**Poseidon Army**

**Earth Lanka Marine Research and Conservation Program in**

**Sri Lanka**

**About us - www.earthlanka.net**

www.earthlanka.net is a web site operated in Sri Lanka by a voluntary group of journalists who are passionate about conserving the environment and eco systems across the country. The website provides information and engages with environmentalists and other key stakeholders on a range of pressing issues which include the following. The web site has been registered with the Ministry of Mass Media& Information of Sri Lanka.

Impact of Global Warming

Natural Disasters

Extinction of Species

Deforestation

Human Elephant conflict

Pollutions world wide

Threats faced by eco systems globally

Smuggling of fauna and flora globally

Issues on marine eco systems globally

A key feature of Earthlanka.net is that it is a platform for organizations, individuals, schools, environmentalists, naturalists, zoologists, marine biologists, researchers to publish their latest works and findings on environmental issues.

Just a year into its operations Earthlanka is slowly yet steadily beginning to expanding its

outreach and form strategic partnerships with likeminded organizations and individuals

through the online community which was registered under Central Environment Authority,

Ministry of Environment Sri Lanka. The online youth network which became an organization is working heavily with young people in recognizing them in the society and to bring up their initiatives for the development in Sri-Lanka.

**Background and Rationale: Poseidon Army Project**

Marine waters cover two-thirds of the surface of the Earth.Marine ecosystems are among the largest of Earth's aquatic ecosystems that include with oceans, salt marsh and intertidal ecosystems, estuaries and lagoons, mangroves and coral reefs, the deep sea and the sea floor. They can be contrasted with freshwater ecosystems, which have a lower salt content. Marine ecosystems are very important for the overall health of both marine and terrestrial environments. According to the World Resource Centre, coastal habitats alone account for approximately 1/3 of all marine biological productivity, and ecosystems such as salt marshes, sea grass beds, mangrove forests are among the most productive regions on the planet.

Meanwhile, marine ecosystems like coral reefs and sand bars provide food and shelter to the highest levels of marine diversity in the world[

Marine ecosystems usually have a large biodiversity and are therefore thought to have a good resistance against invasive species(Wikipedia, 2011).The diversity and productivity of marine ecosystems are significant to human survival and well-being as well. These ecosystems provide us with a rich source of food and income. Areas occupied with mangroves, reefs, and seagrass beds also provide protection to coastlines by reducing wave action, and helping to prevent erosion, while areas occupied with salt marshes and estuaries have acted as sediment sinks, filtering runoff from the land, excellent breeding and feed grounds for fisheries. Despite the importance of marine ecosystems, recently increased human activities such as overexploitation, coastal development, pollution, illegal fishing, and the introduction of exotic species have caused significant damage and pose a serious threat to marine biodiversity and ecosystems[2].

Yet it seems that people still believe that the ocean had an infinite capacity to absorb and remove waste and by products. Over the past few decades the range of waste and hazardous material dumped into the sea increased along with its quantity posing a serious threat to the marine eco system. Plastic trash, oil spills, radioactive and nuclear waste, sewage effluence, toxic industrial waste, pesticide residues, etc. are major pollutants. Thus tens and thousands of marine fauna and flora are disabled or killed each year. According to marine biologists, as many as 30,000 fur seals are estimated to becomeentangled in lost or discarded plastic fishing nets or choked to death in plastic cargo straps. Similar kind of fatal threats have been reported constantly in for turtles and dolphins. The resulting damage to marine life due to pollution is difficult to access. Yet the non accessed damage to the ocean done in the past is bringing tragedy to us today.

About Sri Lanka:

Sri Lanka possesses territorial waters in an area of 21,700 square kilometres up to 12

nautical miles. Beyond, up to 200 nautical miles, is our Exclusive Economic Zone with an area of 465,800 square kilometres. This is seven times the size of country’s land area.

The fishing industry provides a livelihood directly or indirectly, for about 200 million people. Today, in Sri Lanka the coastal line is heavily populated. Apart from houses, industries, hotels, restaurants, road side eateries, business establishments, shops, schools, filling stations etc are concentrated within few kilometres from the sea.

Increase in the number of activities in the seas and oceans can increase the number of

crimes at sea. Considering the environmental crimes 70% of pollution of the oceans has its source in human activities on land. These activities include agriculture, industry, urbanization and its resulting outputs.

Though reported in less numbers piracy and armed robberies do happen in the Indian Ocean. Over exploitation of marine resources is another crime. Apart from those a long list of unethical and cruel activities identified as crimes at sea globally do happen in silent deep blue seas of our country. The terrorist threats are no more at the sea. Thus the increase in the number of sailors, fishermen and tourists traveling via sea is inevitable. Realizing the negative impacts on the country from crimes at sea, the Sri Lanka Coast Guards was established in order to enforce law in the seas.

This concept note was developed by Earthlanka Marine Research & Conservation program team, which is a co-group of youths who will work towards community development in coastal areas, bringing concerns on sustainable development in Sri Lanka, uplifting the tourism industry & engaging in Action planning in national level on marine resources. Additionally the youth co group will work with locals who wish to continue their higher education in marine biology and international professionals / marine researchers who wish to come down and share their knowledge and experiences with the Sri Lankan community.

Aim (general vision);

To be a volunteer force in improving and conserving the marine biodiversity and oceanic

natural resources of Sri-Lanka by developing a National Strategy and Management Plan for Marine ecosystems conservation by forming a task force which carries out marine researches and conservation programs .

Field of the project:

Education, Social, Volunteering Initiative

Problems & Difficulties :

Lack of proper data / no access to the available data sources

Because of the civil war we had for 30 years , which made it impossible to reach the northern and eastern coastal belt to get any data ,and the lack of proper resources and money, has resulted in the lack of proper research data in all the parts of the marine environment in Sri- Lanka. Also the war made the government and other independent bodies that were likely to carry out any kind of scientific experiences, focus on more defense related activities.

Lack of technically trained personals for research.

Again the 30 year old war which ended recently prevented the national expenditure used

mostly on defense related activities thus the money spent for training of technical/research persons were curtailed .also the high government corruption which is common to the southAsian region is again a reason for the lack of government money spent on education.

Lack of community awareness on marine ecosystems and their benefits for them

Though Sri Lanka is an island covered with an ocean, most of the public is not aware of the ecosystems and their benefits; and although some are aware of them some people-specially the fishermen villagers living in the coastal area are too poor to lead a environmental friendly lifestyle. Also the traditional ways of fishing and misusing and wasting of saltwater resources (plants etc) is causing a lot of harm today.

Lack of national action plan

Lack of a proper national plan considering short term and long term goals, covering all the parts of the coastal line, gathering industry specialists, professionals, volunteers, students, other concerned groups and the public at large has been a main reason for this issue. While the war is to blamed as the main reasons for this ,the mismanagement qualities of governments, the non environment friendly behavior of large multinational companies who are based near the coastal areas-thus making it the fault of the economic policy of the country have all been factors for the issue.

Problem in future.

Over exploitation of marine resources, pollution, threat on marine ecosystems due to rapid development... therefore need a proper action plan for its conservation.

Possible Solutions

Gathering a set of reliable data by trained people and analyzing it .Using the analyses

information, and past reports get an idea of the situation of the endangerment of marine

biological system and forecast on the possible threats ((a set of research experiments for the marine water quality is attached) Develop an action plan which includes short and long term goals to reduce the threats Make the authorities and the public know about the findings and work together according to the action plan.

**Measurable**: Train 25 volunteers to do the above task in 4 pre identified marine eco zones (Negombo, Colombo, Unawatuna, Mirissa) which represents different ecologies in the coastal line of sri lanka.

**Achievable**: Get a pool of lectures and industry experts consisting of marine biologists, divers, ecologists and other resource persons, lab, teaching & other training facilities, transportation, accommodation, boats & diving gear, by the financial support of a number of government and

nongovernmental organizations.

**Realistic**/**Relevant**: As the project is about creating a volunteering force to do a basic survey that is essential in determining the quality of the marine biological system-done by volunteers, including all the coastal area of the country including the northern coastal belt, which was not reachable due to the civil war we had for 30 years, it is needed to stick to only the essential experiments to make this project a realistic and relevant one. Learning and observing of a marine ecosystem is a large area which would take a long time, and lot of resources so it is a must to manage the limited resources we have to make this project a success.

**Objectives to be resolved (SMART objectives)**

Train a volunteer force to carry out specific marine biological researches and by the analysis of the research develop a National Strategy and Management Plan for Marine ecosystems conservation in Sri-Lanka.

**Project Goals:**

Our primary goal of the program is to improve Sri Lankan marine biodiversity and natural

resources by conservation and sustainable use of marine ecosystems by means of research, awareness and practicing ecosystem approach in vulnerable or environmentally sensitive areas of Sri Lanka.

**Objectives:**

1. To form a task force for the implementation of Marine Research and Conservation

Programme of Sri Lanka on the identified areas

2. To provide basic training required and capacity development of the task force

3. To carry out a baseline survey on marine ecosystems (wildlife and other natural

resources) and current threats on them.

4. To develop a National Strategy and a Management Plan for Marine ecosystems

Conservation in the identified zones

5. To implement the National Strategy and Management Plan.

6. To strengthen the existing legal and institutional framework of Marine Environment

Protection and management

7. To develop capacities of other local non-government agents, community groups those

who work towards Marine Conservation.

8. To improve public awareness and understanding on marine environment, importance

of live in harmony with their surrounding environment and how they can support for its

conservation.

Activities:

Phase 1: Baseline Survey on Marine Ecosystems (Biodiversity) and current threats

(2019-2020)

1. Calling application from interesting individuals for the Task Force

2. Formation of the task force and working groups for;

a) Marine Biodiversity and Ecology

b) Marine Pollution

c) Climate Change and Natural Hazards

d) Socio, Economic and Cultural values and Policy related concerns

3. Capacity development of the task force

- Basic training: (Diving, GIS mapping, marine biology, marine geology

(Oceanography), etc.

- Advance Training under working groups

Phase 2: Implementation of the Action Plan (2020-2021)

4. Implementation of the baseline survey

5. Data gathering and Analysing

Working groups and key areas to be covered in the training session.

1. Marine Biodiversity and Ecology

- Study on Marine Biodiversity (Species/ Ecosystems/ Genetic),

- Marine ecology

- Evaluation of ecosystem services and their values

- Current threats on Biodiversity (Biodiversity degradation)

- Natural Resource Management

- Research techniques and methodologies

2. Marine Pollution

- Identify main sources/ agents for pollution

- Their potential threats and impacts on marine ecosystems

- Prevention and mitigation measures

- Other manmade impacts/ threats on marine environment

- Research techniques and methodologies

3. Climate Change and Natural Hazards

- Understanding Climate change patterns

- Understanding Natural hazards

- Their impacts on the environment society and economy

- Adaptation and mitigation (management)

- Research techniques and methodologies

4. Socio, Economic and Cultural values and Policy related concerns

- Social survey on their livelihoods, education, culture/norms

- Their correlation and interaction with the marine environment

- Economic analysis of environmental benefits on the community

- Marine Archaeology

- Study on existing legal framework and its gaps

- Understanding needs and gaps of knowledge on best practices

**Opportunities**

The more local & international sponsorship opportunities coming in with the end of the

civil war

Possible changes in government policies.

Ability to get more experienced resource persons with the marketing and popularity got

by word of mouth.

As most of the volunteers involved are active youth workers engaged locally and globally the opportunities of letting the world know about the project are high.

**Conclusion**

1. To form a task force for the implementation of Marine Research and Conservation

Programme of Sri Lanka.

2. To provide basic training required and capacity development of the task force

3. To carry out a baseline survey on marine ecosystems (wildlife and other natural

resources) and current threats on them.

4. To Develop National Strategy and Management Plan for Marine ecosystems conservation in the identified zones.

5. To implement the National Strategy and Management Plan.

6. To strengthen the existing legal and institutional framework of Marine Environment

Protection and management

7. To develop capacities of other local non-government agents, community groups those

who work towards Marine Conservation.

8. To improve public awareness and understanding on marine environment, importance of

living in harmony with their surrounding environment and how they can support for its

conservation

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| Activity | Amount |
| Phase I,II & III  Baseline Survey on Marine Ecosystems/Training  the Task Force/ Implementation of action plan | |
| Formation of the Task Force | 500 $ |
| Capacity Development of the Task Force | 2000$ |
| Baseline Survey | 5300$ |
| Development of the National Strategy & Action Plan | 1500$ |
| Project Progress Monitoring and Evaluation | 900$ |
| Public Awareness | 3000$ |
| Promoting Gender Equality for coastal conservation | 3000$ |
| Overall Admin cost of the project (12%) | 2000$ |
| Grand Total | 19200$ |