level Committees
DSTE Department of Science Technology and Environment
FAO  Food and Agriculture Organisation
GEF  Global Environmental Fund
GIS  Geographic Information System
GPS  Global Positioning System
HTL  High Tide Line
ICM  Integrated Coastal Management
ICMAM Integrated Coastal and Marine Area Management
ICZM Integrated Coastal Zone Management
LTL  Low Tide Line
NCPC National Coastal Protection Campaign
NCSCM National Centre for Sustainable Coastal Management
NDTV New Delhi Television
NFF  National Fishworkers' Forum
NGO  Non-Governmental Organisation
NGT  National Green Tribunal
NIOT National Institute of Ocean Technology
PIL  Public Interest Litigation
QGIS Quantum Geographic Information System
SHG  Self Help Group
TCEC Techno Commercial Evaluation Committee
TDC  Town Development Council
UNEP United Nations Environment Programme
1. Background and context

The coastal ecosystems play a vital role in India’s economy by virtue of the resources, productive habitats and rich biodiversity. The coast is endowed with a wide range of coastal ecosystems like mangroves, sand dunes, salt marshes, estuaries, lagoons and wetlands. Each of these constituents has a significant role to play in sustaining ecological functions and thus in protecting coastal habitats, wildlife and human communities. Agriculture, fisheries, port, industries and tourism are the major activities along the coastal zone with significant contribution to development. India’s coastline stretches about 7500 km and supports almost 30% of its human population. Coastal zones are highly dynamic systems in the interface of ocean-climate and continental processes, and thus highly vulnerable to natural and anthropogenic changes. The coastal areas are also prone to natural disasters. India has been identified as one amongst 27 countries which are most vulnerable to the impacts of global warming related accelerated sea level rise (UNEP, 1989) which threatens coastal habitat as a result of human influence.

In order to protect and conserve the beauty and ecology of the coast, the Coastal Regulation Zone Notification 1991 (reissued in 2011) has been issued under the Environment (Protection) Act, 1986 and calls for the preparation of coastal zone management plans but it is limited to the CRZ area which is up to 500 metres from the high tide line. In July 2004, the Ministry of Environment and Forests constituted an expert committee, chaired by Prof. M.S. Swaminathan, to carry out a comprehensive review of the CRZ notification. A major recommendation of the committee was to adopt an integrated coastal zone management approach that would, with people’s participation, promote the livelihood security of the coastal communities and protect the ecosystems while promoting sustainable development.

In the past decade, the degradation of the Indian coastline has reached alarming proportions and this has been caused by major human interventions such as ports, harbours, power plants, large industries etc. along with the associated migration of people. This has resulted in urban population explosion, rapid and unplanned urbanization of coastal cities and towns, over exploitation of marine and coastal resources, dumping of industrial and toxic wastes and coastal erosion due to man-made structures such as seawalls and groynes. According to the ADB and ICMAM reports, about 1,500 km or 26% of the mainland coastline faces serious erosion and much of the coastline is actively retreating thus posing a grave danger to the integrity and safety of the mainland making it significantly more vulnerable to natural disasters. In most cases, the coastal communities affected are not isolated to the immediate vicinity of the development but stretches to distances far beyond the development itself.

1.1. Relevant developments

1.1.1. Government:

- The Expert Committee constituted by the MoEF to finalize the Coastal Management Plan Notification, state the following in their report titled ‘The Final Frontier’:

  “...the coast especially the beaches are facing severe erosion and the shorelines are changing. These could be due to natural or manmade activities such as construction of ports, harbours, groynes, shore protection measures etc. It was also indicated that the Central Government/State Governments propose to construct several ports and harbours all along the shore in the coming years. These could have irreversible adverse impact on the coast if such infrastructures are constructed without scientific studies. It was also discussed that there is a need to study the cumulative impact of the individual projects on the entire coastline. Keeping in view the seriousness of the matter the committee suggested that the ministry should study the impacts of such projects and also make policy changes to ensure the damage to the beaches and coastline is mitigated.”
The Cabinet Committee on Economic Affairs approved the Rs.1156 crores world bank assisted Integrated Coastal Zone Management (ICZM) projects on 25.03.2010. Integrated Coastal Zone Management (ICZM) is a process that unites Government and the community, science and management, sectoral and public interests in preparing and implementing an integrated plan for the protection and development of coastal ecosystems and resources. The overall goal of ICZM is to improve the quality of life of human communities who depend on coastal resources while maintaining the biological diversity and productivity of coastal ecosystems. This project is currently being implemented by the Ministry of Environment and Forests in the states of Gujarat, Orissa and West Bengal. Other coastal states have been asked to submit proposals for the 2nd phase of the funding.

1.1.2. Media:
- Centre for Science and Environment (CSE) has come out with a number of articles about the coastal problems in their magazine “Down to Earth”, the last one being the cover page article “The Coast under Siege”.
- NDTV has taken up a campaign, “Save India’s Coast” to create awareness and highlight the increasing degradation and pollution of India’s coastline and challenges faced by the coastal communities. The NDTV crew travelled the entire length of India’s coast and interviewed people involved in the struggle against projects that were destroying coastal habitats and livelihoods. PondyCAN conceptualized the campaign and coordinated with the local NGOs.

1.1.3. Judiciary:
- National Green Tribunal: In an interim order connected to a PIL recently filed in the NGT at Chennai, the judge gave directions to consider the entire east coast holistically and come out with a strategy to find long term solutions to the problem of coastal erosion.

“The present case is not only for stopping the on-going construction of hard structures in the coastal areas but also to see the substantial coastal management by way of preparing a plan both long term and short term and also to implement the same as an integrated and comprehensive and a substantial solution. In view of the above, the tribunal is of the considered opinion that the Coastal Zone Management Authority can better convene a meeting of the CZMA’s of Kerala, Tamil Nadu, Pondicherry, Andhra Pradesh, Orissa and West Bengal which would cover the coastal stretch on the east in order to evolve a plan to serve the above purpose.”

1.1.4. Civil society:
NCPC, a coalition of NGOs and fishing organizations, came together and opposed the Coastal Zone Management notification to replace CRZ 1991. Environmentalists and the fishing communities felt that the introduction of such a notification would have resulted in the further exploitation and destruction of the coastal ecology and put pressure on an already devastated coast. After a yearlong sustained campaign this proposal was abandoned. Thereafter extensive MoEF held consultations with coastal communities and came up with the modified CRZ 2011. This struggle highlighted the fact that coastal communities have to be consulted and become part of the planning process.
2. Justification

The apparent paradox of our times is that in spite of extraordinary economic and technological transformations, issues of justice and democracy still continue to exist. Economic development, in the current context of globalization and urbanization is leading to massive human and environmental crises. Current practices of planning and development are localized and compartmentalized and totally disregards the enormous environmental, sociological, cultural and economic impacts. Society as a whole, in a narrow pursuit of industrial development has lost its focus on the wider implications of such developments, the full scale of which is only now becoming apparent.

The coast remains one of the most essential areas of social occupation and there is considerable conflict for this space among the many competitive interests resulting in social tensions. The current problem of the coast is mainly due to the following reasons:

- No assessment at national level as to the actual needs of infrastructure projects.
- Lack of information about ecosystems and land use of existing coastal settlements poorly planned and uncoordinated coastal development as a result of sectoral approach in planning and management.
- Approval of individual projects without considering carrying capacity and cumulative impacts.
- No mechanism in place to monitor the proper implementation of projects.
- Weak enforcement of existing legislative framework.
- No assessment of environmental, social and economic impacts of existing projects.
- No accountability for damage caused to the coastline by project developers.
- Weak institutional frameworks that do not adequately address the complex cross sectoral problems facing coastal zone.
- Lack of effective strategies to promote community empowerment and sustainable livelihoods.
- Inadequate communication, education and public awareness on coastal management issue.
- Destruction and loss of coastal and marine habitats as a result of overexploitation, poor land use practices, encroachment and unplanned and unregulated human settlement and urban development.
- Poor waste management practices posing a public health risk.
- Flow of untreated sewage into the ocean.
- Declining water quality and inadequate sources of potable water.
- Uncoordinated research and monitoring programmes that do not adequately inform the management of coastal zone resources on issues affecting them.

To make a profound paradigm shift in protecting and conserving our precious coastal resources and stop further degradation of India’s coastline, we need to have transformation and shifts in individuals and systems, i.e. individual and collective values and norms, structures, policies and laws. It is about sourcing our inner wisdom and capacities and shift systems to manifest sustainable and equitable change. For a balanced development, the way forward is to engage all stakeholders, particularly the coastal communities, more actively and innovatively in a holistic planning and monitoring of this natural and national asset.

The objective of the Bay of Bengal Large Marine Ecosystem (BOBLME) Project component 2, “Coastal/Marine Natural Resources Management and Sustainable Use“, is to promote the development and implementation of demonstrative regional and sub-regional collaborative approaches to common and/or shared issues which affect the health and status of BOBLME. subcomponent 2.1. Community-based Integrated Coastal Management aims at learning and
adapting best ICM practices benefitting coastal communities. In India, Puducherry has been nominated as the pilot area for ICM support activities, both through Government agencies and in collaboration with the NGO partner PondyCAN.

Pondy Citizens' Action Network (PondyCAN) has been closely associated with the Government, academic and scientific institutions and other NGOs working with coastal communities. PondyCAN office is presently the NCPC secretariat for the east coast. PondyCAN proposes to set up a Coastal Stewardship Centre (CSC) to foster an Integrated Coastal Management (ICM) approach which could become a model to be replicated by other coastal states/districts/taluks.

PondyCAN will establish and equip the centre with resource teams of experts, for capacity development and learning in action programs. Two teams will be formed: 1) The Stewardship building team will organize workshops, organize village meetings, and prepare the required reports. 2) The GIS mapping team will collate data and prepare GIS maps.

The overall outcome of this initiative will be the availability of suitable infrastructure and work environment for the smooth running of the Coastal Stewardship Centre and effective coordination of the establishment of Integrated Coastal Zone Management in two districts of Pondicherry and four districts in Tamil Nadu, India.

3. Guiding principles

i. **Social, economic and ecological justice**: Application of “precautionary principle” to minimize potential harm to environment when there is lack of sufficient scientific information and “polluters pay principle” where developers have to meet the cost of damage to the coastal and marine environment as well as livelihoods of coastal communities. Such costing should be identified and quantified as an integral part of the earliest planning process.

ii. **Environmental sustainability**: Use of ecosystem based approach which recognizes the relationships and inter-linkages between all components of the wider ecosystem including the human/social component for sustainability.

iii. **Interdependence and interconnectedness**: Coordination, integration and co-management of resources.

iv. **Transparency and accessibility through co-creation**: Participatory and inclusive approach, which entails involvement of stakeholders and consensus building on matters of planning and decision making.

4. Objectives

- To demonstrate interconnectedness within social and ecological parameters to form Possibilities, insight and action for sustainability and harmony in this coastal region.
- To foster stewardship among all stakeholders and build a constellation of change makers who burn for social justice and dignity and who will strive for environmental sustainability.
- To enrol all constituencies - utilize their wisdom and build capacity - to maximize the potential for just and equitable change and human well-being.
- To involve communities in geo-spatial mapping of current realities, i.e. land use, natural resources, projects etc., and create a collaborative platform for informed decision making of all stakeholders.
- To stimulate pattern thinking when identifying systems leverage and strategic drivers to transform systems of injustice and inequality while solving problems.
• To design operational strategies to scale the ideas for immediate results as well as long term and large scale sustainable impact.
• To transform existing systems and build alternative architecture to create strategies for action and results dedicated to synergetic solutions.
• To develop case studies which would feed into the development of a cumulative impact assessment framework.

5. Project area details

India's mainland has a coastline length of 5700 km with 1262 settlements (CMFRI data) and 3959 coastal wetlands occupying 4,022,956 ha.

Tamil Nadu has a coastline length of 1079 km and comprises of 13 coastal districts, 39 coastal Taluks and 309 coastal settlements. The Union Territory of Puducherry has a coastline length of 44 km and comprises of 2 districts; Pondicherry region accounts for 24 km with 17 villages and Karaikal accounts for 20 km with 10 villages.

This project involved, 3 districts of Tamil Nadu, namely Kancheepuram, Villupuram and Nagapattinam and the 2 districts of Union Territory of Puducherry. The details are given in Figure 1 & Table 1.

Figure 1 Map showing the five coastal districts of Tamil Nadu and Puducherry
Table 1 Information about selected districts in Tamil Nadu and Puducherry

<table>
<thead>
<tr>
<th>District</th>
<th>No. of taluks</th>
<th>No. of villages</th>
<th>Coastal length (km)</th>
</tr>
</thead>
<tbody>
<tr>
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<td></td>
<td></td>
</tr>
<tr>
<td>Kancheepuram</td>
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</tr>
<tr>
<td>Villupuram</td>
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<td>21</td>
<td>40.7</td>
</tr>
<tr>
<td>Cuddalore</td>
<td>2</td>
<td>21</td>
<td>57.5</td>
</tr>
<tr>
<td>Nagapattinam</td>
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<td>187.9</td>
</tr>
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<td>119</td>
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</tbody>
</table>

<table>
<thead>
<tr>
<th>District</th>
<th>No. of taluks</th>
<th>No. of villages</th>
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<tbody>
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<td></td>
<td></td>
</tr>
<tr>
<td>Pondicherry</td>
<td>3</td>
<td>8</td>
<td>24.23</td>
</tr>
<tr>
<td>Karaikal</td>
<td>1</td>
<td>8</td>
<td>18.10</td>
</tr>
<tr>
<td>Total</td>
<td>4</td>
<td>16</td>
<td>42.33</td>
</tr>
</tbody>
</table>

5.1. The district maps with information about the coast and the names of selected villages.

5.1.1. Kancheepuram district
Kancheepuram district has a coastline length of 87.2 km and comprises of 7 taluks and 38 coastal villages. The five coastal villages selected for this project are given below (Figure 2).

![Figure 2 Map of Kancheepuram district with selected villages](image)

5.1.2. Villupuram district
Villupuram district has a coastline length of 40.7 km and comprises of 2 taluks and 21 coastal villages. In this study we selected five coastal villages, the names of which have been given below (Figure 3).
5.1.3. Pondicherry
Pondicherry has a coastline length 24 km with 17 coastal villages. The five coastal villages selected for this project are given below (Figure 4).

5.1.4. Karaikal
Karaikal has a coastline length of 18.1 km and comprises of 1 taluk and 8 coastal villages. The five coastal villages selected for this project are given below (Figure 5).
5.1.5. Nagapattinam district
Nagapattinam district has a coastline length of 187.9 km and comprises of 5 taluks and 39 coastal villages. The five coastal villages selected for this project are given below (Figure 6).
6. Methodology

**Coastal Stewardship Centre (CSC):**
Set up a fully equipped infrastructure facility.

**Resource team:**
Involve experts for capacity building/learning in action programs. Set up a GIS mapping team familiar with GIS software, data mining and analysis.

**Stewardship building team:**
Identify young people from the coastal communities who will work with the communities; organize training workshops, village meetings, village mapping and preparing reports.

**Community involvement:**
Foster stewardship by sensitizing the community in coastal ecology, coastal processes, coastal laws, impacts of projects etc. and create societal ownership of coastal commons. Involve them in the mapping of the village as they know best how spaces are being used by them.

7. Results

7.1. Coastal Stewardship Centre (CSC)
A state-of-the-art infrastructure facility was established fully equipped with office equipment, GIS lab, audio-visual system, resource materials etc. at No 14, Marawadi Street, Kuruchikuppam, Pondicherry hosted by PondyCAN. Mr Ilango, chairperson of National Fishworkers’ Forum, inaugurated the Coastal Stewardship Centre, Pondicherry on 4th October 2014, in the presence of coastal community leaders (Figure 7). It was the venue for the capacity building programs and preparation of the GIS maps for the 25 villages in this project. Presently programs are being organized for mapping various aspects (water bodies, waste management etc.) under the initiative “Holistic development of Pondicherry-Auroville-Villupuram-Cuddalore bioregion.” The Government of Puducherry would like to take up the mapping of all the coastal villages for the preparation of Coastal Zone Management Plans and keen to partner with PondyCAN for this purpose.

The physical repository of the GIS maps is CSC. On finalization of the report and after consultation with ICMAM and National Centre for Sustainable Coastal Management (NCSCM) they will be uploaded to the PondyCAN website.
Mr Saravanan explaining the mapping process  
Participants discussing with resource person

Figure 7 Inauguration of Coastal Stewardship Centre (CSC) in Pondicherry

Resource people

From PondyCAN, Proibir Banerjee, as the project manager, was in charge of the whole project; coordinating with BOBLME, resource people, Government officials, village Panchayat leaders, the GIS mapping team, Stewardship building team, coordinating the workshops, preparation of the reports etc. Aurofilio was the resource person for the documentary on erosion and did all the coordination work with Shekar Dattatri and Ramnath Chandrashekar.

The GIS mapping team was formed of B. Swamynathan, who has a PhD in Environmental Science and expertise in GIS and Azhagappan, with expertise in Geomatics. They coordinated with the Stewardship building team (district coordinators) for all the training programs, GPS surveys and preparation of GIS maps.

Members from other organizations who are experts in coastal laws, coastal processes etc. were also enrolled for the capacity building/learning in action programs on a voluntary basis, only their travel and food expenses were covered.

7.2. The Stewardship building team (district coordinators)

Govindan (Kancheepuram), Parasaran (Villupuram), Kumaran (Pondicherry), Rajendran (Karaikal) & Kumaravel (Nagapattinam) were selected to coordinate all the activities in their respective district. They were given an honorarium as well as their travel and food expenses so that they could take time out from their present occupation and focus on this project. The district coordinators were sent to ICMAM, Chennai for a 5 day training workshop in GIS etc. (Appendix I - Program).

The GIS mapping team and the Stewardship building team prepared a schedule for the workshops, GIS mapping and village meetings for every district along with timelines after consulting with the village community. It had to be rescheduled many times due to various reasons. The final schedules are given below (Table 2 to 6).
Table 2 Schedule of training workshops, GIS mapping and village meetings in Kancheepuram district

<table>
<thead>
<tr>
<th>Village</th>
<th>Meeting village Panchayats</th>
<th>2-day workshop</th>
<th>GPS data collection</th>
<th>GIS maps</th>
<th>First village meeting</th>
<th>GIS maps correction</th>
<th>Final village meeting</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pannyer Chinakuppam</td>
<td>09.11.14 &amp; 22.11.14</td>
<td>18.11.14 &amp; 19.11.14</td>
<td>19.11.14</td>
<td>25.11.14</td>
<td>08.04.15</td>
<td>17.04.15</td>
<td>18.04.15</td>
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<tr>
<td>Alampara fort</td>
<td>09.11.14 &amp; 22.11.14</td>
<td>18.11.14 &amp; 19.11.14</td>
<td>25.11.14</td>
<td>28.01.15</td>
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<td>15.04.15</td>
</tr>
<tr>
<td>Alampara Kuppam</td>
<td>09.11.14 &amp; 22.11.14</td>
<td>18.11.14 &amp; 19.11.14</td>
<td>29.01.15</td>
<td>12.02.15</td>
<td>20.03.15</td>
<td>15.04.15</td>
<td>15.04.15</td>
</tr>
<tr>
<td>Kadpakam Kuppam</td>
<td>09.11.14 &amp; 22.11.14</td>
<td>18.11.14 &amp; 19.11.14</td>
<td>30.01.15</td>
<td>11.02.15</td>
<td>26.03.15</td>
<td>16.04.15</td>
<td>18.04.15</td>
</tr>
<tr>
<td>Thazhuthali Kuppam</td>
<td>09.11.14 &amp; 22.11.14</td>
<td>18.11.14 &amp; 19.11.14</td>
<td>06.12.14</td>
<td>01.04.15</td>
<td>08.04.15</td>
<td>16.04.15</td>
<td>17.04.15</td>
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</table>

Table 3 Schedule of training workshops, GIS mapping and village meetings in Villupuram district

<table>
<thead>
<tr>
<th>Village</th>
<th>Meeting village panchayats</th>
<th>2-day workshop</th>
<th>GPS data collection</th>
<th>GIS maps</th>
<th>First village meeting</th>
<th>GIS maps correction</th>
<th>Final village meeting</th>
</tr>
</thead>
<tbody>
<tr>
<td>Alankuppam</td>
<td>09.11.14 &amp; 22.11.14</td>
<td>18.11.14 &amp; 19.11.14</td>
<td>19.11.14</td>
<td>12.02.15</td>
<td>18.03.15</td>
<td>Nil</td>
<td>04.04.15</td>
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<tr>
<td>Pudukuppam</td>
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<td>18.11.14 &amp; 19.11.14</td>
<td>01.12.14</td>
<td>03.02.15</td>
<td>05.02.15 (FN)</td>
<td>18.03.15</td>
<td>25.03.15</td>
</tr>
<tr>
<td>Vasanthakuppam</td>
<td>09.11.14 &amp; 22.11.14</td>
<td>18.11.14 &amp; 19.11.14</td>
<td>02.12.14</td>
<td>26.01.15</td>
<td>05.02.15 (AN)</td>
<td>10.03.15</td>
<td>20.03.15</td>
</tr>
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<td>18.11.14 &amp; 19.11.14</td>
<td>31.01.15</td>
<td>13.02.15</td>
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<td>12.03.15</td>
<td>21.03.15</td>
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<tr>
<td>Kaipanikuppam</td>
<td>09.11.14 &amp; 22.11.15</td>
<td>18.11.14 &amp; 19.11.15</td>
<td>25.01.15</td>
<td>06.02.15</td>
<td>04.04.15</td>
<td>07.04.15</td>
<td>08.04.15</td>
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</table>

Table 4 Schedule of training workshops, GIS mapping and village meetings in Pondicherry

<table>
<thead>
<tr>
<th>Village</th>
<th>Meeting village panchayats</th>
<th>2-day workshop</th>
<th>GPS data collection</th>
<th>GIS maps</th>
<th>First village meeting</th>
<th>GIS maps correction</th>
<th>Final village meeting</th>
</tr>
</thead>
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<tr>
<td>Panithittu</td>
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<td>12.1.15 &amp; 13.01.15</td>
<td>13.1.15</td>
<td>20.1.15</td>
<td>22.1.15</td>
<td>06.02.15</td>
<td>11.02.15</td>
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<tr>
<td>Solai Nagar</td>
<td>29.12.14</td>
<td>12.1.15 &amp; 13.01.15</td>
<td>13.1.15</td>
<td>14.1.15</td>
<td>04.04.15</td>
<td>06.04.15</td>
<td>08.04.15</td>
</tr>
<tr>
<td>Keerapalayam</td>
<td>29.12.14</td>
<td>12.1.15 &amp; 13.01.15</td>
<td>10.02.15</td>
<td>11.02.15</td>
<td>04.04.15</td>
<td>06.04.15</td>
<td>08.04.15</td>
</tr>
<tr>
<td>Narambai</td>
<td>29.12.14</td>
<td>12.1.15 &amp; 13.01.15</td>
<td>27.1.15</td>
<td>28.1.15</td>
<td>05.04.15</td>
<td>06.04.15</td>
<td>07.04.15</td>
</tr>
<tr>
<td>Murthikuppam</td>
<td>29.12.14</td>
<td>12.1.15 &amp; 13.01.15</td>
<td>2.2.15</td>
<td>3.2.15</td>
<td>07.02.15</td>
<td>09.02.15</td>
<td>10.02.15</td>
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</table>
Report of the establishment and operation of the Coastal Stewardship Centre

Table 5 Schedule of training workshops, GIS mapping and village meetings in Karaikal

<table>
<thead>
<tr>
<th>Village</th>
<th>Meeting village panchayats</th>
<th>2-day workshop</th>
<th>GPS data collection</th>
<th>GIS maps</th>
<th>First village meeting</th>
<th>GIS maps correction</th>
<th>Final village meeting</th>
</tr>
</thead>
<tbody>
<tr>
<td>T.R Pattinacherry</td>
<td>10.02.15</td>
<td>14.02.14 &amp; 15.12.14</td>
<td>10.02.15</td>
<td>19.03.15</td>
<td>23.03.15(FN)</td>
<td>25.03.15</td>
<td>04.04.15</td>
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<tr>
<td>Kottucherimeedu</td>
<td>10.02.15</td>
<td>14.02.14 &amp; 15.12.14</td>
<td>08.02.15</td>
<td>19.03.15</td>
<td>23.03.15(AN)</td>
<td>25.03.15</td>
<td>04.04.15</td>
</tr>
<tr>
<td>Akkampettai</td>
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<td>14.02.14 &amp; 15.12.14</td>
<td>17.03.15</td>
<td>20.03.15</td>
<td>24.03.15(FN)</td>
<td>26.03.15</td>
<td>08.04.15</td>
</tr>
<tr>
<td>Kalikuppan</td>
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<td>14.02.14 &amp; 15.12.14</td>
<td>28.1.2015</td>
<td>06.02.16</td>
<td>25.02.15</td>
<td>19.03.15</td>
<td>04.04.15</td>
</tr>
<tr>
<td>Mandapathur</td>
<td>10.02.15</td>
<td>14.02.14 &amp; 15.12.14</td>
<td>17.03.15</td>
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<td>24.03.15(AN)</td>
<td>26.03.15</td>
<td>07.04.15</td>
</tr>
</tbody>
</table>

Table 6 Schedule of training workshops, GIS mapping and village meetings in Nagapattinam district

<table>
<thead>
<tr>
<th>Village</th>
<th>Meeting village panchayats</th>
<th>2-day workshop</th>
<th>GPS data collection</th>
<th>GIS maps</th>
<th>First village meeting</th>
<th>GIS maps correction</th>
<th>Final village meeting</th>
</tr>
</thead>
<tbody>
<tr>
<td>Kallar</td>
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<td>14.02.14 &amp; 15.12.14</td>
<td>10.1.2015</td>
<td>28.02.15</td>
<td>03.03.15</td>
<td>10.03.15</td>
<td>03.04.15</td>
</tr>
<tr>
<td>Kameshwaram</td>
<td>11.02.15</td>
<td>14.02.14 &amp; 15.12.14</td>
<td>13.1.2015</td>
<td>18.03.15</td>
<td>24.03.15(FN)</td>
<td>02.04.15</td>
<td>03.04.15</td>
</tr>
<tr>
<td>Vizhunthamavadi</td>
<td>11.02.15</td>
<td>14.02.14 &amp; 15.12.14</td>
<td>12.0.2015</td>
<td>19.03.15</td>
<td>24.03.15(AN)</td>
<td>02.04.15</td>
<td>04.04.15</td>
</tr>
<tr>
<td>Vanavanmadevi</td>
<td>11.02.15</td>
<td>14.02.14 &amp; 15.12.14</td>
<td>13.0.15</td>
<td>20.03.15</td>
<td>25.03.15(FN)</td>
<td>02.04.15</td>
<td>04.04.15</td>
</tr>
<tr>
<td>Vellapallam</td>
<td>11.02.15</td>
<td>14.02.14 &amp; 15.12.14</td>
<td>21.1.2015</td>
<td>21.03.15</td>
<td>25.03.15(AN)</td>
<td>02.04.15</td>
<td>04.04.15</td>
</tr>
</tbody>
</table>

7.3. Community involvement

7.3.1. Panchayat leaders
Considering the local village dynamics, our team first met the Panchayat leaders of each of the 25 villages individually, handed over the letter of introduction from Ilango, chairman of National Fishworkers Forum (NFF), explained to them the importance of the project and fixed a date for a meeting of all 5 Panchayat leaders of that district. In the joint meeting they were explained about the CRZ 2011 and the opportunities therein for fishing communities in a) being part of the District Level Committees (DLC) and b) preparation of the village maps which could be incorporated in the Coastal Zone Management Plan (CZMP) being prepared by all the coastal states.
7.3.2. Two-day district level workshop
It was conducted for the team of young people selected by the Panchayat leaders of that district. They were trained in GPS data collection etc. (Appendix IV - Program). The village team, with the help of the district coordinator and our GIS team collected GPS data of the 3 layers, a) natural assets and features, b) structure and infrastructure and c) activity areas (Appendix II & Appendix III – Template for GIS mapping). The district wise numbers of participants who attended the workshop are given (Appendix V).

Figure 8 Workshop on “Our coast - Our village” for Kancheepuram and Villupuram districts at Marakkkanam
Figure 9 Workshop on “Our coast - Our village” for Karaikal and Nagapattinam districts at Nagapattinam
7.3.3. **GIS mapping of the villages**

The district coordinators prepared the GIS maps of the villages at the CSC with the help of our GIS team.

7.3.4. **Village meetings**

Village meetings were organized in 2 stages in all the 25 villages where Panchayat members, self-help groups, and youth groups participated.

**1st Meeting**: The GIS maps were presented and the views and feedback of the community were taken ([Appendix VI – Program](#)). During the village meetings, a) people kept coming in and going out in batches so the maps had to be presented several times and b) they refused to sign the register in spite of repeated appeals. However at an average we got feedback from about 25 to 30 people. In most of the villages we had separate meeting with the women groups as they would not mix with the men folk as it is against their custom. The feedbacks of all village meetings are given district wise...
(Appendix VII). It was clear from the village meetings that they found the mapping very useful. Their inputs can be divided in 4 categories:

I. Pointing out what was missed out during GPS data collection such as small temple, cremation ground, library, school, water tank etc.

II. Expressing their need for space for certain infrastructure and activities which are presently lacking such as boat parking, net repairing, playground, park and future expansion of village.

III. Recognizing mapping as a tool to stop the taking over of their village lands by industries and tourism resorts.

IV. Hoping that mapping would give their community legal rights to the village lands.

2nd Meeting: Revised maps were presented and approved.
Final village meeting at Thazhuthali Kuppm
Final village meeting at Pannyer Chinakuppam
Final village meeting at Alampara fort

Figure 11 Meetings and discussions in the villages of Kancheepuram district
Pannyer Chinakuppam Village Map, Kancheepuram District

Legend

Infrastructure
- Church
- Community Hall
- Electric Post
- Factory
- Motor Room
- Net Storing Area
- Palvaid
- Ration Shop
- Septic Tank
- Stage
- Temple
- Toilet
- Waste Water Tank

Activity Layer
- Boat Parking Area
- Cremation ground
- Cricket Ground
- Fish Drying Area
- Volleyball Ground

Natural Layer
- Plantation
- Sand Dune
- Water Body
- HTL
- LTL

Sources:
1. Cadastral map of Scale 1:5000 (Survey and Land Records and IRS, AU)
2. Survey of India Toposheet of scale 1:50000
3. HTL, LTL (IRS, AU)

Figure 12 Map of Pannyer Chinakuppam, Kancheepuram district
Alampara Fort Village Map, Kancheepuram District

![Map of Alampara Fort, Kancheepuram District](image)

**Legend**

- **Infrastructure**
  - Electric Post
  - Mosque
  - Septic Tank
  - Transformer
  - Water tank
  - Water Tank Room
  - Kottai Road

- **Activity Layer**
  - Boat Parking Area
  - Muslim Burial Ground
  - Fishing Area
  - Net Drying Place
  - Net Mending Area
  - Play Ground
  - Temple Land

- **Natural Layers**
  - Open Defecation Area
  - Plantation
  - River
  - Vegetation
  - Residential Area

**Sources:**
1. Cadastre map of Scale 1:5000 (Survey and Land Records and IRS, AU)
2. Survey of India Toposheet of Scale 1:50000
3. HTL, LTL (IRS, AU)

Figure 13 Map of Alampara fort, Kancheepuram district
Figure 14 Map of Alampara Kuppam, Kancheepuram district
Kadapakkam Kuppam Village Map, Kancheepuram District

Figure 15 Map of Kadapakkam Kuppam, Kancheepuram district
Thazhuthalikuppam Village Map, Kancheepuram District

Legend
Infrastructure
- Church
- Hand Pump
- Palli
- Water Tap
- Shop
- Garbage Area
- Co-operative Store
- Temple
- Community Hall
- Water Tank
- School
- Electric Post
- Transformer

Activity Layer
- Boat Parking Area
- Net Mending Area
- Playing Area
- Temple Area

Natural Layer
- Sand
- Vegetation
- Water Body
- Residential
- HTL
- LTL

Sources:
1. Cadastral map of Scale 1:5000 (Survey and Land Records and IRS, AU)
2. Survey of India Topo-sheet of scale 1:50000
3. HTL, LTL (IRS, AU)

Figure 16 Map of Thazhuthali Kuppam, Kancheepuram district
Figure 17 Meetings and discussions in the villages of Villupuram district
Figure 18 Map of Alakankuppam, Villupuram district
Figure 19 Map of Mandava Pudukuppam, Villupuram district
Figure 20 Map of Vasavankuppam, Villupuram district
Ekiyar Kuppam Village Map, Villupuram District

Legend

Infrastructure
- Angawadi
- Community Hall
- Electric Post
- Hand Pump
- Light House
- Murugan Temple
- Ration Shop
- School
- Shop
- Temple
- Transformer
- Water Tank
- Water Tap
- Woman’s Public Toilet

Activity Layer
- Boat Parking Area
- Cricket Ground
- Play Ground
- Temple Area
- Temple Stage

Natural Layer
- Plantation
- Sand Dune
- Scrub Area
- Vegetation

Source:
1. Google Earth

Figure 21 Map of Ekiyar Kuppam, Villupuram district
Kazhipanikuppam Village Map, Villupuram District

Legend

Infrastructure
- Anganwadi
- Disaster Shelter
- Factory
- Fish Processing center
- Primary Health Center
- Public Toilet
- School
- SHG Center
- Temple
- Village Panchayat Office
- Water Tank
- Water Tap

Electric Post
- Road
- Residential Area

Activity Layer
- Boat Parking Area
- Cricket Ground
- Net Mending Area
- Net Storage Place
- Cremation ground
- Defecation Area
- Playing Area

Natural Layer
- Plantation
- Scrubs Area
- Seasonal Drainage System
- Vegetation

Source:
1. Google Earth

Figure 22 Map of Kazhipanikuppam, Villupuram district
Figure 23 Meetings and discussions in the villages in Pondicherry
Figure 24 Map of Panithittu, Pondicherry
Figure 25 Map of Solai Nagar, Pondicherry
Figure 26 Map of VambaKeerapalayam, Pondicherry
Figure 27 Map of Narambai, Pondicherry
Figure 28 Map of Murthikuppam, Pondicherry
Final village meeting at Kalikuppm
Final village meeting at T.R Pattinacherry
Final village meeting at Kottucherimedu

Active participation of women SHG at Kalikuppm
Village meeting with SHG at Kalikuppm
Participation of women SHG at Kottucherimedu

Village leader represented from Mandapathur
People from Mandapathur
Women SHG at village meeting, Kottucherimedu

Active participation of women SHG at T.R Pattinacherry
Final village meeting at Kottucherimedu
Village leader represented from Akkampettai

Figure 29 Meetings and discussions in the villages of Karaikal
Figure 30 Map of T R Pattinacherry, Karaikal
Figure 31 Map of Kottucherimedu, Karaikal
Figure 32 Map of Akkampettai, Karaikal
Figure 33 Map of Kalikuppam, Karaikal
Figure 34 Map of Mandapathur, Karaikal
Figure 35 Meetings and discussions in the villages of Nagapattinam district
Figure 36 Map of Kallar, Nagapattinam district
Figure 37 Map of Kameshwaram, Nagapattinam district
Figure 38 Map of Vizhunthamavud, Nagapattinam district
Figure 39 Map of Vanavanmadevi, Nagapattinam district
Figure 40 Map of Vellapallam, Nagapattinam district
7.4. **Documentary on erosion: “India’s disappearing beaches - A wake up call”**

Beaches on India’s coast are disappearing at an alarming rate. Studies show that 40 % or India’s coast is eroding due to man-made interventions. This cancerous destruction is having devastating impacts on the coastal environment and livelihoods of coastal communities. To raise awareness about this serious issue, this documentary has been made. It is produced by Shekar Dattatri, an award winning documentary maker. English and Tamil versions are ready, Malayalam, Kannada and Hindi are under production and eventually it will be made in all the coastal languages.

Website: [http://www.disappearingbeaches.org/](http://www.disappearingbeaches.org/)

You tube (English): [https://www.youtube.com/watch?v=KgTn6Opjiok](https://www.youtube.com/watch?v=KgTn6Opjiok)

You tube (Tamil): [https://www.youtube.com/watch?v=9RSZFx6588U](https://www.youtube.com/watch?v=9RSZFx6588U)

8. **Lessons learnt and new opportunities**

The association with NFF and other NGOs who are all members of National Coastal Protection Campaign (NCPC) was a big help in terms of connecting with the coastal communities. However project strategies had to be changed continuously due to various factors:

- Incessant rain during the project period due to heavy monsoons.
- Meetings being cancelled in the last moment due to sudden siting of fish catch, marriage/temple functions, festivals in the village (deepavali, christmas, new year, pongal etc.)
- Village politics; conflict between the Panchayat leaders
- Expectation of remuneration for attending meetings (a practice developed after Tsunami)
- Expectation of funds for village temple functions
- Suspicion that the maps might be used to oust them from the village

ICMAM / MoES while reviewing the 25 GIS maps confessed that without the community participation it is not possible to prepare such detailed maps. They have given their suggestions to make the maps more relevant and acceptable to the Government.

PondyCAN has organized various consultation meetings and workshops in association with other organizations where this stewardship program experience was shared:

<table>
<thead>
<tr>
<th>Date</th>
<th>Event</th>
<th>Partners</th>
</tr>
</thead>
<tbody>
<tr>
<td>24th Oct. 14</td>
<td>“Tamil Nadu convention for Fishers’ right to housing and commons”</td>
<td>The other media</td>
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<tr>
<td>4th April 15</td>
<td>NCPC retreat</td>
<td>Conservation Action Trust</td>
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<tr>
<td>5th May 15</td>
<td>“Water Stewardship for sustainable development of the Bioregion”</td>
<td>US Consulate Chennai, French Institute of Pondicherry, TDC L’Avenir Auroville</td>
</tr>
<tr>
<td>22nd May 15</td>
<td>“Tackling climate change for greener growth: global endeavour, local solutions”</td>
<td>French Embassy, Agence Française de Developpement Alliance Française, Fondation Goodplanet, French Institute of Pondicherry</td>
</tr>
</tbody>
</table>
Next steps:

I. ICMAM has offered to conduct a series of 6 workshops (3 day program for 25 people each session) which can start from July 2015. This is based on the fact that the Minister of Earth Science, New Delhi has appreciated ICMAM’s partnership with PondyCAN to conduct such social training programs and has requested them to make it an on-going process.

II. Department of Science Technology and Environment (DSTE), Pondicherry have expressed their eagerness to partner with PondyCAN to map all the remaining coastal villages in Pondicherry.

III. NCPC organizations are eager to start the mapping of coastal villages in their respective States. Training programs have already been conducted in Malvan (Sindhudurg district, Maharashtra), Vembar (Tuticorin district, Tamil Nadu) and Sundarbans (South 24 Paraganas district, West Bengal). The next batches will be coming for training to ICMAM and Pondicherry.

IV. In the consultation meeting of all stakeholders for Water Stewardship for sustainable development of the Bioregion: Pondy-Auroville-Villupuram-Cuddalore, it was decided to adopt this community approach for tackling the immediate water crisis as well as planning for future sustainability. One training program has already been conducted in the Coastal Stewardship Centre and more are planned.

With all these proposals and PondyCAN’s conviction that capacity building is the key ingredient to foster proactive citizenship towards building a better tomorrow, it is assumed that the Coastal Stewardship Centre will be busy in the days to come.

9. Conclusions and recommendations

PondyCAN’s endeavour has always been to build a collaborative platform of all stakeholders for an integrated, inclusive and holistic development; harmonizing economic prosperity with the natural, cultural and spiritual heritage. Though excellent rapport has been built with the Government, academic and scientific institutions, NGOs & CBOs, the link to local communities has been limited to just attending meetings. This project was a great opportunity to connect to them; understand their perspectives, the village dynamics etc. The mapping of village resources and activity spaces was a good entry point activity. It was encouraging to see this young and dynamic group taking so much interest in the stewardship program and keen to work for the protection of the coast and the dignity of their community; they picked up mapping skills so quickly and organized and conducted village meetings in an organized manner.

In spite of all the challenges the community involvement was very positive. This exercise was highly appreciated by the Panchayat leaders, SHGs and youth groups as they saw value in it; appreciating the wholesomeness of their village and creating the possibility of getting legal rights over these spaces which they have so far been enjoying only as customary rights. They expressed their gratefulness for our taking up this initiative which they felt will help them immensely in taking ownership and protecting the village assets. They were particularly happy that they were among the first group of coastal villages to take up this initiative.
The entire process has been documented; the templates for village mapping and the formats for conducting the workshops and village meetings can now be readily used for mapping coastal villages in the other States of India.

On the whole it was a huge learning experience. The stewardship program could become a model for creating societal ownership of coastal and marine resources. This could pave the way for better coastal governance for a healthier coast and the wellbeing of the coastal communities.

While this pilot project has helped gaining experience in working with coastal communities for a stronger collaboration, there are a number of actions to be taken for better protection of India’s coast:

- **Coastal Stewardship Centre** to be set up in every coastal state to conduct capacity building/learning in action programs for both Government and civil society.
- **A national network** to be formed to enrol all stakeholders for constant monitoring and data collection.
- **Central information system** to be created for collecting and disseminating information about the coast.
- **Design creative educational materials** and conduct programs in schools to inspire the young generation to take result based actions.

“A society is defined not only by what it creates but by what it refuses to destroy.”

John Sawhill
Appendix I  Training on geomatics for coastal disaster management  
September 1-5, 2014, ICMAM-NIOT, Chennai

Day 1 (1.09.2014)
Inaugural function: Dr S.K. Dash
1st session - Geometrics for coastal disaster management - Dr Tune Usha
2nd session - Fundamentals of remote sensing - Dr S.K. Dash
3rd session - Fundamentals of GIS - Mr Gopinath
4th session - Presentation about the activities of ICMAM and NIOT

Day 2 (2.09.2014)
1st session - Landuse and landcover mapping - Dr S.K. Dash
2nd session - Remote sensing and GIS practicals - Mr Gopinath

Day 3 (3.09.2014)
Visit to Kovalam, a coastal village, for field work

Day 4 (4.09.2014)
1st session - Coastal erosion and shoreline changes - Dr P. Mishra
2nd session - Oil spills and impacts on marine resources - Dr R.S. Kankara
3rd session - Introduction to GIS - Mr Gopinath

Day 5 (5.09.2014)
1st Session - Methodology and preparation of coastal vulnerability maps - Dr Tune Usha
2nd Session - MAP windows GIS - Mr Gopinath

Valedictory function: Dr M.A. Atmanand, Director, ICMAM addressed the gathering and handed over the certificates to participants.
## Appendix II  Template for coastal village mapping

<table>
<thead>
<tr>
<th>Natural layers</th>
<th>Colour code</th>
<th>R</th>
<th>G</th>
<th>B</th>
<th>Shape file type</th>
</tr>
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<tbody>
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<td>170</td>
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<tr>
<td>Plantation</td>
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<td>Scrubs</td>
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<tr>
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<td>Water body/ water stream</td>
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<table>
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<th>Activity layers</th>
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<tr>
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<td>Fish drying area</td>
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<tr>
<td>Net mending</td>
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<td>255</td>
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<td>Polygon</td>
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<tr>
<td>Cricket ground</td>
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<td>Volley ball</td>
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<tr>
<td>Playing area</td>
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<td>71</td>
<td>7</td>
<td></td>
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<td>Cattle field</td>
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<td>LTL</td>
<td>197</td>
<td>217</td>
<td>241</td>
<td></td>
<td>Line</td>
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<tr>
<td>HTL</td>
<td>255</td>
<td>204</td>
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<th>B</th>
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<td>Pier</td>
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<td>96</td>
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<td>0</td>
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<tr>
<td>Bridge</td>
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<tr>
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<td>182</td>
<td>221</td>
<td>232</td>
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</tr>
<tr>
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<td>R</td>
<td>G</td>
<td>B</td>
<td>Type</td>
<td></td>
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<td>-----</td>
<td>-----</td>
<td>-----</td>
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<td>37</td>
<td>121</td>
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<td>Proposed tsunami quarters</td>
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<td>85</td>
<td>255</td>
<td>Polygon</td>
<td></td>
</tr>
<tr>
<td>Big companies</td>
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<td>0</td>
<td>204</td>
<td>Polygon</td>
<td></td>
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<td>Memorial structures</td>
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<td>101</td>
<td>149</td>
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<td></td>
</tr>
<tr>
<td>Plotted land</td>
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<td>109</td>
<td>10</td>
<td>Polygon</td>
<td></td>
</tr>
<tr>
<td>Net mending building</td>
<td>255</td>
<td>102</td>
<td>255</td>
<td>Point/Polygon</td>
<td></td>
</tr>
<tr>
<td>Temple</td>
<td>255</td>
<td>255</td>
<td>0</td>
<td>Point/Polygon</td>
<td></td>
</tr>
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<td>Community hall</td>
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<td>102</td>
<td>0</td>
<td>Point/Polygon</td>
<td></td>
</tr>
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<td>Ration shop</td>
<td>255</td>
<td>51</td>
<td>204</td>
<td>Point/Polygon</td>
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<td>Port structure</td>
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<td>Park</td>
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<td>College</td>
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<td>0</td>
<td>127</td>
<td>Polygon</td>
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<td>Boat building structure</td>
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<td>174</td>
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</tbody>
</table>

Note: R/G/B: Red/Green/Blue
### Appendix III  Template for mapping symbols in village map

<table>
<thead>
<tr>
<th>Symbol</th>
<th>Image</th>
<th>Symbol</th>
<th>Image</th>
</tr>
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<tbody>
<tr>
<td>Hand pump</td>
<td><img src="image" alt="Hand pump" /></td>
<td>Tap</td>
<td><img src="image" alt="Tap" /></td>
</tr>
<tr>
<td>Temple</td>
<td><img src="image" alt="Temple" /></td>
<td>Telephone post</td>
<td><img src="image" alt="Telephone post" /></td>
</tr>
<tr>
<td>Street light</td>
<td><img src="image" alt="Street light" /></td>
<td>Tower</td>
<td><img src="image" alt="Tower" /></td>
</tr>
<tr>
<td>Electricity post</td>
<td><img src="image" alt="Electricity post" /></td>
<td>Tree</td>
<td><img src="image" alt="Tree" /></td>
</tr>
<tr>
<td>Toilet</td>
<td><img src="image" alt="Toilet" /></td>
<td>Light house</td>
<td><img src="image" alt="Light house" /></td>
</tr>
<tr>
<td>Bus stop</td>
<td><img src="image" alt="Bus stop" /></td>
<td>School</td>
<td><img src="image" alt="School" /></td>
</tr>
<tr>
<td>High-Mass-Light</td>
<td><img src="image" alt="High-Mass-Light" /></td>
<td>Community hall</td>
<td><img src="image" alt="Community hall" /></td>
</tr>
<tr>
<td>Bridge</td>
<td><img src="image" alt="Bridge" /></td>
<td>Garbage</td>
<td><img src="image" alt="Garbage" /></td>
</tr>
</tbody>
</table>

Note: The extra land use colour, symbols and option can be added based on your location but need to follow the same pattern for all the maps.
Appendix IV  Agenda for 2-day district level workshop on coastal village mapping “Our Coast - Our Village”

Date:
Place:

Day 1

Welcome address:
1st session: Introduction to CRZ and coastal mapping
2nd session: Introduction and importance of coastal mapping
3rd session: Hands-on session for participants to draw their village map
Lunch break
4th session: Introduction to GPS and Q GIS software and hands on session on using GIS
5th session: Practical session on how to work on GPS files

Day 2 (Field work)

1st session: Field work on targeted village (mapping 3 layers)
Lunch break
2nd session: Working on QGIS
3rd session: Feedback and discussion
Appendix V  Number of participants who attended the 2-day workshop on “Our Coast– Our Village” - district wise

<table>
<thead>
<tr>
<th>Sl.no.</th>
<th>District</th>
<th>No. of participants in the 2-day workshop</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Kancheepuram district</td>
<td>15</td>
</tr>
<tr>
<td>2</td>
<td>Villupuram district</td>
<td>19</td>
</tr>
<tr>
<td>3</td>
<td>Pondicherry</td>
<td>21</td>
</tr>
<tr>
<td>4</td>
<td>Karaikal</td>
<td>14</td>
</tr>
<tr>
<td>5</td>
<td>Nagapattinam district</td>
<td>18</td>
</tr>
</tbody>
</table>
Appendix VI  Agenda for presentation of GIS maps in the first village meeting

“Our Coast – Our Village”

Agenda

1. Welcome address - Village president
2. Self-introduction - Facilitated by District Coordinator
3. Purpose of meeting (CRZ) - District Coordinator
4. GPS mapping experience - Any one of the person in the GPS team
5. Presentation of village map – PondyCAN team
6. Discussion of the 3 layers – PondyCAN team
7. General discussion:
   a. How will this mapping be useful for the village?
   b. Will the mapping help in building community ownership of the village?
   c. When can we have the final village meeting?
8. Vote of thanks - District Coordinator
## Appendix VII  Details of feedback during village meetings

<table>
<thead>
<tr>
<th>Sl.no</th>
<th>Village name</th>
<th>Feedback</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Kancheepuram district</td>
<td></td>
</tr>
<tr>
<td>1</td>
<td>Thazhuthali Kuppam</td>
<td>More land required for their future generation and space for playing activity.</td>
</tr>
<tr>
<td>2</td>
<td>Pannyer Chinakuppam</td>
<td>Traditional village road needs to be freed from occupation. More space needed for boat parking and net repairing.</td>
</tr>
<tr>
<td>3</td>
<td>Alampara Kuppam</td>
<td>Save village land from unwanted development activities. Get back village land from the forest department. Stop the proposal of constructing the hospital near to boat parking area.</td>
</tr>
<tr>
<td>4</td>
<td>Kdpakam Kuppam</td>
<td>Mapping will help them to protect their land from encroachment by industries.</td>
</tr>
<tr>
<td>5</td>
<td>Alampara fort</td>
<td>Mapping needs to be done for escape route during the emergency. Preserve traditional places from encroachments for real estate.</td>
</tr>
<tr>
<td></td>
<td>Villupuram district</td>
<td></td>
</tr>
<tr>
<td>6</td>
<td>Alakankuppam</td>
<td>Stop the construction of the new unit of an industry dumping waste into sea. Need space and facilities for children playing activity.</td>
</tr>
<tr>
<td>7</td>
<td>Mandava Pudukuppam</td>
<td>Protecting village land from encroachment for tourism activity.</td>
</tr>
<tr>
<td>8</td>
<td>Vasavan Kuppam</td>
<td>Mapping will help to protect their land from illegal activities.</td>
</tr>
<tr>
<td>9</td>
<td>Ekiyar Kuppam</td>
<td>Map will be useful when they are stopped by coast guard.</td>
</tr>
<tr>
<td>10</td>
<td>Kazhipanikuppam</td>
<td>Want to stop the proposal for construction of industries.</td>
</tr>
<tr>
<td></td>
<td>Pondicherry</td>
<td></td>
</tr>
<tr>
<td>11</td>
<td>Panithittu</td>
<td>Need more land for future generation. Need space for children’s park.</td>
</tr>
<tr>
<td>12</td>
<td>Solai Nagar</td>
<td>Need space for boat parking and net repairing area because of seawall. Need space for children playing activity.</td>
</tr>
<tr>
<td>13</td>
<td>Keerapalayam</td>
<td>Need alternative land for boat parking because of seawall. Need playground and park for children.</td>
</tr>
<tr>
<td></td>
<td>Location</td>
<td>Concern</td>
</tr>
<tr>
<td>---</td>
<td>----------------</td>
<td>-------------------------------------------------------------------------</td>
</tr>
<tr>
<td>14</td>
<td>Narambai</td>
<td>Children’s park and temple are missing in the activity layer.</td>
</tr>
<tr>
<td>15</td>
<td>Murthikuppam</td>
<td>Need more space for their future generation.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Protect village land from encroachment by industries.</td>
</tr>
<tr>
<td></td>
<td></td>
<td><strong>Karaikal</strong></td>
</tr>
<tr>
<td>16</td>
<td>T. R Pattinacherry</td>
<td>Need space for boat parking and net repairing area.</td>
</tr>
<tr>
<td>17</td>
<td>Kottucherimedu</td>
<td>Cremation ground and playing ground are missing in activity layer.</td>
</tr>
<tr>
<td>18</td>
<td>Akkampettai</td>
<td>Protect village land from encroachment.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Water body is missing in the natural layer.</td>
</tr>
<tr>
<td>19</td>
<td>Kalikuppam</td>
<td>Need more space for housing.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Protect village land from encroachment by industries.</td>
</tr>
<tr>
<td>20</td>
<td>Mandapathur</td>
<td>Need more land for future generation.</td>
</tr>
<tr>
<td></td>
<td></td>
<td><strong>Nagapattinam district</strong></td>
</tr>
<tr>
<td>21</td>
<td>Kallar</td>
<td>Need space for playing activity for children and youth.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Protect village land from encroachment by industries.</td>
</tr>
<tr>
<td>22</td>
<td>Kameshwaram</td>
<td>Protect village land from encroachment for real estate.</td>
</tr>
<tr>
<td>23</td>
<td>Vizhunthamavadi</td>
<td>Library and water tank are missing in the infrastructure layer.</td>
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<td>24</td>
<td>Vanavanmadevi</td>
<td>Primary school and temples are missing in the infrastructure layer.</td>
</tr>
<tr>
<td>25</td>
<td>Vellapallam</td>
<td>Need space for children playing activity and parks.</td>
</tr>
</tbody>
</table>
Bangladesh, India, Indonesia, Malaysia, Maldives, Myanmar, Sri Lanka and Thailand are working together through the Bay of Bengal Large Marine Ecosystem (BOBLME) Project to lay the foundations for a coordinated programme of action designed to better the lives of the coastal populations through improved regional management of the Bay of Bengal environment and its fisheries.

The Food and Agriculture Organization (FAO) is the implementing agency for the BOBLME Project.

The Project is funded principally by the Global Environment Facility (GEF), Norway, the Swedish International Development Cooperation Agency, the FAO, and the National Oceanic and Atmospheric Administration of the USA.

For more information, please visit www.boblme.org