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## Feasibility of Establishing a Cross-sectoral Institutional Mechanism for Mainstreaming Coastal and Marine Biodiversity Conservation into Production Sectors in the East Godavari Riverine Estuarine Ecosystem (EGREE), Andhra Pradesh, India



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III Conference of Parties  
Convention on Wetlands  
HYDERABAD INDIA 2012

**FEASIBILITY OF ESTABLISHING A CROSS-SECTORAL  
INSTITUTIONAL MECHANISM FOR MAINSTREAMING  
COASTAL AND MARINE BIODIVERSITY CONSERVATION  
INTO PRODUCTION SECTORS IN THE  
EAST GODAVARI RIVERINE ESTUARINE ECOSYSTEM (EGREE),  
ANDHRA PRADESH, INDIA.**





**CITATION:** Sanjay Upadhyay, Shyama Kuriakose, Pramod Krishnan, Thulsi Rao and Tarun Kathula. Feasibility of Establishing a Cross-Sectoral Institutional Mechanism for Mainstreaming Coastal and Marine Biodiversity Conservation into Production Sectors in the East Godavari Riverine Estuarine Ecosystem, Andhra Pradesh, India.

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Published by : GoI - UNDP - GEF - Godavari Project, A.P., India

Supported under the GEF–UNDP–GoI Project “Mainstreaming Coastal and Marine Biodiversity Conservation into Production Sectors in the East Godavari Riverine Estuarine Ecosystem, Andhra Pradesh, India.”

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Printed at Kalajyothi Process (P) Ltd., Hyderabad.

## FOREWORD

East Godavari Riverine Estuarine Ecosystem (EGREE) in Andhra Pradesh is the second largest mangrove forests in the east coast of India. In recognition of its national and global biodiversity significance, a part of the EGREE is notified as Coringa Wildlife Sanctuary. EGREE region has undergone rapid economic changes in the last two decades as a result of emergence of production activities like oil and gas exploration, industries and ports. The region is inhabited by rural communities who are also dependent on mangroves and other marine resources for livelihood.

It is imperative to forge partnerships among various sectors on the conservation of the region and to encourage biodiversity friendly practices among production sectors. One critical element in this regard would be the establishment of a cross-sectoral institutional platform that can bring agencies, industries and communities together and work towards the above stated goal, consistent with national and state policies, and priorities.

Creation of ‘**EGREE FOUNDATION**’ under the GoI-UNDP-GEF Project: *‘Mainstreaming Coastal and Marine Biodiversity into Production Sectors in the East Godavari Riverine Estuarine Ecosystem, Andhra Pradesh’* is an attempt towards this direction. I hope that this publication will contribute in the constitution of the Foundation and shall lead to the effective conservation of coastal and marine biodiversity, improving local livelihoods and sustainable development in the Godavari region.



**(S.V. Kumar)**  
Chief Wildlife Warden and State  
Project Director

## PREFACE

Coastal biodiversity governance is increasingly challenging as India seeks to accelerate economic development. There are varied baselines with diverse resource base, use patterns, multiplicity of actors and stakeholder interests. The East Godavari Riverine Estuarine Ecosystem in Andhra Pradesh is a case in point where a rich bio-diversity faces new challenges. Lower Godavari delta has witnessed a surge in production activities in the last few decades such as oil and gas exploration, extractive industries, ports and industrial fisheries. This has implications on regional ecology and rural livelihoods to which the governance framework has to respond effectively

The existing governance frameworks in the region are largely sectoral in nature; characterized by individual sectors pushing their own developmental mandates and priorities. It is important to develop a coastal and marine governance paradigm built on biodiversity-friendly strategic planning and mainstreaming environmental considerations into production sector practices. Ensuring cross-sectoral coordination is central to this approach.

Creation of the EGREE FOUNDATION under the GoI-UNDP-GEF Project: *'Mainstreaming Coastal and Marine Biodiversity into Production Sectors in the East Godavari Riverine Estuarine Ecosystem, Andhra Pradesh'* is an initiative that aims at an effective governance framework to respond to these challenges. I hope that this publication will be useful in exploring institutional options for constituting the Foundation to usher in a new paradigm of coastal governance.



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# AN EGREE PROJECT INITIATIVE



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## ACRONYMS AND ABBREVIATIONS

AFCCS	- Andhra Fishermen Central Cooperative Society
APSEIAA	- Andhra Pradesh State Level Environment Impact Assessment Authority
SEIAA	- State Level Environment Impact Assessment Authority
SEAC	- State Level Expert Appraisal Committee
APBR	- Andhra Pradesh Biodiversity Rules, 2009
APCZMA	- Andhra Pradesh Coastal Zone Management Authority
APDDCFL	- Andhra Pradesh Dairy Development Cooperative Federation Limited
APFCOF	- Andhra Pradesh State Fishermen Cooperative Societies Federation Limited
APFD	- Andhra Pradesh Forest Department
APPCB	- Andhra Pradesh Pollution Control Board
APSBB	- Andhra Pradesh State Biodiversity Board
BD Act	- Biological Diversity Act, 2002
BMC	- Biodiversity Management Committees
CITES	- The Convention on International Trade in Endangered Species of Wild Fauna and Flora
CRZ	- Coastal Regulation Zone
CWLS	- Coringa Wildlife Sanctuary
CZMP	- Coastal Zone Management Plans
DTPC	- District Tourism Promotion Committee
EDC	- Eco Development Committees
EEZ	- Exclusive Economic Zones
EGREE	- East Godavari Riverine Estuarine Ecosystem
EIA	- Environmental Impact Assessment
ELDF	- Enviro-Legal Defence Firm

EPA	- The Environment Protection Act, 1986
FAO	- The Food and Agriculture Organization
GEF	- Global Environment Facility
GOMBRT	- The Gulf of Mannar Biosphere Reserve Trust
IUCN	- The International Union for Conservation of Nature
JNTU	- Jawaharlal Nehru Technological University
LLMC	- International Convention on Limitation of Liability for Maritime Claims
M&E	- Monitoring and Evaluation
MARPOL	- The International Convention for the Prevention of Pollution from Ships
MFF	- Mangroves for the Future
MoEF	- Ministry of Environment and Forests
MPEDA	- Marine Products Exports Development Authority
MZA	- The Maritime Zones Act
NGO	- Non-Governmental Organization
OIL POL	- The International Convention for the Prevention of Pollution of the Sea by Oil
PCPIRs	- Petroleum, Chemicals & Petrochemicals Investment Regions
PESA	- The Panchayat (Extension to Scheduled Areas) Act, 1996
UN	- United Nations
UNCED	- United Nations Conference on Environment and Development
UNCLOS	- United Nations Convention on the Law of the Sea
UNDP	- United Nations Development Programme
VSS	- Vana Samrakshana Samithis







## I. Unique Context of EGREE

The ecological significance of the East Godavari Riverine Estuarine Ecosystem (EGREE) lies in its uniqueness. It is a region with high biodiversity value and includes the Coringa Wildlife Sanctuary (CWLS), along with numerous coastal and marine features. The Godavari Delta, like many other deltaic systems, is characterized by rivers and channels, flood plains, natural levees, mangrove forests, tidal channels, tidal flats, lagoons, Kakinada Bay, sand spits, mainland beaches, sand dunes and paleo-ridges. All these features keep the land sheltered from ocean currents and thus are highly important in the event of any natural disaster. In addition, the presence of different species of fauna, flora and marine living organisms makes this region a contender for advanced levels of protection. Increasing human activities in the form of industries, fisheries, aquaculture, livelihoods/ subsistence of local communities, tourism, ports, shipping, salt pans, etc. are threatening to disturb the existing features in the EGREE region<sup>1</sup>. It can



be seen that all the characteristics that make EGREE unique need to be conserved without compromising, as far as possible, the interests of the local communities and production sectors. The means of achieving this is certainly a challenge and is the subject matter of the current monograph. One of the ways is to establish a cross-sectoral institutional mechanism for mainstreaming coastal and marine biodiversity conservation into the production sectors in the EGREE.

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<sup>1</sup> Prof. Y. Anjaneyulu and Prof. L.V. Murali Krishna, *Final technical report, Monitoring of Godavari Estuarine and Mangrove Environment of Kakinada Bay Using Remote Sensing and In Situ Measurement Methods*, p. 220.

## II. Need for a Foundation

As explained above, the ecological integrity of EGREE is under increasing pressure on account of the rapid emergence of production activities in the Kakinada region<sup>2</sup>. The various threats to the biodiversity in EGREE arise from the manufacturing sector, fisheries, aquaculture, livelihoods/subsistence of local communities, tourism, ports and shipping, and salt pans among others<sup>3</sup>. While the importance of these production sectors cannot be overlooked, a sustainable mechanism is to be put in place that takes into consideration the conservation of coastal and marine biodiversity; the socio-economic welfare of the local communities; and the development of production sectors based within the region and in accordance with principles of good governance.

Thus, a common platform that takes care of the above-mentioned cross-sectoral interests is required. This platform may be in the form of an implementing agency or an executive body that balances development and conservation of biodiversity. A Foundation in the form of a Trust or a Society seems to provide the most suitable remedy since this model has been implemented in various eco-sensitive regions, for example, the Periyar Foundation and the Gulf of Mannar Biosphere Reserve Trust, and has met with great success. It must however be noted that in the context of EGREE, the success of the Foundation would largely depend on the satisfaction of cross-sectoral interests and priorities. These include the following:

- a. Having a mechanism that will harmonize government policies, programmes and resources with production sector objectives;
- b. Involving actively all sectors that exert pressure on EGREE in sustaining local communities, along with the production sectors, while sustainably utilizing coastal and marine resources;
- c. Addressing issues such as bycatch, ballast water, fishing gear and practices, pollution and systematic decimation of mangroves, wildlife habitats and sand dunes;
- d. Protecting critical habitats on both the landward and seaward sides, including the habitats of turtles, migratory birds, etc. and pelagic and benthic habitats larvae and juvenile marine animals of the depend on mangroves;

<sup>2</sup> *Ibid.*

<sup>3</sup> *Ibid.*, pp. 236–260.

- e. Facilitating trade through augmentation of ports and harbour facilities with reduced usage of oceans as pollution sinks;
- f. Monitoring and enabling production sectors to treat their effluents and have proper waste disposal and recycle plants in place;
- g. Bringing civic monitoring systems in place that will elicit community support in observing joint patrolling exercises along the EGREE coastline;
- h. Creating the proper environment for coastal eco-tourism; and
- i. Conforming to international obligations that govern oceans within the responsibilities of the Foundation.

An agency that satisfies the above-mentioned aspects should have an authority of the Government and the flexibility of a good NGO to be both effective and efficient. Towards achieving such a structure, it would be vital to understand the various laws, policies and plans already existing and suitable to Andhra Pradesh in the context of marine and coastal sectors. The Foundation must have clear aims and objectives and a suitable composition and structure, functions, jurisdiction, representation, financial autonomy, powers, duties, planning, staffing, liability, penalties, incentives, technical and disciplinary backup, global outreach, convergence with local authorities and state actors, grievance redressal, resolutions of disputes, etc. This should be weaved into the rules, bye-laws and regulations that facilitate the creation of a Foundation for EGREE, referred to in this document as the EGREE Foundation.

It is clear that such a structure would be based on a sound understanding of the existing law and policy regime, including the institutional arrangements that currently impact the region. It is therefore essential to explain the legal and policy environment within which such a Foundation may exist.



### III. Law and Policy Regime on Coasts and Oceans that Impacts EGREE

#### 1. Plethora of Laws

There are at least twenty-eight national statutory laws that are related to marine areas and about seventeen international instruments that India has signed on various aspects of ocean management. Then there are an equal number of state laws in the federal structure where there is jurisdictional classification of the States and Centre vis-à-vis the ocean and coastal stretches. There are laws that conserve the marine habitat, those that protect marine species, those that use marine resources and those that facilitate trade. There are also marine laws that divide the marine waters into several zones. Then there are international instruments that protect marine habitats and species and delineate zones within marine waters. It is therefore important to understand them in a little more detail and how they affect EGREE.

#### 2. Laws and Policy that Conserve Marine and Coastal Areas

In the larger law and policy framework that addresses marine and coastal areas issues, the foremost is the Constitution of India, which provides control over marine resources and also envisages the

states' responsibility of protecting the natural resources, including the marine living resources and habitat. The only policy frame that has been made at the national level on oceans is the Ocean Policy Statement, issued in the late 1990s, which primarily provided for a use-oriented framework. Clearly, it now needs to be revisited, and a comprehensive Ocean Policy needs to be formulated. The EGREE Foundation and its experience could provide inputs to such a policy.

The most important legislation on coastal and marine waters is perhaps the Territorial Waters, Continental Shelf, Exclusive Economic Zone and Other Maritime Zones Act, 1976, which not only zones the seascape but also provides for measures to protect the marine environment. Further, the Coast Guard Act, 1986, the Merchant Shipping Act, 1958 and the Public Liability Insurance Act, 1991 too provides for protection measures to the marine environment. Of course the primary umbrella legislation, the Environment Protection Act, 1986, and especially the CRZ Notification, 2011 (as amended) still form the basic legislation from the environmental standpoint for the coastal and ocean stretches. Other appellate fora have





also been created, such as the National Green Tribunal, through the Act of 2010, which may be used to adjudicate on issues on marine environment. This is notwithstanding the inherent competence issue of such quasi-judicial bodies.

### **3. Laws that Protect Marine Species**

There are specific laws that protect species, such as the Wild Life Protection Act, 1972, wherein schedules list marine species as according to the threats faced by such species. The Biological Act too protects the coastal biodiversity at all levels: genetic, species and ecosystem. Similarly, there are internationally acknowledged lists that have been prepared for the global community, such as the IUCN Red Data List and the appendices of the

Convention of International Trade in Endangered Species of Fauna and Flora (CITES), to which we are a party since 1976.

### **4. Laws on Trade in Marine Products**

Apart from the laws that aim at protection of habitats or species, there are those that govern the trade in marine products and resources. The Marine Products Export Development Authority Act, 1972, The Indian Fisheries Act, 1897, The Aqua-Culture Authority Act, 2005 and the Andhra Pradesh Marine Fishing Regulation Act, 1994 are good examples of these. Coupled with such laws are also policies that are aimed at exploiting marine resources. The Deep Sea Fishing Policy, 1991 is a case in point.

## 5. Laws on Movement of Vessels and Ships

Along with the trade-oriented laws there exist laws that facilitate trade, such as the Indian Ports Act, 1908, the Major Port Trusts Act, 1963, the Foreign Jurisdiction Act, 1947, the Indian Merchant Shipping Act, 1958, the Marine Insurance Act, 1963, the Coast Guard Act, 1978, and the Maritime Zones of India (Regulation of Fishing by Foreign Vessels) Act, 1981, among others.

## 6. Laws on Zonation of Marine and Coastal Areas

Equally important are the laws that geographically divide the ocean or seascape for specific purposes. The best-known is the Territorial Waters, Continental Shelf, Exclusive Economic Zones and other Maritime Zone Act, 1976, which talks about at least four zones, namely territorial waters, the continental shelf, the Exclusive Economic Zone (EEZ) and the contiguous zone. Similarly,



the Foreign Jurisdiction Act, 1947 also talks about historic waters. The best-known regulatory notification for dividing the coastal stretches is of course the Coastal Regulation Zone (CRZ) Notification, 2011, which has been issued under the Environment Protection Act, 1986.

## 7. International Legal Regime of Marine and Coastal Areas

There are at least three strands of assessment in the international legal regime of marine and coastal areas. First there are international laws for prevention of marine pollution such as the OILPOL Convention, the MARPOL Convention and UNCLOS III, to which India is a party. Second, there are laws that relate to maritime operations and pollution prevention. These may include laws on marine casualties and pollution prevention for mitigating casualties, such as UNCLOS III, the International Convention Relating to Intervention on the High Seas in Cases of Oil Pollution Casualties and the Basel Convention. They may also relate to securing compensation, such as the Convention on Civil Liability for Oil Pollution Damage, 1969, the Fund Convention, UNCED and the Rio Declaration among others.

The third strand relates to international law and conservation of marine resources, which includes both laws on protection of species,

such as CITES, Migratory Species Convention, UNCLOS III, International Whaling Commission and laws on protection of marine habitats such as the Ramsar Convention, World Cultural and Natural Heritage Convention and the Convention on Biological Diversity. This complex maze of laws need to be further examined and analysed for its full potential to be understood in terms of both its impact and creative use. But the surface alone has been touched as it is relevant when a Foundation such as EGREE is being conceived.

## **8. Classification of Marine Zones**

The numerous statutory laws described above also classify the seascape into various zones depending upon their convenience and the wisdom at that point in time when they were passed. Such classifications add up to about twenty-three different kinds of legal categories of areas within the ocean and coastal stretches according to the mandate of the laws. These include territorial waters, the Exclusive Economic Zone, the Coastal Regulation Zone, the Island Protection Zone, contiguous zone, high seas, designated area, coastal areas, port, selected waters, historic waters, prohibited zone, tidal waters, private waters, inland waters, foreshore, high water mark, prohibited areas, special areas and

coast. It is important to understand the implications of such zonations as each category entails different legal consequences in terms of activities within it. The planning exercise taken up by EGREE or even for vetting a master plan of the region will require a deeper understanding of the existing legal zonations in the seascape.

## **9. Ten Departments Involved in Decision-making: Organizational Responsibilities**

It is not very well-known that there are at least ten national ministries that have a bearing on the oceans and the coastal region with specific mandates. These often interplay and could be at cross purposes with each for their own specific mandates. Thus, for example, the Ministry of Environment and Forests (MoEF) has a focus on management of resources in the coastal water and is the nodal ministry, with the major responsibility for protecting the marine environment, including implementation of legislative measures. Further, the Ministry of Earth Sciences-especially the Department of Ocean Development has a specific mandate of scientific monitoring of the marine environment and management of resources in the high seas. Similarly, the Ministry of Agriculture is primarily responsible for the development of fisheries, aquaculture and fish processing. The

Ministry of Water Resources is responsible for checking erosion in the seascape. Significantly, the Ministry of Defence, including the Indian Coast Guard, is primarily responsible for taking pollution response measures, including against oil pollution. The Ministry of Surface Transport, which handles ports and shipping, represents an important sector. Further, the Ministry of Petroleum and Natural Gas has a very important role in the ocean and coastal resources as it is responsible for offshore installations, coastal refineries and pipelines, which are primarily used in an extractive industry. The Ministry of Tourism has the responsibility of carrying out and promoting tourism activities in coastal regions. These activities can have large impacts on the marine resources and the habitat. Another important extractive ministry is the Ministry of Mines, which is responsible for mining activities in coastal regions. Similarly, the Ministry of Commerce is responsible for the import of foreign trawlers and industrial fisheries of the deep seas as well as other commercial ventures in the sea.

There are statutory institutions that bring in their own conflicting mandates. These include the Coast Guard, as mentioned earlier, the Chief Wildlife Warden's Office, the Marine Products Export Development Authority, under the Ministry of Commerce, the National Marine Fisheries Development Board, the

Central Institute of Brackish Water Aquaculture, the Andhra Pradesh Pollution Control Board, the Andhra Pradesh Coastal Zone Management Authority and the Fishery Survey of India among others. Each of these has statutory and non-statutory backing, and they are not always in harmony with each other. It is clear that a larger seascape strategy through a robust institutional mechanism that realizes these mandates and integrates them within its function is the way forward.

## **10. Summary of Findings from the Preliminary Legal Analysis**

From the above preliminary analysis it is quite clear that the broader policy and legal framework for marine areas presents a very use-oriented framework. Further, the laws that affect the marine areas have classified the various zones according to their own convenience at that point of time. It is thus obvious that there are conflicts in inter-sectoral or inter-departmental coordination as the mandate and vision of every department is different. It is here that an overarching institution such as EGREE would be most suitable for bringing the synergies of these conflicting mandates to foster a win-win situation. This synergy is no more a luxury of choice but necessary as numerous conflicts are already simmering on the ground.





The EGREE region is not an exception. Thus, for example, the operation of the Wildlife Protection Act has an influence on fish catches and fishing activities, especially in protected habitats such as CWLS or the national park in the EGREE region. Port construction activities have huge ecological implications, and therefore mitigation measures have to be put in place soon. The industries destroy fishing grounds and pollute water through the discharge of rust and paints. The proposed SEZ and extractive industries that are in operation or that are proposed will certainly have their own impacts. Then, there are larger questions of fisherfolk's rights as a common property right. Similarly, the welfare of the fishing community at large is also a mandate that cannot be ignored during coastal development and coastal exploitation of resources.

## **11. Possible Conservation**

### **Measures through Utilizing of Existing Legal Spaces**

While numerous legal instruments with different mandates seemingly act as cross-purposes, there are also possibilities of creatively using the provisions so that the mandates actually strengthen rather than weaken each other. This is especially true for the conservation mandate of the EGREE region. Thus, for example, the Maritime Zones Act (MZA) can be creatively used to constitute designated areas and introduce measures to protect the marine environment in the EEZ. Further, the union government could take necessary action and frame rules to this effect. Similarly, the Coast Guard Act can be used to ensure the safety of marine habitats that may be affected due to the movement of vessels and ships along trade routes. The government may also enlarge and clearly specify the role of the Coast Guard through special rules for

marine habitats that are ecologically sensitive. In the same manner, the Merchant Shipping Act too empowers the government to take steps in the 'national interest'. This could be used to protect marine and coastal habitats. Specifically, the concept of the 'prohibited zone' and its linkage to the 'designated area' under the MZA need to be further explored. Although an old Act, the Indian Ports Act may also be used to ensure sustainable management of the coast even while meeting the requirements of trade through the movement of vessels. Specifically, the regulation and use of fires and lights within any port, which may affect marine species, the hazards of ballast water and the discharge of oil in ports, which may be detrimental to coastal conservation, can be regulated under this Act. Further, any movement by foreign vessels for the purposes of fishing that affects the marine habitats may be regulated by the Maritime Zones of India (Regulation of Fishing by Foreign Vessels) Act. The Act specifically provides for deterrent punishment by way of heavy fines and even confiscation of foreign fishing vessels engaged in any activities violating it.

## 12. New Developments

It is equally important to keep a tab on recent developments as they have their implications in creating a



Foundation as described. These developments include legal, policy and administrative developments. Thus, for example, the CRZ Notification, 2011, which brings in new concepts of vulnerability and zonations and looks at islands separately or the process of approval that has been modified, has its own bearing. Similarly, the government has come out with guidelines for providing single-window clearances for SEZs being set up along the coast. The Wetland Rules, issued in 2010, completely change the character of how wetlands will be managed in this country.

In the central government too, an inter-ministerial body is being created. It will be coordinated by the MoEF for coastal issues. Similarly, there is a national coordinating body for the Mangroves for Future programme. The National Coastal Zone Management Authority has also been created recently. Another important statutory creation is the Committee on Infrastructure for EIA Clearances. Similarly, for wildlife matters the Standing Committee of

the National Board of Wildlife is a particularly significant body. These new developments will have both statutory and institutional implications in the day-to-day functioning of EGREE and thus cannot be ignored.

### **13. Global Responses and Interests**

There is a lot of global interest in the Indian marine ecosystem. Indicative of this interest are the current UNDP effort on mainstreaming conservation programmes and the recently concluded study of the UN Team for Tsunami Reconstruction Support. The World Bank-supported

Integrated Management of Coastal Zone Programme for implementing the Swaminathan Committee Report is another massive programme that is currently being implemented on India's coast. Recently, the FAO of UN also carried out the Coastal Fisheries Sector Review. And there is the IUCN-UNDP, MFF programme, which aims to promote investment in coastal ecosystem conservation. It is clear from this that there is enough evidence to suggest that bringing on the conservation agenda on the marine waters of India is now a national priority and is globally recognized.



## IV. The Dilemma of Choice and Our Performance in Oceans-Related Policy and Action

### 1. What is More Important? And for Whom?

Perhaps the biggest dilemma for the marine ecosystem in India, including the EGREE region, is the choice of the kind and nature of the activity that should be undertaken and more importantly its implications for marine waters. These choices are not only governed by the mandates of line agencies but are also a reflection of the priorities of states or the nation, with overlapping and conflicting mandates being involved sometimes. It is perhaps time to prioritize choices and address questions such as whether sustaining traditional fishing communities or protecting critical habitats, for example, CWLS, is more important. Which is more important, conserving the landward side and the seaward side, the pelagic and the benthic habitats that serve ecological needs or maintaining aesthetic standards for promoting tourism? Should creating defense and strategic installations for national security be a priority over everything else? Should facilitating trade through augmentation of ports and harbour facilities in a developing economy for the billion-plus population be the national priority? Which is more important, utilizing oil and natural

gas for larger economic gains or harnessing tides and waves for energy security? Is the use of the ocean as a pollution sink by design and by default a priority? These are not easy questions and therefore require a meeting of minds and joining of hands to take judicious decisions. For the EGREE region, the EGREE Foundation could be best placed for taking related decisions. Who decides these priorities and how they are decided are therefore crucial.

### 2. Have We Done Enough? Way Forward?

#### 2.1 Jurisdictional Confusion

Apart from making the above difficult choices, it is important to have a preliminary understanding of the numerous gaps that exist in coastal and marine management: For example, how do we synergize and streamline central and state control over ocean resources? There is a lot of confusion between the state mandate, within the territorial waters, and the area controlled by the central government, beyond the territorial waters. There is still no plan to synergize these efforts.



## 2.2 Civic Monitoring System

A civic monitoring system to look at activities on the coast and in the ocean is entirely lacking. We are perhaps still relying on anecdotal evidence regarding threats to marine areas. It is now clear that a more rigorous and scientific civic monitoring system has to be put in place for assessing and reporting the impacts of activities on the coast and in the oceans. EGREE could play an important role in this regard.

## 2.3 Critical Coastal and Ocean Issues and Impact Assessments

It is still not clear how are we tackling critical ocean- and coast-related issues such as bi-catch, ballast water, fishing gear and practices, pollution and the systematic decimation of mangroves and sand dunes. Clearly, this needs immediate attention through an institutional arrangement such as EGREE.



## 2.4 Monitoring International Instruments and their Relevance to Indian Marine Waters

As stated earlier in the review of international law that, there needs to be a plan for monitoring and negotiating the 18–20 international instruments that India

has signed and that govern oceans. Moreover, their local impact, such as on EGREE, needs to be assessed.

## 2.5 A New Ocean Policy

Feedback from Experiments such as EGREE India still has



to formulate a comprehensive oceans policy. All we have is a policy statement that was issued in the mid-1990s. It is time to have a comprehensive oceans policy for the country. What is important from the EGREE perspective is that such experiments can potentially come up with pragmatic lessons in terms of coordination, implementation, institutional challenges and feedback from the policy making process.

## **2.6 Engagement with other Sectors Impacting Oceans**

The typical left-hand-not-knowing-the-right-hand syndrome is also true with the departments controlling the marine sector. The coordination between conservation organizations such as the Forest Department and the production sectors and with other conservation-related departments has been minimal, to say the least. Thus it is important that the Forest

Department meet with the Department of Ocean Development, the Fisheries Department or the Coast Guard to discuss issues of commonality. Such engagement is not a luxury of choice any more. It is imperative for the marine waters and their habitats to be secured for the present and the future.

## **2.7 Planning the Seascape and the Zonation**

The current planning mandate and the legislative mandates that have not been followed so far also need a fresh approach. There is still no larger macro-plan for the maritime zones of this region in line with the larger seascape of the nation. It is time to see such contexts not only up to the territorial waters but also beyond, to the entire EEZ. What is perhaps most important from the policy standpoint is the streamlining of about 28 categorizations in the sea, supposedly managed by more

than 10 central and state organizations under more than 40 laws. This is a herculean task, but EGREE has its role cut out for the future: to grapple with this complexity and make it a simpler maze for more effective coastal and ocean governance. In fact, such analysis must lead to a robust legal strategy for protecting coasts and oceans.

## 2.8 Creating Opportunities for Learning from Traditional Wisdom and Practices in Oceans

EGREE offers a great opportunity to devise mechanisms to utilize the

conventional wisdom and traditional customary practices of local fisherfolk and other stakeholders. Such mechanisms will not only help EGREE to be more responsive to local needs but will also strengthen themselves through traditional knowledge and conventional wisdom.

It is clear that the proposed EGREE Foundation faces immense challenges and has to operate in a complex domain of coastal and ocean stakeholders. It is important to therefore choose an appropriate legal instrument that will give it a shape that is functional and, more importantly, effective for posterity.



## V. Legal Backing for such a Foundation

For the creation of a Foundation that has authority as well as flexibility and acts as a supporting mechanism for the existing line departments, it is important to look at certain laws that can be considered most supportive of the objectives of this Foundation. There are also a few organizations already existing in India, the management pattern of which can be adopted or adapted in the EGREE context.

One such organization is the Gulf of Mannar Biosphere Reserve Trust, which was created using the Tamil Nadu Trust Act, to ensure sustainable coastal zone development in the Gulf of Mannar, and it demonstrates the point that multi-stakeholder participation and establishment of supportive institutions such as the Trust can go a long way in supporting existing institutions in addressing current and new challenges facing the conservation sector<sup>4</sup>. Another such initiative was taken in Periyar Tiger Reserve through the creation of the Periyar Foundation<sup>5</sup>, and this effort is an illustration of how participatory management of protected areas can be evolved and sustained with the help of local communities. The Tiger Conservation Foundation, which is now a legally backed Foundation under the recently amended Wildlife Protection Amendment Act, 2006, is another institutional model that needs to be watched in the coming years for lessons applicable to EGREE.

There are enabling legal provisions that permit any group wanting to create a nonprofit organization as a legal body. Such organizations need to register themselves under Acts such as the Companies Act, 1956, the Indian Trust Act, 1882 the Andhra Pradesh Societies Registration Act, 2001 and the Andhra Pradesh Mutually Aided Cooperative Societies Act, 1995. Though incorporation under these statutes is not mandatory, it will give the Foundation the status of a legal body, with the ability to sue and/or be sued as a separate and distinct ‘person’ but with no physical existence<sup>6</sup>. The conditions stipulated by the above-mentioned laws are described below. They need to be adapted according to the needs and aspirations of the Foundation.

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<sup>4</sup> [www.gombprt.org](http://www.gombprt.org)

<sup>5</sup> [www.periyarfoundation.org](http://www.periyarfoundation.org)

<sup>6</sup> [http://www.pria.org/publication/Legal%20 Framework%20for%20NonProfit%](http://www.pria.org/publication/Legal%20Framework%20for%20NonProfit%20)



## 1. Companies Act, 1956 and its Application

Within the Companies Act, it is possible to incorporate the Foundation as a producer company, provided that providing education; rendering technical services, consultancy services, training, research and development; or any other activity that may be ancillary to these activities are among its objectives<sup>7</sup>.

Small producers dealing with primary produce (arising from agriculture, animal husbandry, horticulture, floriculture, pisciculture, viticulture, forestry, forest products, re-vegetation, bee raising and farming or plantation)<sup>8</sup> have hitherto been brought together by registering cooperatives. However, after an amendment was made to the Companies Act in 2003, these producers have been given the option of transforming the cooperatives into more professional organizations. A producer company is special as it maintains the member-ownership nature of a cooperative and the structural advantage of a company.

As producer companies strike root, they will require greater capital support from the banking

institutions. Largely these companies are not well-established and do not possess a strong asset backing. Thus innovative measures will have to be adopted for getting funding<sup>9</sup>. In addition, these companies are mostly product-based, while the objectives of EGREE Foundation are not to produce/market the products of stakeholders but to merely facilitate the stakeholders. These points will have to be considered before incorporating the Foundation as a producer company. But in our considered opinion, this may not be the appropriate legal backing for an institution such as EGREE at this point in time.

A company can also be established “for promoting commerce, art, science, religion, charity or any other useful object”, provided the profits, if any, or other income is applied for promoting only the objects of the company and no dividend is paid to its members. Such a company is popularly known as a Section 25 company<sup>10</sup>. The central government should also have granted a license to such a company recognizing it as a public or private company having a limited liability. Once constituted, a Section 25 company has various advantages<sup>11</sup> such as the following:

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<sup>7</sup> [20Institutions%20in%20India%20%20Working%20Paper%202.pdf](#)  
Section 581 B, Companies Act.

<sup>8</sup> <http://www.hindu.com/biz/2003/06/30/stories/2003063000010300.htm>

<sup>9</sup> <http://www.kvic.org.in/update/KRDP/Producer%20Company%20Model.pdf>

<sup>10</sup> Section 25(1)(a) and (b), Companies Act

- a. Enjoyment of limited liability;
- b. Relaxation of the minimum limit of the share capital;
- c. Freedom to increase the number of its directors without seeking the approval of the central government<sup>12</sup>;
- d. The quorum required for any board meeting is 8 members or one fourth of its total strength, whichever is less, provided it is not less than 2 members in any case;
- e. Resolutions may be passed by circulation instead of at meetings regarding the power to borrow moneys other than on debentures, the power to invest funds of the company and the power to secure loans;
- f. Registration fees are fixed at a mere Rs.50/- regardless of the authorized share capital; and
- g. Ease in transferring ownership of shares or other interest of any member in the company.

It is clear that such companies are well-regulated non-profit organizations and that the prescribed incorporation and dissolution procedures and other provisions help

the government to keep a check on the working of Section 25 companies<sup>13</sup>.

However, the aims and objectives of the Foundation do not necessarily visualize the Foundation as a commercial or profit-making venture but more as a advisory or regulatory body formed to enforce the rule of law, simultaneously raising policy and legal issues related to conservation within the production sectors and within its own mandate to a higher level of decision-making.

## 2. Creation of a Trust Under the Indian Trust Act, 1882

A trust is defined as an obligation annexed to the ownership of property arising out of the confidence declared and accepted by the owner for the benefit of another or of another and the owner<sup>14</sup>. Trusts are governed in different states by the trust acts in force. The process to be followed in the absence of a Trust Act is given within the Indian Trust Act, 1882. A public charitable trust is usually created when there is a property involved, especially land and building. The main instrument of any public charitable trust is the trust

<sup>11</sup> <http://www.legalindia.in/section-25-companies-under-companies-act-1956>

<sup>12</sup> *Vide Notification No. 2767, dated 5-8-1964.*

<sup>13</sup> *Vide Notification No. 2767, dated 5-8-1964.*

<sup>14</sup> <http://efs-consultants.com/indian-trust-formation.html>

deed, wherein the aims and objects and mode of management of the trust should be enshrined<sup>15</sup>.

Section 2(15) of the Income Tax Act, which is applicable throughout India, defines 'charitable purpose' to include relief of the poor, education, medical relief and any advancement of general public utility. Thus a public charitable purpose in the case of a trust has to benefit a large section of the public as distinguished from specified individuals<sup>16</sup>. The Gulf of Mannar Biosphere Reserve Trust (GOMBRT) is a good example of a state-owned trust wherein appropriate institutional bodies that are multi-layered have been created and are led by the highest administrative authorities as trustees. With its 10 years' history, it could be a good example to follow. The GOMBRT owing to its success is now about to be owned up completely by the state. However, the context of the Gulf of Mannar is different, with production sectors being largely absent and the ecological seascape being very different from that of EGREE. Second, at least at a theoretical level, a trust can be created and made functional with only three members and therefore the representation of various actors may be limited. Although the Gulf of Mannar Trust

has attempted to resolve this inadequacy by having other stakeholders as trustees, in a strict legal sense it is still possible to divest them of their membership and reduce the number of trustees to the minimum requirement of three stakeholders or even three members within the same line agency, namely the Forest Department. In this context, Andhra Pradesh offers a slightly better legal instrument, the Andhra Pradesh Societies Act, 2001, which promotes government-owned NGOs. Under this Act, at least seven stakeholders are required for its constitution. This obviously offers a more varied option in the more complex eco-zone, largely dominated by the production sector, in the EGREE region.

### **3. EGREE Foundation as a Society**

As stated above, the Andhra Pradesh Societies Registration Act 2001 is an appropriate legal option that may be used to register a society that has as its objectives the promotion of art, fine art, charity, crafts, religion, sports, literature, culture, science, political education, philosophy, diffusion of any knowledge or any other public purpose<sup>17</sup>. The activities of the members of such a society can

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<sup>15</sup> *Ibid.*

<sup>16</sup> *Ibid.*



be monitored through inspection of the register of members<sup>17</sup>, thus making the process transparent. There are also provisions within this Act that facilitate the establishment of an executive committee and a governing body, which are crucial for the day-to-day working of a Foundation and taking important policy decisions, respectively. Even though the state government can finance such a society and prescribe its terms and conditions, in all its functioning, a society is an independent body corporate after registration<sup>19</sup>. This is the feature most desirable in a Foundation and will give it flexibility and authority.

#### **4. EGREE Foundation as a Cooperative Society**

The Andhra Pradesh Mutually Aided Cooperative Societies Act, 1995 provides yet another opportunity for the voluntary formation of cooperative societies as accountable, competitive and self-reliant business enterprises<sup>20</sup>. The byelaws formed by such societies must adhere to the various principles enunciated within the Act<sup>21</sup>, such as being a democratic body where the membership is open to all persons in the public. A cooperative society may be registered with limited or unlimited liability under this Act. Here again the vision and the nature of the

<sup>17</sup> Section 3 (1), Andhra Pradesh Societies Registration Act.

<sup>18</sup> Section 13, Andhra Pradesh Societies Registration Act.

<sup>19</sup> Section 28 read with Section 18, Andhra Pradesh Societies Registration Act.

<sup>20</sup> Preamble, Andhra Pradesh Mutually Aided Cooperative Societies Act.

<sup>21</sup> Section 3, Andhra Pradesh Mutually Aided Cooperative Societies Act.



activity envisaged for the EGREE Foundation are not necessarily in a cooperative model although several existing cooperatives such as the trawler boat associations could be members of a Foundation created under the Societies Act.

### **5. EGREE Foundation as a Statutory Authority Under Environment Protection Act, 1986.**

Another possibility that the central government has been using in the past to institute a statutory body is under the Environment Protection Act. Numerous authorities have been created, and therefore there is an abundance of lessons that may be drawn from such experiences. Whether an authoritative body with

powers to regulate agencies and activities is necessary at this stage or the creation of such an Authority should be a gradual process needs to be thought through. The extensive discussions held so far suggest that it should be a gradual process.

Thus we see that the EGREE Foundation may be instituted under any of the above laws after perusing the requirements for companies, trusts, societies or authorities and studying the models that have been constituted in the country. There seems to be a natural tilt towards a society as it provides flexibility as well as authority. The next mandate of this feasibility review is to analyse the type of organizational structure and key functionaries within the Foundation.



## VI. Organizational Structure

As mentioned previously, the Foundation has to have authority and flexibility. A three-tiered structure that includes the governing body, the executive committee and the advisory council may satisfy these requirements. The governing body may take all the important policy decisions of the Foundation, with the Chief Secretary or the Additional Chief Secretary as its head. This body may also have representation from production sectors and the public, thus giving the grassroots stakeholders more representation in decision-making. The executive committee could be responsible for the day-to-day functioning and financial management of the Foundation. The executive committee should be headed by atleast a high-ranking forest officer, who needs to be stationed at the

landscape site itself. For the efficiency of the Foundation, there is a need to make this committee very efficient in its operations. There should also be a panel of researchers and specialists with academic and professional expertise who can be assigned responsibilities on the basis of requirements. These may include economists, ecologists, lawyers, sociologists to name a few.

The next step would be to ascertain the functionaries of the Foundation. Without doubt, all the key players in the production sector and conservation efforts must be involved. For this purpose, the Foundation should ideally involve the relevant government agencies (Department of Forests, Coringa Wildlife Sanctuary Management, Andhra Pradesh Pollution Control





Board (APPCB), Andhra Pradesh Coastal Zone Management Authority (APCZMA), State Environmental Impact Assessment Authority, Marine Production Export Development Authority, Coast Guard, Department of Fisheries, Department of Agriculture, Department of Industries, Port Authority, Department of Transport, Department of Tourism, Kakinada Municipal Corporation); representatives of key production sectors (Gujarat State Petro Chemicals, Kakinada Seaport Limited); and communities (including Panchayati Raj institutions, functionaries of Eco-

Development Committees (EDCs), fishermen's associations, animal husbandry associations, agriculture associations and commerce and trade organizations).

Research institutions such as Andhra University, Andhra Pradesh State Remote Sensing Agency, Jawaharlal Nehru Technological University (JNTU) and representatives of NGOs such as M.S. Swaminathan Research Foundation and Pallisri will have a significant role in promoting awareness about integrated coastal zone management, human welfare, sustainability of resources and scientific management of ecosystems and the environment and in



providing the technical expertise that government agencies may lack. Representatives from these organizations could be included within the advisory councils so that the Foundation has a perceptive approach.

Further, to create a platform for multiple stakeholders, it would be vital to understand the jurisdictional overlaps and mandates of other

agencies. A flavor of this overlap is presented below to demonstrate how they bring in the dynamism as well as complexity to the proposed institution, EGREE. This jurisdictional understanding will in turn help in the long run in formulating the appropriate rules, byelaws and regulations for the EGREE Foundation.





## VII. Jurisdiction and Relation with Other Agencies Including Its Representation and Role

### 1. Involvement of the Andhra Pradesh Forest Department in the Management of CWLS

CWLS was declared and gazetted as a sanctuary in 1978 with a total area of 235.70 square kilometers under the Wildlife Protection Act, 1972, and it falls within the EGREE region<sup>22</sup>. It was declared to regenerate mangroves and rehabilitate endangered species such as the Saltwater Crocodile, Olive Ridley Turtle and the Indian Otter.



The Andhra Pradesh Forest Department, specifically its wildlife wing, under the aegis of the office of the Chief Wildlife Warden, is responsible for its management. The sanctuary provides rich habitats for marine living resources such as crabs

and fish. It is the nesting ground of various migratory birds. The water in the forest supports a variety of animals such as the Mudskipper, the Jackal, monkeys and the Fishing Cat<sup>23</sup>.

There are various conservation strategies in place for protecting these forests such as bringing mangroves under the network of protected areas; demarcation of mangroves and a mangrove sanctuary, including its core areas, to avoid encroachments; taking up various protection measures through intensified watch and ward; taking up large-scale afforestation of banks by digging channels; growing seedlings in nurseries and planting them on the sloping edges of water channels; forming and strengthening the existing EDCs and Vana Samrakhsana Samitis (VSSs) for conservation of the mangroves through a participatory approach by providing welfare measures to the villagers living around the sanctuary to reduce their dependency on the mangroves, at the same time enhancing the livelihood of the coastal communities; conducting eco-tourism activities within the

<sup>22</sup> <http://eastgodavari.nic.in/Coringa.html>

<sup>23</sup> *Ibid.*

sanctuary, which are helping the local communities in obtaining livelihood support; educating people about nature conservation and environmental protection through the Nature Study Center located in Rajamundry. Video films and books are available to children and others. A museum has also been developed, with displays of on nature and wildlife. Due to these efforts, there is increased awareness among the public<sup>24</sup>.

The problems faced in the management of CWLS are that the existing staff strength, capacity and infrastructure are inadequate for effective management of the sanctuary. The staff is not adequately trained, and the funds received for the activities within the sanctuary are quite limited. Moreover, while CWLS anchors conservation efforts in EGREE, it cannot provide security to the region outside the sanctuary. CWLS is also impacted by development models and growth strategies in the wider landscape. Hence this existing management must be utilized within the framework of the EGREE Foundation.

### **1.1. Mangroves as Wetlands and their Management Under the Wetland (Conservation and Management) Rules, 2010**

The management and conservation of wetlands must be in accordance with the Wetlands Conservation and Management Rules, 2010, which specify the constitution of the Central Wetland Regulatory Authority and inclusion in it of various experts. Various activities that are harmful to wetlands, such as unregulated running of



industries, construction, dumping of untreated wastes and reclamation are prohibited unless prior permission is taken from the concerned authorities<sup>25</sup>.

<sup>24</sup> *Ibid.*

<sup>25</sup> Rule 4 (1) and (2), Wetland Rules.

The definition of ‘wetlands’ in the rules includes mangroves, salt farms, etc<sup>26</sup>. The mangrove forests situated within the deltaic wetlands cover an area of 32,140 hectares, while salt farms cover 1000 acres of land in EGREE. This warrants the protection of these regions as wetlands, and various activities described in the foregoing without the requisite permissions should be prohibited. Presently, the Rules mandate that wetlands situated within sanctuaries, national parks and protected or notified forest areas should be regulated by the Wildlife Protection Act and the Indian Forest Act (in this case the Andhra Pradesh Forest Act, 1967)<sup>27</sup>. Since the APFD is already managing the mangroves within CWLS and the reserve forests, these Rules should be looked into while framing any programme for conservation of wetlands in EGREE.

## **2. The Role of Andhra Pradesh State Biodiversity Board and Biodiversity Management Committees in the EGREE Foundation**

The Biological Diversity Act, 2002 (BD Act) is a significant piece of legislation as regards conservation of biological diversity, sustainable use of its components and fair and equitable sharing of benefits arising out of the use of biological resources and the knowledge associated with them. This Act is relevant in the context of EGREE because the definition of biological diversity<sup>28</sup> also includes coastal and marine biodiversity.

The Andhra Pradesh Biodiversity Rules, 2009 (APBR) specify the formation of various bodies such as a state biodiversity board<sup>29</sup> and biodiversity management committees (BMCs)<sup>30</sup>. Accordingly, the Andhra Pradesh State Biodiversity Board (APSBB) was created in 2006. APSBB, along with the National Biodiversity Authority, is mandated to consult the BMCs before taking any decision relating to the use of biological resources and the knowledge associated with such

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<sup>26</sup> Rule 2 (1) (g), *Wetland Rules*.

<sup>27</sup> Rule 7 read with Rule 8, *Wetland Rules*.

<sup>28</sup> Section 2(b), *BD Act*.

<sup>29</sup> Section 22, *BD Act read with Rule 3, APBR*.

<sup>30</sup> Section 41, *BD Act*.

resources occurring within the territorial jurisdiction of the BMCs and to take necessary steps to facilitate the setting up of areas of significant biodiversity values as biodiversity heritage sites<sup>31</sup>.

Use of different kinds of traditional knowledge as possessed by the communities living within the region pertaining to sustainable utilization of the marine and coastal ecosystem and resources could be made with the help of BMCs. Documentation of this knowledge has not been initiated, and this needs to be done. There are around 43 BMCs present in AP<sup>32</sup>. There are three BMCs located in East Godavari District<sup>33</sup>, and representation from these BMCs would be vital for the collection, documentation and usage of traditional conservation practices by the communities.

### **3. Department of Environment-Pollution Control Boards: Use of Environment Protection Act, 1986 in the Control of Pollution from Various Production Sectors**

The Environment Protection Act, 1986 (EPA) and subsequent amendments and Rules set out the limits of various environmental

pollutants, including noise, and restrictions on the location of industries. Pollutants from industry, aquaculture and urban agglomerations are being discharged into EGREE and Kakinada Bay increasingly. Thus it becomes necessary to impose certain limits on such discharges. Limits on the effluents from different kinds of industries have been stipulated by the Andhra Pradesh Pollution Control Board (APPCB)<sup>34</sup>, thus making it a useful tool to control the various kinds of industrial activities within EGREE.

Moreover, it is obligatory on the part of an industry to obtain consent for establishment and operation from the Board under Section 25 of the Water (Prevention & Control of Pollution) Act, 1974 as amended and under Section 21 of the Air (Prevention & Control of Pollution) Act, 1981 as amended.

APPCB, constituted in 1976 to implement the provisions of the Water (Prevention and Control of Pollution) Act, 1974 (Water Act), was subsequently given the responsibility of implementing various environmental Acts and Rules, including the Water Act; the Air (Prevention and Control of

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<sup>31</sup> Section 22, BD Act read with Rule 3 and Rule 13 (xi), APBR.

<sup>32</sup> <http://apbiodiversity.ap.nic.in/>

<sup>33</sup> [http://apbiodiversity.ap.nic.in/BMC\\_List.html](http://apbiodiversity.ap.nic.in/BMC_List.html)

<sup>34</sup> <http://www.appcb.ap.nic.in/Env-Standards/category.htm>



Pollution) Act, 1981; the Water Cess Act; the Environment Protection Act, 1986; the Hazardous Waste (Management and Handling) Rules, 1989; the Bio Medical Waste (Management and Handling) Rules, 1998; the Municipal Solid Waste (Management and Handling) Rules, 2000; the Plastic Manufacture, Sale and Usage Rules; the Batteries (Management and Handling) Rules; and the Manufacture, Import and Storage of Hazardous Chemical Rules and Coastal Regulation Zones Rules, 2011, within the jurisdiction of Andhra Pradesh.

The Board has representation from various Andhra Pradesh state departments including the departments of municipal administration and urban development; environment; forests; science and technology; health, medical and family welfare; industries, commerce and export promotion; and transport, and from academicians in the fields of environmental studies and applied geo-chemistry. It is interesting to note that even though there are enough financial resources at the discretion of the board, sufficient manpower or time to take care of all the issues falling within the mandate of the board is not. Such issues and

various others can be brought to the notice of the state government if the APPCB is made a part of the governing body of the EGREE Foundation.

### **3.1. The Process of Environment Impact Assessment (EIA) in EGREE**

An EIA is a statutory exercise to be carried out before any project or major activity is undertaken to ensure that it will not in any way harm the environment on a short-term or long-term basis<sup>35</sup>. A major legislative measure for the purpose of environmental clearance was taken in 1994 when a specific notification was issued under Section 3, Rule 5 of the EPA, namely the Environment Impact Assessment Notification, 1994. This was superseded by a central government notification in 2006<sup>36</sup>, which required that construction of new projects or activities or the expansion or modernization of existing projects or activities listed in the schedule to this notification entailing capacity addition with a change in process and or

<sup>35</sup> R ://www.freewebs.com/epgorissa/ENVIRONMENT%20IMPACT%20ASSESSMENT%20PROCESS%20IN%20INDIA%20AND%20THE%20DRAWBACKS-1.pdf

<sup>36</sup> S.O.1533(E), 14/09/2006—Environmental Impact Assessment Notification—2006.

technology be undertaken only after a prior environmental clearance from the central government or a State Level Environment Impact Assessment Authority (SEIAA).

Following this, the AP SEIAA was constituted through a notification in 2007<sup>37</sup>, by the Andhra Pradesh state government in consultation with the central government. A State Level Expert Appraisal Committee (SEAC) was also established that could provide recommendations to this authority. These bodies have members with expert knowledge on various aspects of environmental pollution. According to the schedule to the EIA Notification<sup>38</sup>, the projects that require prior environmental clearance include oil and gas transportation and pipelines passing through sanctuaries, coral reefs or ecologically sensitive areas. This means that all the SEZs and proposed Integrated Petroleum, Chemicals and Petrochemical Investment Regions (PCPIRs) activities in EGREE mandatorily require EIA

clearance so that there is no serious impact on the biodiversity of the region. Coordination with the SEIAA and SEAC is thus recommended for the successful functioning of the EGREE Foundation. If there statutory clearances are obtained, then a robust monitoring mechanism to oversee the compliance of conditions on which such projects are cleared is equally important. In 2009, the burden of providing information about the projects and their impacts was also shifted to the industries and the companies engaged in the activities listed in the schedule of the EIA notification of 2006. It is clear that there are sufficient ingredients to create a robust monitoring system for the infrastructure projects, especially those that impact the region.

#### **4. Andhra Pradesh Coastal Zone Management Authority (APCZMA) and Industrial Development in EGREE**

The Coastal Regulation Zone notification created under EPA

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<sup>37</sup> S.O.1105(E), 04/07/2007—Constitution of the State Level Environment Impact Assessment Authority, Andhra Pradesh.

<sup>38</sup> S.O.1533(E), 14/09/2006—Environmental Impact Assessment Notification-2006.

imposes regulations on various activities pertaining to backwaters and estuaries. It declares, “coastal stretches of the country and the water area up to its territorial water limit is known as [the] Coastal Regulation Zone.” This notification prohibits as well as regulates the setting up or expansion of industries in ecologically sensitive areas.

The CRZ Notification divides coastal areas into four coastal regulation zones, namely CRZ I<sup>39</sup>, II<sup>40</sup>, III<sup>41</sup> and IV<sup>42</sup>. Since most of EGREE falls within the CRZ notification and mangrove forests are one of the ecologically sensitive areas, all the implementation activities need to with the CRZ Notification, 2011. Areas designated within CRZ I include mangroves, protected areas, turtle nesting grounds, bird nesting areas, etc.,<sup>43</sup> and these are very important components of EGREE since it consists mainly of CWLS, the mangroves and the nesting grounds of various endangered species of

animal. It is also an Important Bird Area.

Moreover, the CRZ Notification, 2011 identified Coringa, East Godavari and Krishna as ‘Critical Vulnerable Coastal Areas’ that should be managed with the involvement of the local coastal communities, including the fisherfolk who depend on its resources for their livelihood, through a process of consultation with the objective of promoting conservation and sustainable use of coastal resources and habitats<sup>44</sup>. The notification also provides for the formulation of specific Coastal Zone Management Plans (CZMPs) by individual states (with the approval of the central government), identification of the regulation zone areas within the states’ respective territories, which is to be done in accordance with the guidelines contained in the main notification. The notification thus arms the central government with adequate powers to regulate construction activities in and around coastal areas

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<sup>39</sup> CRZ I areas are areas that are ecologically sensitive and the geomorphological features of which play a role in the maintaining the integrity of the coast.

<sup>40</sup> CRZ II areas are “those which have already been developed upto or close to the shoreline”.

<sup>41</sup> CRZ III areas that are relatively undisturbed and those do not belong to either CRZ I or II, which include coastal zone in the rural areas (developed and undeveloped) and also areas within municipal limits or in other legally designated urban areas, which are not substantially built up.

<sup>42</sup> CRZ IV are the water area from the Low Tide Line to twelve nautical miles on the seaward side. Also it shall includes the water area of the tidal-influenced water body from the mouth of the water body at the sea up to the influence of tide, which is measured as five parts per thousand during the driest season of the year.

<sup>43</sup> 2011 CRZ Notification, Para 7.

<sup>44</sup> *Ibid.*

and to protect ecologically sensitive areas.

Further, in March 2012, the National Coastal Zone Management Authority was re-constituted to take measures “for protecting and improving the quality of the coastal environment and preventing, abating and controlling environmental pollution in coastal areas”. One of the most important functions of this authority is to examine and accord its approval to area-specific CZMPs formulated by State Coastal Zone Management Authorities and Union Territory Coastal Zone Management Authorities.

The Andhra Pradesh Coastal Zone Management Authority (APCZMA), which was constituted in 2009, is mandated with identifying ecologically sensitive areas in the

CRZ; formulating area-specific management plans for these areas; and identifying economically important stretches of CRZ and formulating Integrated Coastal Zone Management Plans for the same<sup>45</sup>. This authority has representation from various state departments (Environment, Forest, Science and Technology, Revenue, Ocean Development, Meteorology and Oceanography), the APPCB, the Shore Area Development Authority and the Zoology and Marine Biology Department of Andhra University<sup>46</sup>.

These bodies must be involved in the formulation of area-specific management plans for setting up SEZs and PCPIRs since those PCPIRs proposed by the Government of India fall within the Kakinada region and may have serious impacts on the coastal and

<sup>45</sup> <http://envfor.nic.in/news/janmar05/andhra.htm>

<sup>46</sup> C Ibid.







marine biodiversity unless adequate environmentally friendly practices are incorporated from the inception phase itself. It is evident that the involvement of the APCZMA is vital for the major economic activities within the EGREE region.

### **5. Department of Fisheries and Animal Husbandry: Fishing, Animal Husbandry and their Regulation within EGREE through the Foundation**

The Andhra Pradesh fisheries sector is playing a key role in the fisheries map of India, contributing 10 percent of the total fish and shrimp production in the country<sup>47</sup>. Within EGREE, the major subsistence

activities of the local communities are from traditional fishing and collection of firewood, materials for house construction and fodder for livestock. These communities enjoy a traditional right to fish within the sanctuary and in the sea even though the villages are outside the sanctuary, with the help of non-mechanized fishing vessels<sup>48</sup>. Semi-wild cattle roam about in the sanctuary area as they have done for ages immemorial, thus having become a part of the ecosystem<sup>49</sup>. The village communities depend on the cattle for milk, and the state cooperative called Andhra Pradesh Dairy Development Cooperative Federation Limited (APDDCFL) has one of its centres in Kakinada for collection of surplus milk from these communities and to provide quality milk to urban and semi-urban consumers<sup>50</sup>.

However, it has been noticed that even though grazing is regulated within the sanctuary, it is happening destructively because the cattle are left loose and wild. The villagers approach these cattle only to provide fresh drinking water and to provide fodder for the calves and to milk them. Left loose, the cattle trample regenerating mangroves, thus turning the area into bare stretches.

<sup>47</sup> <http://www.aponline.gov.in/apportal/departments/departments.asp?dep=02&org=20&category=about>

<sup>48</sup> Rule 16, Andhra Pradesh Marine Fishing (Regulation) Rules, 1995

<sup>49</sup> Management Plan, Coringa, Andhra Pradesh Forest Department.

<sup>50</sup> [www.apddcf.gov.in](http://www.apddcf.gov.in)

In addition, the villagers often cut branches from the mangrove trees for fodder. Some of the locations close to the villages have denuded mangrove vegetation<sup>51</sup>.

In addition, it has been noticed that with passing time the number of boats used for fishing in the various rivers, channels and creeks inside the sanctuary has increased, causing disturbance to the flora and fauna<sup>52</sup>. Along with traditional fishing, commercial fishing is also done in EGREE, imposing a great stress on the available marine resources due to the usage of mechanized crafts, overharvesting of juveniles and other unsustainable fishing practices. As a result, over a period, the catch size is decreasing, threatening the livelihood security of many people. Another reason for the reduced fish catch is the setting up of oil and gas industries in the vicinity of the fishing villages.

Another kind of economic activity being practiced in this region is aquaculture, which has been established on converted mangrove lands. After the harvesting of fish, the area is usually disinfected using chemicals that are then flushed into the estuarine system, polluting the same. An increase in salinity of drinking water can also be attributed

to an increase in the number of aqua farms. It has been observed that big farms are treating their water but the smaller ones are not. The people involved in aquaculture, however, allege that their investment in mitigating environmental concerns is not accounted for in their main business because of reduced government support. Labelling and certification are required for efforts to follow good practices. Sudden demands cause dilution of the process. Their concerns are to be addressed within the EGREE forum because the number of people getting into this business is increasing.

The state has a fully fledged Fisheries Directorate, set up in 1959 and headed by a Director who is also the Registrar of the fishermen's cooperatives. This directorate has extended its support to mechanization of craft; manufacture and supply of gear; processing and marketing; inland fisheries and coastal aquaculture; credit and cooperatives; and education and training and development of integrated fisheries<sup>53</sup>, which has helped the local fishermen as well as the large-scale fishing enterprises. There are also various fishing cooperatives such as the Andhra

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<sup>51</sup> *Management Plan, Coringa, Andhra Pradesh Forest Department.*

<sup>52</sup> *Ibid.*

<sup>53</sup> <ftp://ftp.fao.org/docrep/fao/007/ae482e/ae482e00.pdf>

Pradesh State Fishermen Cooperative Societies Federation Limited (APFCOF)<sup>54</sup> and the Andhra Fishermen Central Cooperative Society (AFCCS) Limited<sup>55</sup>. Since the two main fish landing centres on the Andhra Pradesh coast are at Vishakhapatnam and Kakinada, it becomes important to raise and address every issue arising with respect to the fisheries resources and the fishing communities in the region, and EGREE will be useful in this regard.

### **5.1 Protection of the Coastal and Marine Biodiversity through Policies and Legislation on Fishing**

Various regulations are in place to regulate fishing activity in the EGREE. These include the Marine Fishing Regulation Act, 1978, the Andhra Pradesh Marine Fishing (Regulation) Act, 1994 and related rules. These laws regulate/restrict/prohibit fishing in any specified area, the number of fishing vessels allowed in any area, catching any specified marine species and the use of any specified gear for fishing with

the ultimate objective of protecting the interests of traditional fishing communities and conserving various species of fish.<sup>56</sup>

The Indian Fisheries Act (IFA) specifically prohibits the use of dynamite or poisons in all waters, including inland waters and coasts.<sup>57</sup> The Maritime Zones of India (Regulation of Fishing by Foreign Vessels) Act, 1981 deals with sustainable fishing in territorial waters, the Exclusive Economic Zone and the continental shelf. This Act is important with respect to illegal trawling by foreign fishing vessels within the territorial waters of EGREE<sup>58</sup>. The Marine Fishing Policy, 2004 was introduced with the objective of augmenting marine fish production in a sustainable manner to ensure the socio-economic security of traditional and coastal fishermen with due concern for coastal biodiversity. This policy will be beneficial for the coastal villages abutting EGREE if implemented properly<sup>59</sup>.

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<sup>54</sup> <http://www.apfisheries.com/afcof.html>

<sup>55</sup> <ftp://ftp.fao.org/docrep/fao/007/ae482e/ae482e00.pdf>

<sup>56</sup> Section 4, *Andhra Pradesh Marine Fishing (Regulation) Act, 1994*.

<sup>57</sup> Section 4, *Indian Fisheries Act*.

<sup>58</sup> Section 3, *Maritime Zones of India (Regulation of Fishing by Foreign Vessels) Act*.

<sup>59</sup> <http://www.dahd.nic.in/fishpolicy.htm>

Furthermore, the Wildlife (Protection) Act, 1972 is a legislation which is meant for the protection of wild plants and animals and includes various species of marine and coastal life such as fishes, corals, sea turtles and sea cucumber within its Schedule I and III. The problem with this legislation is that there is no focus on harm caused to species due to developmental activities and fishing activities. The ecosystem is protected more when it is within the boundaries of a protected area. The species outside PAs and its critical habitat is ordinarily not protected unless the species itself is harmed. In fact, fisheries related mortality of sea turtles is very high along the coast of Kakinada, which is probably due to the higher density of turtles in the region<sup>60</sup>.

There are numerous legal regimes with relevance to marine and coastal regions, but there is no coordinated effort in implementing the regulations imposed by these laws. The fishermen's associations, APCZMA and the Coast Guard can take a role in joint patrolling

of the specified areas around the EGREE coastal area to ensure that the provisions of all these statutory laws are effectively implemented. The APSBB, which includes the Director of Integrated Coastal Marine Area Management<sup>61</sup>, has been bestowed with the power to advise the state government to specify areas of importance as 'heritage sites' and provide measures for the management of such heritage sites. Significantly, this provision empowers the Board to specify critical habitats such as nesting sites<sup>62</sup> of marine turtles or other marine species as heritage sites so that they can be conserved against commercial fishing interests.

With regard to aquaculture, the Marine Products Export Development Authority (MPEDA), created under the MPEDA Act, 1972, initiated organic or chemical-free aqua farm activities in the region, but these have not attained much popularity so far since almost the entire export of marine products is handled through Vishakhapatnam, with the quantity from Kakinada being

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<sup>60</sup> [http://www.seaturtlesofindia.org/downloads/Upadhyay&Upadhyay\\_2002.pdf](http://www.seaturtlesofindia.org/downloads/Upadhyay&Upadhyay_2002.pdf)

<sup>61</sup> [http://apbiodiversity.ap.nic.in/pdf/GO\\_RT\\_No-417.pdf](http://apbiodiversity.ap.nic.in/pdf/GO_RT_No-417.pdf)

<sup>62</sup> Section 18(3) (b) of the Act.



negligible<sup>63</sup>. Since the main thrust of this Act is economic gains from the export of marine products, the concerns of conservation are not given adequate importance. This is apparent from the composition of the Authority because it has representatives from among ship owners, processing plants, dealers and persons engaged in research connected with the industry and not related to conservation of marine resources. However, the Act does provide space for representation by persons concerned with the environment by vesting discretion with the government to additionally engage such other persons who, in the opinion of the government, ought to be represented<sup>64</sup>. The role of this Authority needs to be further enhanced so as to garner profits for the local

fishing communities based in EGREE.

## 5.2 Role of Local Groups in Sensitizing and Supporting the Villagers

Among the 44 mangrove-abutting villages in the EGREE, almost all show a high dependency on mangroves for cattle grazing and fishing needs, and the current management does not have adequate strategies to reduce this dependency<sup>65</sup>. The APFD issued comprehensive guidelines for adopting joint forest management as a strategy for rehabilitation of degraded forests in 1993, through village-level committees called Vana Samrakshana Samithis (VSS)<sup>66</sup>. Later, EDCs were constituted for the purpose of protection and development of protected areas<sup>67</sup>. The local people around CWLS need to be educated about the importance of the mangroves. To educate the local people, 20 EDCs were formed. Nature camps and awareness programmes are being conducted. Training programmes are conducted for the



<sup>63</sup> <ftp://ftp.fao.org/docrep/fao/007/ae482e/ae482e00.pdf>

<sup>64</sup> [http://www.seaturtlesofindia.org/downloads/Upadhyay&Upadhyay\\_2002.pdf](http://www.seaturtlesofindia.org/downloads/Upadhyay&Upadhyay_2002.pdf)

<sup>65</sup> Project Document, UNDP, p. 17.

<sup>66</sup> [http://forest.ap.nic.in/JFM%20CFM/G.O.No.218\\_3110.htm](http://forest.ap.nic.in/JFM%20CFM/G.O.No.218_3110.htm)

<sup>67</sup> <http://forest.ap.nic.in/JFM%20CFM/Go167.htm>

presidents and members of the EDCs and for the local people<sup>68</sup>.

Through these local committees, the voices of the communities are heard. The communities must also be given adequate financial and infrastructure support for maintaining their cattle and fishing activities so that they do not get marginalized in comparison with the mainstream production sectors. Wherever rehabilitation and settlement of communities is required for developmental activities, these local groups need to be consulted within the Foundation for creating a balance between the conservation of the EGREE region, developmental activities and the livelihoods of the villagers.

## **6. Department of Ports and Shipping: Regulation of Ports and Shipping in EGREE through EGREE Foundation**

Ports are an important focus of economic activity in EGREE, with the Kakinada Intermediate Port being located in East Godavari District. Since Andhra Pradesh is the second highest cargo handling state in India, there is a lot of stress on this port. Direct impacts include

habitat conversion for the construction of ports and associated industrial estates, which affects the health and development of EGREE. Maritime traffic is also known to have direct impacts on marine biodiversity, through spillages from offshore oil exploration. Oil from ship landings and fishing boats moored at the harbour may result in pollution and bio-accumulation of heavy metals and synthetic compounds. In the case of CWLS, the biodiversity risks associated with oil spills is high because they are close to the port. The laws relating to shipping include the Indian Merchant Shipping Act, 1958 and the Indian Ports Act, 1908, and these include provisions that mandate the protection of marine habitats and prevention of pollution in the coastal areas as well as the sea.

### **6.1 Merchant Shipping Act in the Prevention of Pollution in the Seas**

The Merchant Shipping Act, 1958, amended in 2002, 2003 and 2007, establishes the position of the Director General of Shipping and the National Shipping Board for the purpose of advising the central government on matters relating to Indian shipping, including the

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<sup>68</sup> *Management Plan, Coringa, Andhra Pradesh Forest Department.*

development of ports. Among other things, this applies to incidents that may cause grave danger to the Indian coastline and to threats of pollution from negligent release of oil, ballast water, noxious substances and other harmful substances<sup>69</sup>. ‘Harmful substance’ in this context means anything that could create hazards to living resources and marine life<sup>70</sup>. This Act has gained prominence in light of the fact that several oil companies are based in Kakinada as this port is a transit point for oil and gas shipments<sup>71</sup>.

The Rules under this Act requires ships, both cargo carriers and others, to conform to the Safety Convention and secure ‘Safety Convention Certificates’<sup>72</sup>. No Indian ship may set out to sea without carrying an international oil pollution prevention certificate<sup>73</sup>, pollution prevention certificate<sup>74</sup> and sewage pollution prevention certificate<sup>75</sup> issued by the

central government. Under the rule-making powers of this Act, the central government may specify areas that shall be deemed to be ‘prohibited zones’ for the purpose of prevention of pollution of the sea by oil discharges and spillage from offshore oil explorations<sup>76</sup>. Provisions for establishing the liability of ship owners in the case of damage and the formation of an international oil pollution compensation fund under the International Convention on the Establishment of an International Fund for Compensation of Oil Pollution Damage, 1992 have also been included through an amendment by the central government of this Act in performing its obligations under the International Convention on Limitation of Liability for Maritime Claims (LLMC), 1976<sup>77</sup>.

<sup>69</sup> S. Section 356 A (1) (b), Indian Merchant Shipping Act.

<sup>70</sup> Explanation to Section 356 E, Indian Merchant Shipping Act.

<sup>71</sup> <http://en.wikipedia.org/wiki/Kakinada>

<sup>72</sup> The Merchant Shipping (Safety Convention Certificates) Rules, 1968.

<sup>73</sup> Section 356C (1), Indian Merchant Shipping Act.

<sup>74</sup> Section 356C (2), Indian Merchant Shipping Act.

<sup>75</sup> Section 356C (3), Indian Merchant Shipping Act.

<sup>76</sup> Part XI, Prevention of Pollution of the Sea by Oil, Indian Merchant Shipping Act.

<sup>77</sup> Part X B, Civil Liability For Oil Pollution Damage, Indian Merchant Shipping Act.

The Mercantile Marine Department at Chennai administers the various provisions and rules under this law in Andhra Pradesh, including the minor ports. One of the subordinate offices of this department is based at Vishakhapatnam<sup>78</sup>. Inclusion of the mandate of this department within the mandate of the Foundation would help greatly in regulating the adverse environmental impacts of shipping and port activities on EGREE.

## 6.2 Department of Ports: Protection of Marine Habitats in EGREE through Indian Ports Act

Another law with regard to the ports and protection of marine habitats is the Indian Ports Act, 1908. Under this Act, the government may enact rules to regulate the use of piers, jetties, landing places, etc., to regulate vessels whilst taking in or discharging ballast or cargo and to regulate the use of fires and lights within any port, among other things. The main authority under the Act is the Conservator of Ports, who is empowered to

impose fines and take other measures to ensure compliance with provisions under the Act. The Maritime Agenda 2010–2020, launched in 2011, mentions the enactment of a new Indian Ports Act replacing Indian Ports Act, 1908 and the Major Port Trusts Act, 1963<sup>79</sup>. Increasing tonnage and coastal shipping are two points found within the agenda<sup>80</sup>.

As the stress increases on the port facilities in Andhra Pradesh, Kakinada Port will be further developed, thus increasing the chances of degradation of the coastal and marine biodiversity. The expansion of Kakinada Sea Port Limited is in different stages of completion. APCZMA, which is in charge of formulating Area Specific Management Plans for the CRZ, can help in this regard by formulating plans that provide



<sup>78</sup> <http://mmdchennai.in/duties&functions.html>

<sup>79</sup> <http://pib.nic.in/newsite/erelease.aspx?relid=69044>

<sup>80</sup> *Ibid.*



environmentally friendly production practices and safeguards built into these expanding port facilities.

## **7. Manufacturing Units and their Role in Protection of EGREE**

There are many medium and large scale industries such as oil refineries, ceramic factories, and fertilizer and pharmaceutical factories and a number of small-scale industries including those making shell products and other products from the sea. Most of these industries derive benefits directly or indirectly from the estuary. The potential threats to biodiversity from these industrial activities include industrial discharges and spillage of oil. Offshore oil exploration and production and shipping may result in pollution and bio-accumulation of heavy metals and synthetic compounds.

Kakinada is part of a proposed SEZ and PCPIR<sup>81</sup>, and it is important that activities for such projects do not further degrade this region. Some measures have been taken by a few

industries as a part of their corporate social responsibility activities, such as choosing a longer route for a pipeline to avoid destruction of mangrove areas<sup>82</sup>. In addition, the Special Economic Zone Act, 2005 stipulates the constitution of an approval committee<sup>83</sup>, which has been done in the case of the multi-product SEZ developed by Kakinada SEZ Private Limited<sup>84</sup>. This committee, which consists of representatives from the Department of Commerce in Andhra Pradesh, have the responsibility of approving the units to be set up within such a zone and monitoring whether the developer has complied with all the conditions or not<sup>85</sup>. Kakinada town is administered by the Kakinada Municipal Corporation, consisting of elected representatives and a Commissioner. It is important that this Commissioner, along with the approval committee for SEZs, APPCB and APCZMA be ideally included in the day-to-day functioning of the Foundation.

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<sup>81</sup> *Project Document, UNDP, p. 11.*

<sup>82</sup> *Project Document, UNDP, p. 18.*

<sup>83</sup> *Section 13, Special Economic Zone Act.*

<sup>84</sup> <http://www.cabible.com/forum/showthread.php/4171-Special-Economic-Zone-SEZ-Notifications-Year-2008/page9>

<sup>85</sup> *Section 14, Special Economic Zone Act.*

## 8. Coast Guard: Use of Coast Guard Act, 1978 in Preventing Marine Pollution around the Kakinada Sea Port

The Coast Guard Act, 1978 (CG Act) is an Act that provides for the constitution and regulation of an armed force of the Union for ensuring the security of the maritime zones of India with a view to the protection of maritime and other national interests in such zones and for matters connected therewith<sup>86</sup>.

in the Kakinada Intermediate Port mainly involve landing of ships and fishing boats in the harbour or port, which cause oil spills in the water. They are likely to affect the biodiversity of the region, the mangroves being in the close proximity of the harbour. This impact has not been studied; however, it would be wise to use the Coast Guard to mitigate any pollution caused in the territorial waters around EGREE. In addition, the Coast Guard station of



The maritime zones that are protected by the Coast Guard include the territorial waters, the contiguous zone, the continental shelf, the EEZ and any other maritime zone of India<sup>87</sup>. Activities

every region has an Oil Spill Disaster Contingency Plan in place, which should be given due regard by other line agencies responsible for marine habitat protection. One of the

<sup>86</sup> h Preamble, CG Act.

<sup>87</sup> Section 2 (m), CG Act.



functions of the Coast Guard involves taking such measures as are necessary to preserve and protect the maritime environment and to prevent and control marine pollution and enforcing the provisions of such enactments as are for the time being in force in the maritime zones<sup>88</sup>.

The officer to be appointed by the central government as the Director-General of the Coast Guard<sup>89</sup> is assisted in following the mandate of this Act by Inspectors-General, Deputy Inspectors-General, Commandants and such other officers as may be appointed by the central government<sup>90</sup>.

Even though the Ministry of Defence at the centre is the nodal

agency for rule-making powers within this Act, it may by way of a general or specific order in the Official Gazette, direct with the concurrence of the state government concerned that any of the powers or duties that may be exercised or discharged under a state act by a police officer may be exercised or discharged by a member of the Coast Guard who, in the opinion of the central government, holds a corresponding or higher rank<sup>91</sup>. The designated official could have a role in patrolling the EGREE coastal zone along with the local public, which has a stake in the marine resources with which the EGREE region abounds.

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<sup>88</sup> Section 14 (c ) and (e), CG Act.

<sup>89</sup> Section 5, CG Act.

<sup>90</sup> Ibid.

## 9. Prospects of Eco-Tourism in the EGREE Region

Though EGREE is not very well-known for tourism, it has some good places in and around to visit, such as beaches, mangrove forests and the Godavari Delta. Currently some rudimentary facilities have been created within CWLS, but they are not enough. If tourism is responsibly managed, then it could prove to be a good source of livelihood for the communities. In fact the Andhra Pradesh Tourism Policy, 2010 has a special thrust on conserving the environment with the support of the communities by getting them to participate in the various eco-tourism programmes planned by the agencies formed for this purpose<sup>92</sup>. It is

stipulated that in every district, a District Tourism Promotion Committee (DTPC) is envisaged that will include representation from the Forest Department, amongst others<sup>93</sup>. This committee is very important and must be given representation within the EGREE Foundation to satisfy the dual purposes of conserving the biodiversity of EGREE and providing livelihood support for the communities.

## 10. Involvement of the Panchayati Raj Institutions in the Foundation

The state of Andhra Pradesh has its Panchayati Raj Act and



<sup>91</sup> Section 121 (2), CG Act.

<sup>92</sup> [http://www.aptourism.in/investments-site/TOURISM\\_POLICY\\_2010.pdf](http://www.aptourism.in/investments-site/TOURISM_POLICY_2010.pdf)

<sup>93</sup> Ibid.





corresponding rules, which give power to the mandate of the Panchayats (Extension to the Scheduled Areas) Act, 1996 (PESA) in the case of scheduled areas. It recognizes the right of village communities to govern themselves through their own systems of self-government and also acknowledges their traditional rights over natural resources. In accordance with PESA, the gram sabha has been given various powers to manage the administration within the villages in

a manner that suits them traditionally. According to the Andhra Pradesh Panchayat Act, 1998 (APPRA), “Every Gram Sabha is considered to be competent to safeguard and preserve the traditions and customs of the people, their cultural identity, community resources.”<sup>94</sup> APPRA and rules provide sufficient powers to the gram sabha for approval of plans. However before preparation of development plans, it is important that a need assessment of the village

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<sup>94</sup> Section 242 C (1), APPRA.

also be done, in which the gram sabha can be instrumental<sup>95</sup>. Representatives from such gram sabhas located in EGREE will be crucial in the decision-making functions of the Foundation.

On the other hand, the functions of the zilla parishad include distributing funds allotted to the district by the state government, coordinating plans prepared for various mandals in the district, performing functions relating to any development

programme and advising the government on all matters relating to developmental activities in the district<sup>96</sup>. The administration of the zilla parishads will be under the control of the Chief Executive Officer<sup>97</sup>. The executive functions of this officer should be utilized for the day-to-day functioning of the EGREE Foundation because it could act as the link between the state and central governments and the village communities.



<sup>95</sup> Rule 4, AP PESA Rules, 2011.

<sup>96</sup> <http://www.aponline.gov.in/apportal/departments/departments.asp?dep=27&org=178&category=about>

<sup>97</sup> Ibid.

## VIII. Responsibilities of this Foundation as a Facilitative Body

It is proposed that the Foundation should not be an implementing agency that will compete with other government agencies or line departments in the implementation process and thus duplicate efforts. Rather, it has to be a supporting, advisory institution that is expected to take up a variety of roles. Thus a few responsibilities are envisaged for this Foundation, which would include inter alia the following:

- Overseeing the compliance and mainstreaming environmental concerns amongst various production sectors as well as strengthening the role of the implementing agencies through technical and advisory back-ups, as a nodal advisory body for the EGREE region.
- Identifying and understanding the underlying traditional socio-economic and ecological dynamics in the landscape between the communities and the environment.
- Working towards supporting, advocating and strengthening the overall policy initiatives to enable various agencies working in the area for enhanced and meaningful coordination and collaboration in the enforcement of coastal zone regulations and biodiversity conservation
- Monitoring various attributes in the protected areas, such as human–nature conflict, poverty eradication and people’s welfare
- Ensuring the continuation and sustainability of various eco-development activities by the EDCs and VSSs
- Bidding and preparation of specific project proposals suitable for EGREE
- Conducting capacity building and skill enhancement for villagers and staff members of EGREE
- Assisting communities to deal with offenders with reference to biodiversity resources and the environment
- Mobilizing and helping the communities with joint patrolling, coastal surveys, intelligence gathering, underwater monitoring, fish landing site monitoring and field data compilation
- Ensuring that the developmental activities happening within the EGREE are not in conflict with the conservation measures and interests of the local communities
- Mobilizing resources for management of EGREE
- Implementation of various specific programmes such as rehabilitation and settlement process of communities





## IX. Flexibility for Resource Mobilization

It is imperative that the Foundation have financial mobility to be able to function as a successful and independent agency. The assistance received from the state and central governments alone will not be adequate to meet the costs and activities of the Foundation. It must generate funds on its own through various innovative measures so that in time it will become self-sustainable. It can solicit resources at local, regional, national and international levels in tune with the existing rules and procedures followed in India. In addition, the following are a few measures suggested to achieve this level of self sustenance:

- Collection of environmental user fees from production sectors based all over EGREE that directly and indirectly depend on this unique ecosystem, including port development and other marine activities;
- Bidding in national and international level projects specific to EGREE with funding organizations for grants for research, training and consultancies;
- Fines and penalties for illegal activities recognized within various forest and marine laws;
- Leveraging from financial allocations of the Forest Department, Wildlife Department, Department of Ocean Development Panchayati Raj and Rural Development;
- Fees and receipts for entry into protected areas such as sanctuaries and national parks; and
- Other levies through panchayats, etc.

A part of the resources generated by the Foundation can be earmarked and kept aside as a 'trust fund', which is a very popular tool of conservation financing in many parts of the world.





## X. Conclusion

From the foregoing discussion, it can be seen how a flexible management can be envisaged for the EGREE Foundation that considers the interests of all the stakeholders without compromising any. The facilitative role played by this Foundation can be further enhanced through innovation and the mind-set of its functionaries. A balance between all interests will be necessary to manage EGREE. The core idea of such an institution is to ensure that the strengths of all the above approaches are weaved into the new structure so that past lessons are incorporated for a robust institutional arrangement that lasts for effective marine and coastal biodiversity concerns in the East Godavari Region, where enhancement of both biodiversity conservation measures and livelihoods is ensured and secured. More importantly, it has the potential of serving as an example, perhaps for the first time, in how mainstreaming biodiversity concerns in production sectors can be achieved, especially for a coastal ecosystem and seascape such as EGREE.



## Annexure I

### Essentials of EGREE Foundation: A Framework

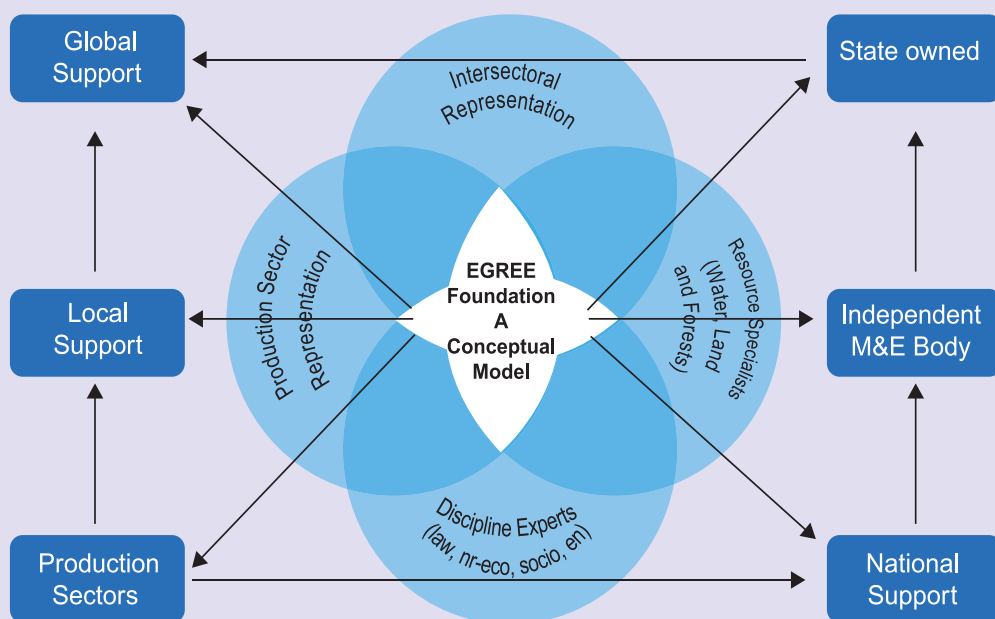
- Aim and objectives
  - Mainstreaming conservation in the production sectors
- Composition and structure
  - Acquiring membership
  - Right of membership
  - Duties and responsibilities of members
  - Consequences of non-performance of duties
  - Termination of membership
  - Withdrawal from membership
- Nature and extent of liability
  - Liability of office bearers
  - Transfer of assets and liabilities
- Structure
  - Governing Board
  - Advisory Board
  - Executive Functionaries
  - Frequency of meetings of boards and quorum
  - Term of office and conditions for removal
- Powers and duties of executive
- Powers and duties of board
- Powers and duties of advisory board
- Functions
- Responsibilities or functions of this Foundation as a facilitative body
- Jurisdiction and relation with other agencies
- Representation of line agencies
  - Involvement of the Andhra Pradesh Forest Department in the management of Coringa Wildlife Sanctuary
  - The role of APSBB and biodiversity management committees in EGREE Foundation
  - The Andhra Pradesh Coastal Zone Management Authority (APCZMA) and industrial development in EGREE

- Use of Environment Protection Act, 1986 in the control of pollution from various production sectors
- Fishing, animal husbandry and their regulation within EGREE through Foundation
- Regulation of ports and shipping in EGREE through Foundation
- Manufacturing units and their role in protection of EGREE
- Use of Coast Guard Act, 1978 in preventing marine pollution around Kakinada Sea Port
- Prospects of eco-tourism in the EGREE region
- Involvement of the Panchayati Raj Institutions in the Foundation
- Financial autonomy
- Mobilization of funds
- Reserve funds
- Utilization of funds for specific purposes
- Flexibility in terms of resource mobilization
- Planning
- Sectoral planning and master plan
- Staffing
- Penalties
- Incentives
- Technical and disciplinary back-up
- Global outreach
- Convergence with local authorities and state actors
- Grievance redressal, resolutions of disputes
  - Dispute resolution among members
  - Disputes with outside agencies
  - Disputes relating to management
- Procedure to amend bye-laws
- Dissolution of society
- Manner of disposal of funds on liquidation

## Annexure II

### Essentials of EGREE Foundation

#### A Framework





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