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The Blue Economy Sri Lanka - Introduction

The Ocean covers two-thirds of the Earth's surface area. An estimate of over three billion individuals depend marine and coastal systems for their livelihoods, both directly and indirectly. Important maritime activities such as fishing, sea transportation, tourism, offshore mining and energy generation play a significant role in the national economies of many countries, including Sri Lanka. The expansion of marine economic activities can be considered as one frontier of globalization, especially in a country like ours.

Thus, the "Blue Economy" concept embraces Sri Lanka's 530,684 square kilometers of territorial waters and its vivid natural resources for sustainable economic development. Our island consists of nearly 1785 kilometer long coastline comprising of a vast area of marine habitat including sandy beaches, extensive lagoons, mangroves and coastal marshes abundant with resources. As an island nation, it is time that Sri Lanka, like many other countries with coastal resources, too adopts the "Blue Economy" concept alongside the Green Economy concept that is already in place to achieve sustainable economic development.

Core Objective

Sri Lanka is surrounded by sea and the blue high sea which is 8 times larger than the land is a worthy treasure to our country. However we have to reconsider how much this great resource with high production capacity has been optimized to the economic development of the country.

Thus, the Core Objective of Project Blue is to investigate a large number of sea resources practically important to Sri Lanka.

Prospects of Project Blue

The Ocean is without a doubt one of the most resourceful areas in the planet and Sri Lanka is fortunate enough to be situated in the middle of immeasurable and unidentified sea resources. Considering the scope of duties vested to the Ministry of Fisheries and Aquatic Resources Development, sea resources can be categorized as follows:

1. Fisheries & Nutrient cycling
2. Marine Tourism
3. Sea Transportation
4. Ocean Energy
5. Co2 Capture and storage
6. Waste management

Fisheries & Nutrient cycling

Fish have historically played highly significant roles in satisfying the protein requirements of large fractions of humanity since the earliest periods of recorded history. Originally fisheries were low intensity, low technology industries that likely exploited fish stocks at a sustainable rate. However mass fishing, facilitated by technological developments including shipbuilding and fishing technology, lead to alteration in fish stocks (size and demographic) and the subsequent closure of some fisheries. Proposed multipurpose harbour complex at Delft will enhance the fishery trade in Northern area.

Fisheries on the shelf are supported by a wide range of coastal pelagic and demersal species, typical of tropical multispecies fisheries. Both developed and developing countries today are facing many challenges in the management of fisheries resources. However, there are many international organizations which engage in fisheries management. According to them, many countries do not show the necessary enthusiasm or attitudes in this regard. Thus, in an island nation like Sri Lanka there is a great necessity to introduce laws and methods to prevent illegal fishing where world fish resource is at a risk of extinction.

Therefore a review will be conducted on the fishing methods adopted in developed countries. Furthermore, we will directly engage the fishery community in this task along with other governmental institutes.

Multi Day Vessels

With the advancement of technology in the marine sector, the relevant equipment that is necessary for the current arena is unavailable in Sri Lanka. We do not have larger vessels for the relevant purposes. Thus, all the multi day fishing vessels needed to be upgraded via the use of high technological equipment in addition to improving the prevailing techniques. In addition to better development and produce, new equipment with high technology ensures the life safety of fishermen and the need for these for the multi day fishing vessels to be introduced is increasing by the day.

There is a major necessity for the relevant safety equipments which is currently severely lacking. Due to this under-developed stage, we are only at a very primary stage in terms of safety.

Therefore **Winches, Life Rafts, EPIRB, Fish Finders, and Fish Sonars** need to be introduced to multi day fishing vessels along with **Telephone facilities** and at the same time introducing a **Vessel Tracking System** for small vessels have been identified as the important aspects to be implemented earliest.

Life Rafts

Many accidents encountered by those who are mostly engage in fishing at deep sea in multiday fishing vessels have been increasingly reported. The most recent incident occurred off Galle causing death of 5 fishermen of Galle due collision against a merchant ship. Wearing life safety jackets only won't help because it is difficult to do fishing wearing life jackets. These lives could have been saved if life rafts were available Therefore life rafts should be located for all the multi day fishing vessels in Sri Lanka.



These life rafts are made from Polyurethane coated and Neoprene Rubber and these materials are so strong that they can face emergency at sea. It can be fitted to any place and it needs only small space. No technical knowledge is needed to operate it and any fisherman can easily operate it. These rafts contain medical facilities and food. It can give accident signals by the parachutes spread to sky and it can seek help from nearby vessels in an emergency.

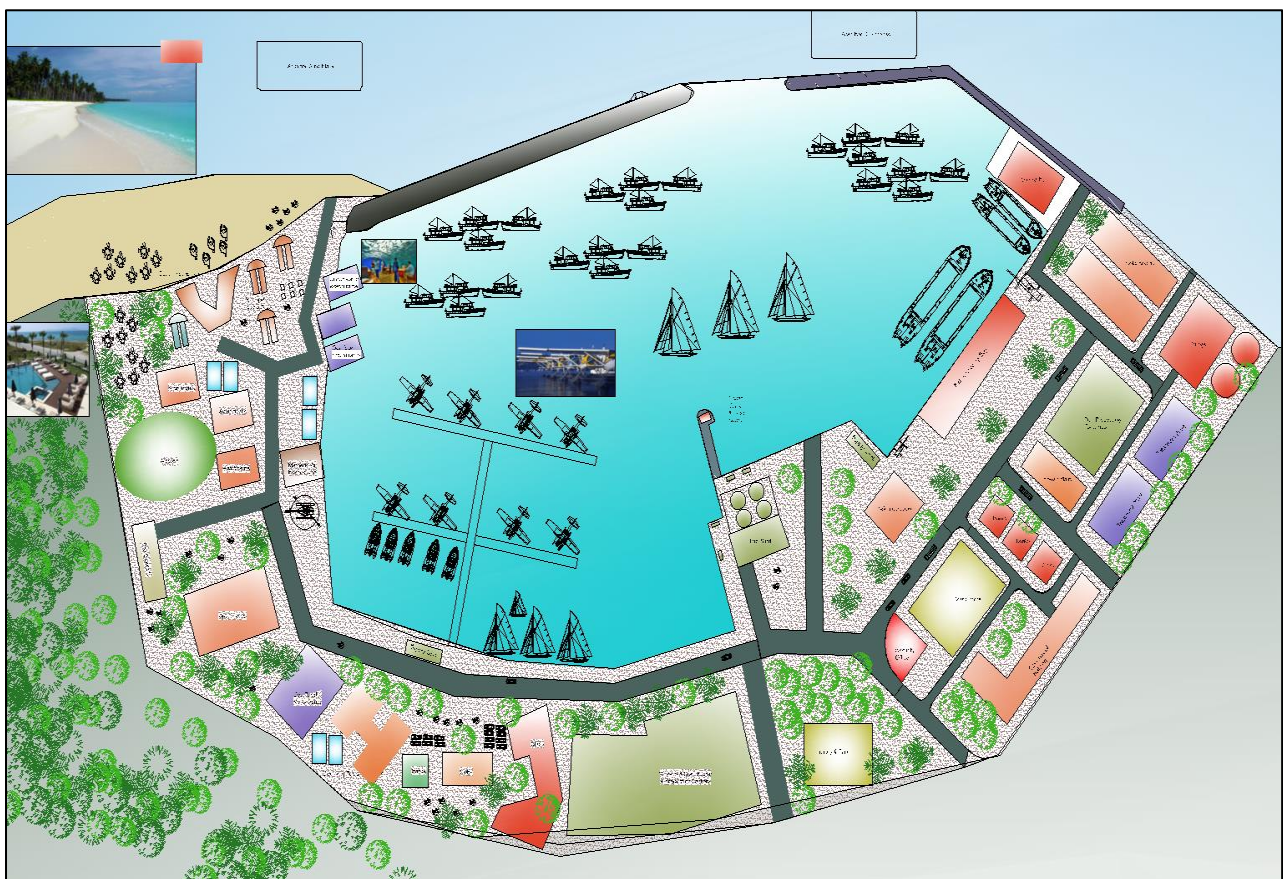
Its occupants can exist safely in any bad weather condition due to its special cover. A raft can be used for 07, 14, 21 days. Its main feature is that it can operate automatically upon the water pressure where a vessel is sunk in an accident.

Multipurpose Fishery Harbor Complex

In the future, we will be having larger vessels. Multipurpose fishery harbours complex will be consist of facilities for **fishery, tourism** and **commercial trading**. Present fishery harbours in Sri Lanka are running at a loss and this is the only reason for us to propose Multipurpose Fishery Harbours Complex which will be economically viable. Thus, we will be able to accommodate larger vessels.

As an island we need to have passenger and goods transportation Island wide. For that we need small cargo vessels. This will also save time and money.

The local business community will be encouraged to buy these large vessels. **“Project Blue”** has taken measures to direct youth for Korean fisheries employment after having them trained in the fisheries technical colleges proposed to be established in Tangalle and Jaffna which will be operated under the sponsorship of National Federation of Fisheries Cooperatives of Korea.



Proposed Multipurpose Fishery Harbour Complex Structure

Construction of Multipurpose Fishery complexes of 5m depth to launch the large scale vessels is another concept of Project Blue. Accordingly, following harbours will be developed with the support of the Government of Korea, where they have already signed a MOU with the MFARD to carry out free feasibility.

I. Udappuwa Fishery Harbour

II. Chalei Fishery Harbour

III. Delft Fishery Harbour

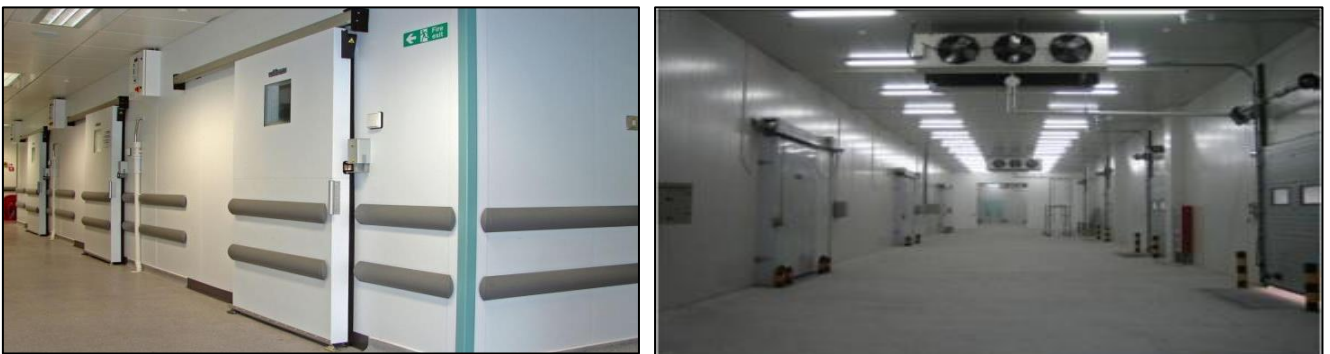
IV. Madagal Fishery Harbour

These harbours will include moor facilities for large vessels, yachts and small merchant ships and launching for seaplanes, restaurants, small hotel complexes, housing and community centers.

Modern Locker Cold Rooms

The necessity for this is due to the fact that most of these small time fishermen do not have the necessary equipment to safely preserve their harvest for a day and thus, they are forced to sell the harvest to the first bidder. This in turn results in dissatisfaction within the fishermen.

Fishers in the North and East especially face this issue of having to sell their harvest at very low price due to lack of safe stores thus forcing many of them given up the industry. As a solution “Locker Cold Rooms” will be introduced which will allow 20-30 fishers to preserve their harvest before sell.



Blast freezing facilities in these cold rooms will provide qualitative fish to the public and this will be implemented parallel to the **“H. E. President's vision of food security”**. National Planning Unit has already submitted it and feasibility reports are being done by anchorage development project. Management of this will be done by the proposed community based management system.

Community Based Management System

“Project Blue” firmly believes that management of all these projects has to be done with the participation of the fisheries community and a community based management method has been introduced to anchorage and Locker cold rooms management. Many anchorages are operated under the Ministry and many other are proposed under the fishery harbours and anchorage development project. These resources are not optimized due to the lack of proper management. The existing methods need to be changed for the proposed anchorages.

Experience of the fishery community will be directly utilized to the development of the fisheries. Using excess workers of Ceylon Fishery Harbours Corporation to the community based management unit is the main objective. Fisheries activities in certain fisheries harbours have encountered several issues. Neglecting the experience of **fishermen over environmental factors in establishment of harbours has made some of them unsuccessful.**

This objective needs to be achieved by encouraging small scale fishermen and uplifting their life status through government contribution and creating a collective method to increase the contribution share of the fisheries industry to the national income. Indian fishing vessels do a great calamity in Northern sea of Sri Lanka.

In 2014 India has exported shrimp to USA worthy of 1274 million USD and became NO: 1 exporter to USA. But our total fish exports comes around 350 million USD. We need to increase this which is important for Blue Economy programme.

We have already selected some anchorages which will be managed under this concept, and already submitted a cabinet paper.

Modern Fishing Vessels with Latest Technology

Proposed Multipurpose fishery harbour will have access to a fleet of modern fishing vessels with latest technology for deep sea fishing. All the multi day fishing vessels are needed to be upgrade and State Minister intends to use high technological equipment and also to improve prevailing techniques.

New equipment with high technology which ensures the life safety of fisherman needs to be introduced for the multi day fishing vessels. I have already started to introduce safety devices for multi day fishing vessels.



Fish Processing Factories

Proposed Multipurpose fishery harbour will have access to be possessing some of the state of Fish – Tech factories. This will ensure the total harvest against spoilage & value additions done to maximize the efficiencies & market advantages.



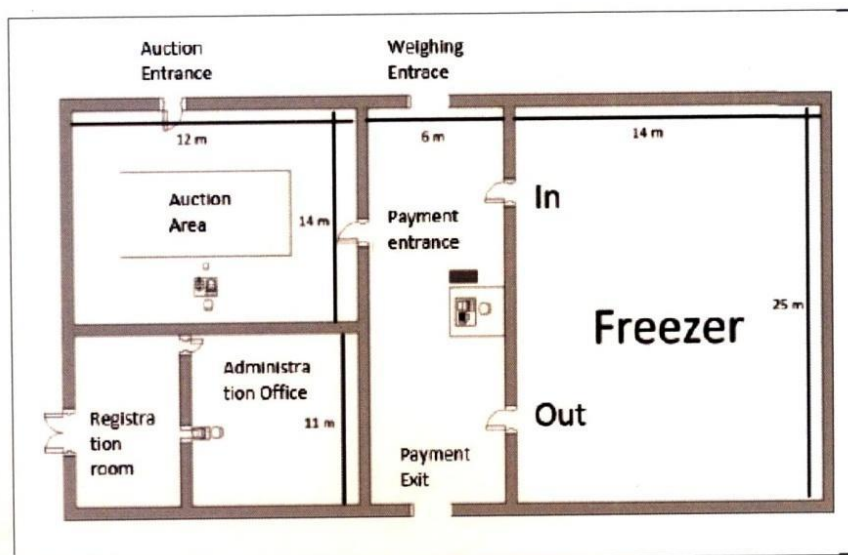
Digital Auction Centers

Investment in setting up Digital Auction Centers and Cold Room facilities for large scale fish processors and merchants and Locker Cold Room facilities have been recognized viable not only to uplift the industry as a whole but to provide assistance to small scale fishers who encounter financial difficulties due to the unavailability of affordable storage facilities.

Suggest a simpler approach as a preliminary step towards digitization of the system. The process will take place upon landing of the fish catch on the auction centre premises. A network connecting all auction centers in the island will be in operation where bidding entries can be fed to an online system or where they can be placed over the phone.

The implementation of Radio Frequency Identification (RFID) which is increasingly used for data logging at auction places can be introduced at a later stage for the establishment of an integrated fish auction system. This system will be a fourfold process.

- i. Bidder Registration - This will involve the issuance of Identity Cards to fishing boats and fishermen and RFID Tags to fish boxes.
- ii. Digital Weighing - Fishermen will be able to tap their ID Cards on to an RFID reader and the fish boxes with RFID tags to determine the fish type, quality and price. A photograph will be taken and the box weight is read by a digital weighing scale which will then be entered into the database.
- iii. Auction Terminal - The auction process will be carried out by displaying the information of the fish box. The interested bidder from an auction centre in the country can enter into bidding after a digital read of his RFID Card.
- iv. Payment Terminal - After the display of the auction results, the winning bidder using the RFID card will make the payment and get a receipt. If the winning bidder is from the same auction centre he can proceed to the Cold Room and claim his fish box. If the winning bidder is from a different centre he can make arrangements to get his fish box transported.

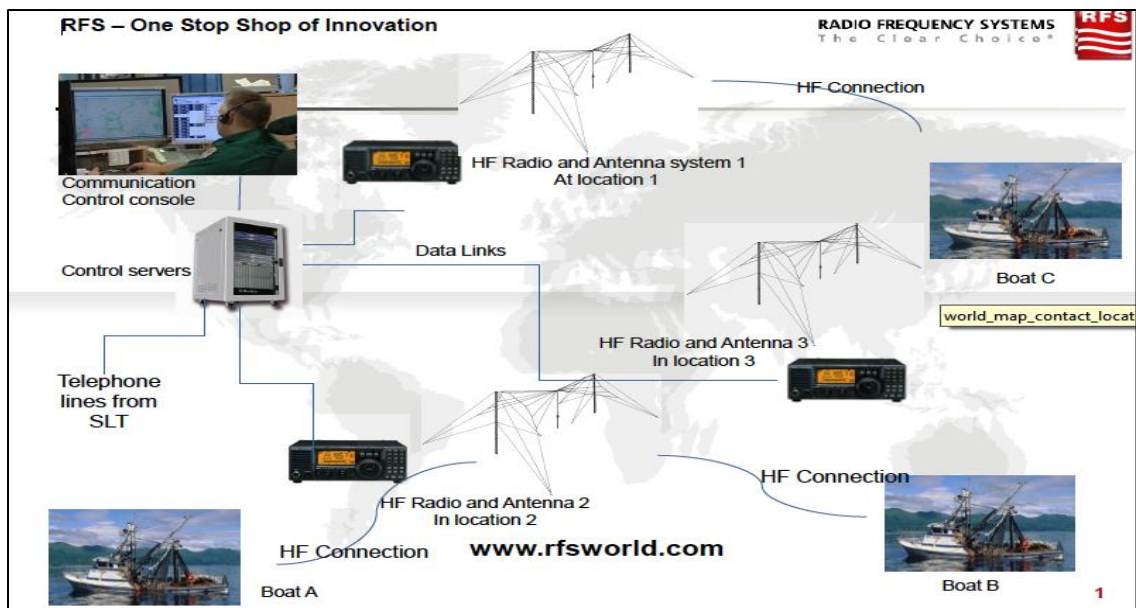


A microfinance System has been currently introduced under the National Fishery Federation. The core objective of this will be to establish a fishery bank and an insurance company under the National Fishery Federation. We aim to make this business venture a business unit to strengthen those involved in the fishery trade. We aim to influence the smallest fishermen, so that they will have the necessary backing that they need.

Telephone Patch System

This will allow the fishermen at sea to communicate from sea to land. They can contact their homes and families through HF Communication. Furthermore, anyone out at sea can sign up to use this communication threads and make use of it. In this system we will be required to install a HF patch which will translate Telephone connectivity to HF transmissions to HF transceivers. A controlling system which will control which station would pick the call and transmit to boat. The transmitting antenna and the receive antenna arrays will also be installed.

The way it functions is: When a registered user needs to call the craft out at sea, they would be required to call a predefined calling number and an operator would assist to establish the link with the relevant boat. If the boat has encryption it will be a private call if not it will be a call that anyone in the system can hear. The call will be charged at a predefined rate.



When approval is granted, this system could be installed and commissioned within 8 to 12 months.

Sea Transportation

Sea transport is also a possible avenue from which the country could benefit. Although not implemented yet, there have been long discussions on the utilization of the ocean as a mode of transport. The possibilities of having an ocean transport routes to neighboring India, as well as between the Northern and Southern regions of Sri Lanka, have been looked into by policy makers. The security issues which prevailed during the conflict period greatly constrained the implementation of such programmes. However, Sri Lanka can now make use of the ocean as a low cost mode of passenger and goods transportation. The proposed ferry service from Colombo and Tuticorin, India, is viewed as an important avenue for increasing connectivity with India, which can thereby generate economic gains for Sri Lanka through India-Sri Lanka goods and passenger transport. However, the financial viability of the initiative needs to be enhanced through appropriate strategies, before going forward. In the mean time we can introduce ferry service around the island to transport passengers and goods.

Marine Tourism

Marine Tourism does not come within the purview of our Ministry. However, our coast is not that large in comparison with other countries. Thus, Marine Tourism and Fisheries often go hand in hand in reality. Thus, we are attempting to incorporate marine tourism into our projects to further this endeavour.

Countries in the South Asian, as well as Asia-Pacific regions have demonstrated that Ocean resources can be utilized for economic development. For instance, ocean-based tourism industry in the Maldives has been able to contribute 22% to its GDP, in 2012 according to do the World Travel and Tourism Council. Although Sri Lanka possesses a comparatively high resource base, earnings from tourism still remains in a very below potential. In addition, lessons can be learned from countries outside the region on how best ocean resources can be explored; such as Fiji on tourism and canned fish industry, and from Mauritius on up-market tourism. The ocean, its resources and the natural environment has been a major contributor to Sri Lanka's tourism industry over the years. The growth rates in the past few years show the enormous potential that the tourism industry possesses, as one of the major economic sectors in the country.

Given the high prospects for tourism in the marine environment in Sri Lanka, it is high time to look for new forms of tourism which can ultimately lead to an increase in the economic benefits. The natural marine environment and its resources can be made use of, to offer a variety of tourism products such as snorkeling, diving, whale and dolphin watching, wind surfing, parasailing, and watersports, etc. Value additions for sun and sand tourism has been slow to emerge in the hotel sector in Sri Lanka. In terms of the development of unconventional tourism activities, Sri Lanka can learn lessons from countries such as Thailand and Malaysia.



The idea of **“Project Blue”** is that the marine tourism within our country is not satisfactory. Tourism fisheries industry is given a place in the proposed multipurpose fishery harbours so that the marine tourism can be extended and international tourist attraction can be achieved.

Exploration of Ocean Resources

Ornamental Fish

We have currently begun a promotion of ornamental fish via NAQDA via the organization of an exhibition titled “Min Wisithuru” to target local businessmen. However, the international participation that we received to this event was not enough. If we were to increase the exports, we need to make this an international event.

Annual income of ornamental fish exportation is nearly 3 million USD. By increasing this industry, new job opportunities can be created. Identification of issues of businessmen engaged in fresh water fishing and marine ornamental fish, promotion and exportation, making laws if necessary and conducting “Min Visithuru” successfully on an international level is expected.



As the basic stage of this, we are planning on organizing an international event in 2020.

Coral Reefs



Most coral reefs help for biodiversity and scientists have identified their herbal value. Large demand is there for coral reefs and marine ornamental fish which in turn create an avenue for vast export income. New laws have to be introduced for both the industries and it has been planned to grow corals making no harm to natural corals with NAQDA. Farming sea weeds, promote their herbal value, and conduct a program to make medicine out of herbal corals are expected to be done in future.

The Concepts for Master Plans

Through Project Blue we have launched a concept incorporating both Fisheries and Marine Tourism together.

1. The Delft Project
2. The Hummanaya Marina
3. The Tangalle Fishery Harbour
4. The Weligama Bay

We will be going forward with these four projects under the Hon. Prime Minister's programme "Balagathu Sri Lankawak". Furthermore, the Hummanaya Marina, the Tangalle Fishery Harbour and the Weligama Bay will all be developed under the coastal belt of "Balagathu Sri Lankawak".

The reason we are incorporating marine tourism to this is because Sri Lanka does not provide as much as it could through marine tourism. As mentioned above, ocean-based tourism industry in the Maldives has been able to contribute 22% to its GDP, in 2012 according to do the World Travel and Tourism Council. Although Sri Lanka possesses a comparatively high resource base, earnings from tourism still remains in a very below potential. Thus, we will be focusing on tourism attraction through these projects.

The Delft Project



Project Blue aims to kick start the Delft Project - The First Blue City in Sri Lanka.

Introduction to the Delft Project

On the west, is an island popularly known as Delft (named by Dutch), known by the Portuguese as Ilha das Vacas, and by the locals, Nedunutivu. Delft, famous for its wild ponies, baobab tree, coral fences and historical ruins, is home to a population of about 4500.

Of this, about 1200 fishermen in 560 families are engaged in fishing as their main livelihood.

Delft Island is the largest island owned by SriLanka with an area of 50 km² which is strategically located between south India & northern part of SriLanka with high levels of socio-cultural bonds remained established as an island of centrally topographical modus.

One of the main reasons we decided to create a hub at the Delft Island is because of its geographical location. Apart from the fact that it is close to India, through this Project we can develop the North to a great scale. Marine Tourism will be one of the first steps. However, we also want to make it a commercial hub - a free island. If this happens, there will be many benefits to be reaped. It will not be developed in an isolated manner, but along with the mainland.

Marine Tourism - Beach Nourishment

As mentioned above, Marine Tourism takes an important role in these projects. In order to do that, we must first focus on beach nourishment.

Nourishment restores and widens the recreational beach at present. Furthermore, the structures behind beach are protected as long as the added sand remains.

However, when erosion continues, beach nourishment does not leave hazards on the beach or in the surf zone. This is a big advantage when compared with “hard” beach stabilization structures like seawalls and groins. Seawalls may protect structures behind the beach, but they almost always cause the beach in front of the wall to become narrower. If erosion breaches the seawall, then debris from the wall will be left on the beach and in the surf. Since beach nourishment only puts sand on the beach, no debris is left when it erodes.



Fun and Recreation

Seeing as one of the main aspects of attracting tourism includes food, beverage and shelter, we will be focusing on building Seafood Restaurants, Underwater Restaurants and Boutique Hotels. Furthermore, Recreational activities like Diving, Passenger Submarines, Horse Tracks and Sport Fishing will also be available as a boost for tourism.



Commercial Trading

We are currently building a harbour under the feasibility Korean grants. This harbour will be built with a five meter raft. When we're building it with a five meter raft, there will be commercial vessels involved as well. When commercial vessels come here, there are many benefits.

The Indian Poaching Issue too could be stopped if we can turn this into a hub, because this will be directly involved with the International Community.

Shopping Malls and Banks

Seeing as the money flow is one of the major components in any area, and the fact that we aim to increase our income, the establishment of Shopping Malls and Banks will further this purpose.

Coastal Passenger Transportation

Transportation is one of the major aspects in any community. Thus, we aim to establish coastal passenger transport. Furthermore, all transportation in the island will be electrically driven. They will be in the forms of cable cars, trolleys, trams and electrical vehicles.

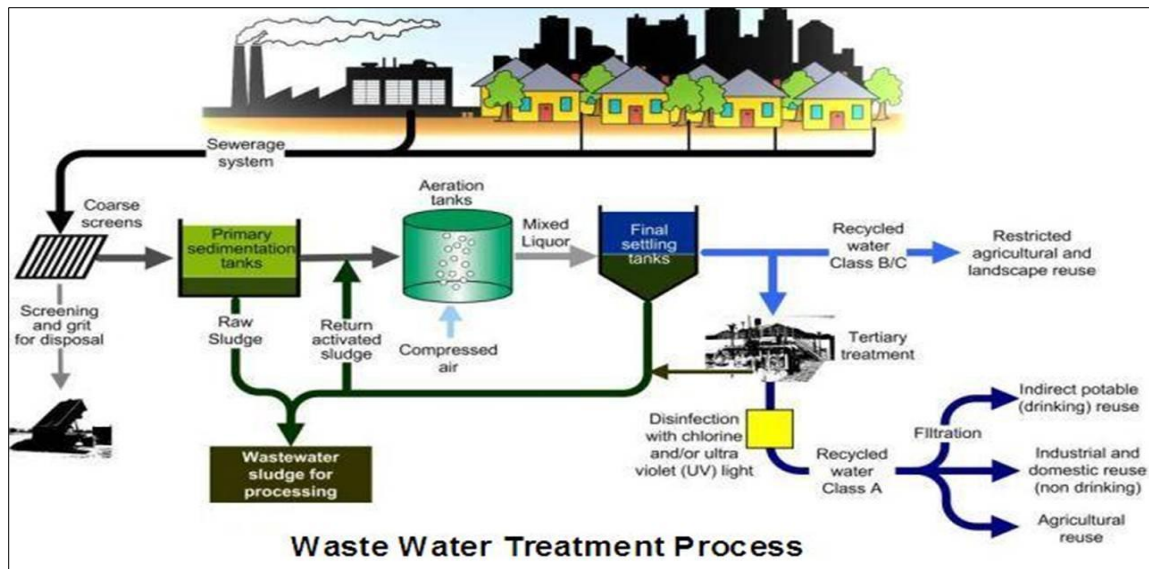


Berthing Facilities

The chief purpose of berthing facilities is to facilitate the approach of a ship and mooring process. We will be providing such facilities in order for more larger ships to engage in this.



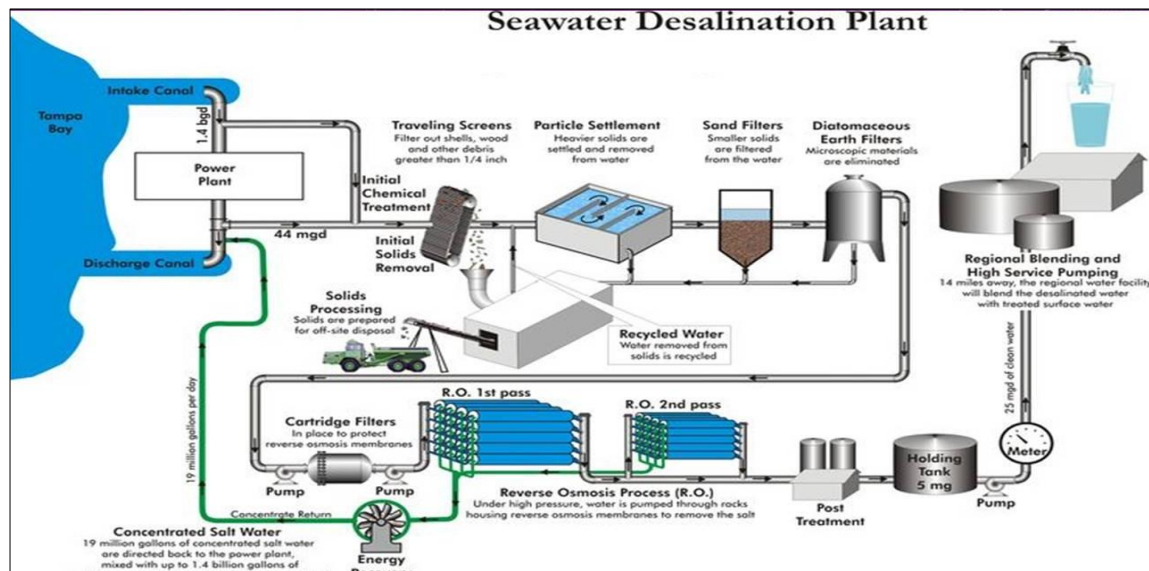
Waste Disposal System



A successful waste disposal system will be established in order to make sure that waste would not be an issue in the future. The Delft Island will be built in a 100% environmentally friendly manner. This island will be a Blur Revolution, where it will contribute to the good of the environment as well.

Seawater Desalination System

The solution for the water problem at Delft will be the Seawater Desalination System.



Explorations

Oil and Gas

High demand prevails for fossil fuel and its necessity is emphasized concerning the possible fuel shortage in future, use of oil and gas and other products related to them. Currently many Middle East countries are investigating for seabed oil fields. Even though Sri Lanka is also investigating for fuel and gas we are still out of good result. This will attract the Investors.

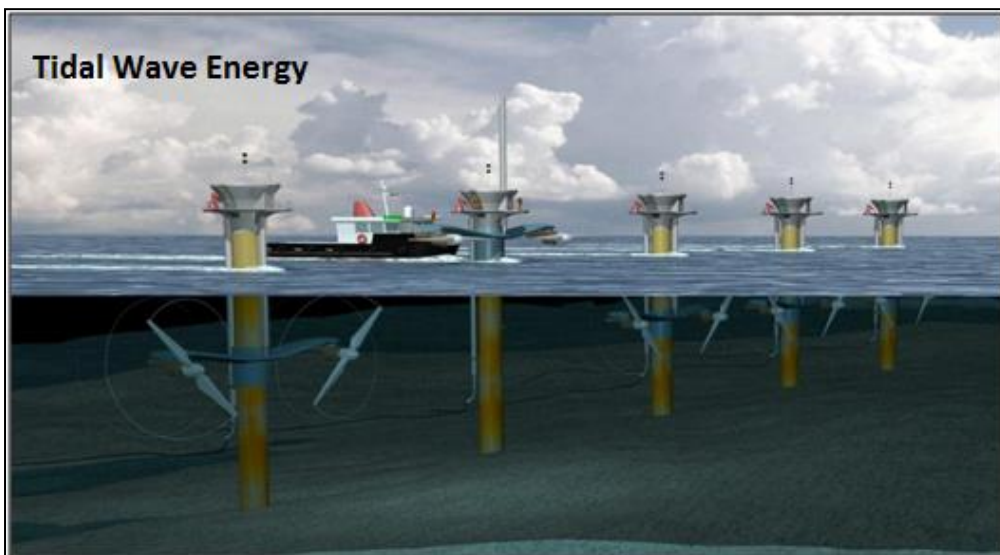
Co2 Capturing and Storage - as mentioned above.

Minerals

Among the numerous inanimate resources of sea, Sri Lanka is harvesting only one mineral which is salt and no other minerals are ever attempted to be harvest. Indian Ocean is hugely famous for minerals and scientists mention that its water contains chemical more than 60. Gold, Titanium, Diamond are believed to be stocked in the sea bed and we also should pay attention on this area.

Renewable Energy - Tidal Wave Energy and Offshore Windmills

The island is to be powered by the Tidal Wave Energy and offshore wind mills. Offshore wind power refers to the construction of wind farms in bodies of water to generate electricity from wind. Offshore windmills have not been used before, however, in order to curb the fossil fuel issue and for this island to be made 100% environmentally positive, we will be using renewable energy. We encourage this because these methods are very productive especially when considering the environment.



Proposed Channel



Weligama Bay

The Weligama Bay is of great importance, especially as it is a great natural resource due to its location. The surrounding area around Weligama is all involved in tourism. That is also one of the reasons Whale Watching began in Mirissa. However, now there is no space for the fisheries industry in Mirissa. Thus, we have to bring the tourism to Weligama. However, we cannot just build structures in the sea on a whim. Because we cannot change a structure, if one is built, there should be a master plan where we focus the future steps we take alongside the Hotels that are currently in the mainland. In accordance with the breakwater marked in the proposed illustration, we will do a feasibility study and select the best course of action. This is why we're introducing this as a concept and later we will develop this in accordance with a master plan.



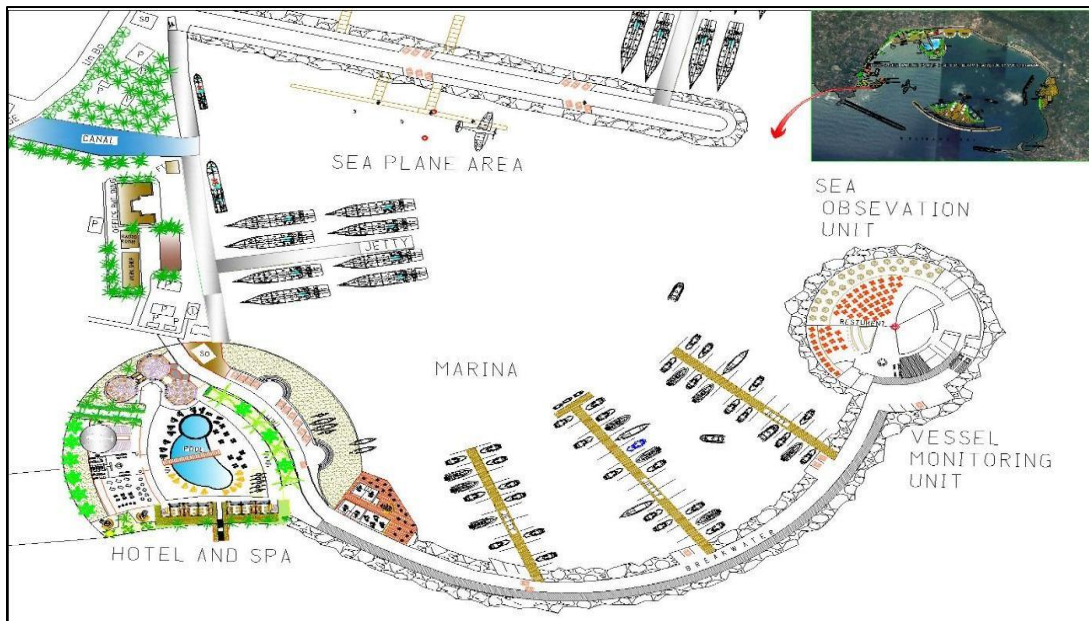
After the Weligama Bay was destroyed in the 2004 Tsunami, little has been done in terms of development. However, under project Blue, we plan to develop the Bay into a Fisheries Harbour with all the luxuries that can be afforded.

Modern Day Locker Rooms

Fishers in North and East have to sell their harvest at very low price due to lack of safe stores thus forcing many of them given up the industry. As a solution "Locker Cold Rooms" will be introduced which will allow 20-30 fishers to preserve their harvest and keep it fresh for another day.

Blast freezing facilities in these cold rooms will provide qualitative fish to the public and this will be implemented parallel to the HE President's vision of food security.

National planning unit has already submitted it and feasibility reports are being done by anchorage development project. Management of this will be done by the proposed community based management system.



Seaplane/Passenger Transport

The contribution made by air transport to the growth of trade and industry throughout the world is significant. Consignments of different nature are being sent in aircraft daily to different parts of the country and the world. It is the fastest mode of transport.

There are generally no physical barriers to air transport. For transporting easily perishable commodities like fruits and flowers, air transport is the best mode. Air transport also plays a crucial role in promoting international trade. As there is always strict adherence to the time schedule, delay is avoided.

Fun and Recreation

Furthermore, we plan to use Marine resources in a Sri Lankan context. Due to the beautiful beaches and warm double monsoon in a land area of about 65,610 km² with sandy beaches, extensive lagoon and estuaries Marine Tourism will take a very important stance in this.

Glass Bridge

Something never before seen in Sri Lanka would be the proposed glass bridge for the Weligama Bay. The bridge, built as an attraction for tourists, will be glass-bottomed and is transparent. It is indeed a great way to get your adrenaline pumping and thus will attract thrill seekers.



Beach Cabanas

Cabana or Cabaña may refer to either an "indigenous hut" or a "recreational structure". This will be yet another way to attract tourists. The Beach Cabanas will be the best place for tourists who would like to revert to nature and to feel miles away from the daily constraints of modern life.

Much like the Delft Project, this too will have Shopping malls, Banks, Hotels, recreational activities, an Aquarium, a museum, underwater tourism locations and other tourist attraction centers.



While Weligama is a great location for tourism, there is no real regulation. However, under this project, under the Prime Minister, we hope to uniformly structure everything, especially in the tourism sector.



Hummanaya Marina

A resort harbour complex will be built in the Hummanaya Marina. The reason the Hummanaya Marina has been selected for this is because most ships from the Red Sea to the Malacca Sea will be travelling through the Kudawella and Tangalle harbours. By building Berthing Facilities for these yachts and ships, Sri Lanka's Marine Tourism Industry too will flourish.

Through this we will also be developing the Kudawella area, building underwater sea aquariums, cable cars, recreational water sports, which will all boost tourism.



A marina is a dock or basin with moorings and supplies for yachts and small boats. A marina differs from a port in that a marina does not handle large passenger ships or cargo from freighters. The word marina is also used for inland wharves on rivers and canals that are used exclusively by non-industrial pleasure craft such as canal narrow boats. We will be establishing a Marina in the Hummanaya along with the resort complex.



The main reason we're doing this Marina is because, the bay under Hummanaya is the most suitable place for a marina. There are many Yachts that pass the area, and if we develop this accordingly, we can further develop this.

Many countries that have recognize the advantages of blue economy have developed ocean resources exploration and are now reaping the results of their labor. The concept of blue economy was first introduced to the country by me. And accordingly, Sri Lanka stands to reap greater results through major implementation of this concept due to Sri Lanka being surrounded by three seas, in comparison to other nations.

Areas such as Kudawella has become synonymous for historic roots in fishing, rich aquatic resources and a livelihood that surrounding these natural aspects. However, things have gone through major changes with technological advancements but remains as a tradition in the area. Currently Kudawella has become an urbanized model city that has made fishing its main bloodline.

Any potential local and foreign tourists who visit the proposed resort harbour complex will attain the opportunity to engage in wildlife safaris adjacent to the Kudawella town. More so, potential visitor will also retain the opportunity to visit beach areas which are regularly used as various turtle egg laying regions. Tourists will also get the chance to swim and dive into the Great and Less Bases leading to the development of the tourism surrounding the Hummanaya as well.

Proposed City Planning adjacent to the Resort Harbour Complex

Many countries around the globe are resorting to complex and explicit city a planning procedure that provides quick solutions to evolving problems. Accordingly, in order to transform Kudawella alongside the economic zone and tourism hub a proper and thorough city planning that covers water management, transport, housing complex infrastructure and market areas is essential. This will provide quick solutions to any problems that erupt in an eco-friendly city.

The development of cable car system that covers the Kudawella beach strip that runs to Mirissa and Hambantota tourist zones can be utilized in this procedure. Furthermore, as a solution to the impending drought and heavy dry zone areas that surrounds Kudawella can be resolved by developing underground water distribution mechanism that collects and transports it to the closest reservoirs.

Accordingly, new road management methods have to be introduced to Matara and Kudawella. This will lead to the development and the widening of the Matara- Katharagama Main Road. This was also including the development of a new drainage system to the area as well.

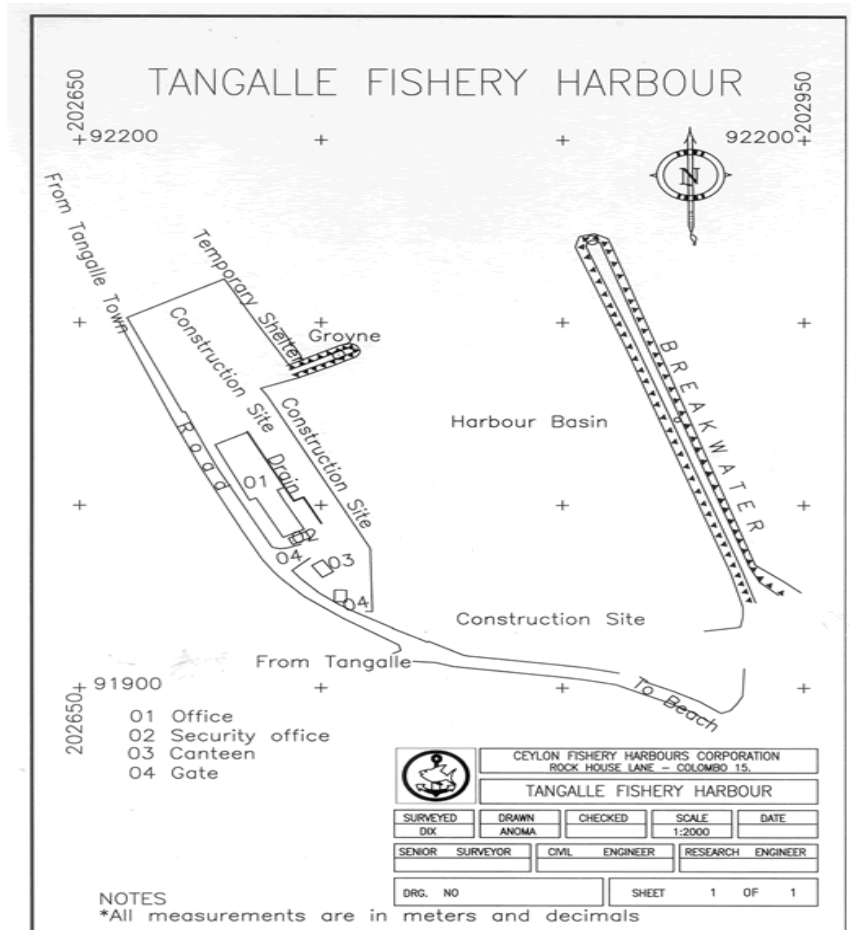
Tangalle Fishery Harbour

The Tangalle Fishery Harbour will also be developed as a multipurpose fishery harbour to be a significant economic hub under Project Blue.

This will uplift tourism and generate foreign exchange for Sri Lanka. A tourism plan related to Yala safari, Whale watching, underwater safari, Sea Turtle watching and Boutique Hotels under a specific Master Plan will also be a part of this project.

The Tangalle Fishery Harbour was completely destroyed by the Tsunami disaster in 2004 and was reconstructed with a new Ice Factory, Cold Room, Winch House and a Slipway. In developing the Tangalle fishery harbour as a Multipurpose Fishery Harbour, promotion of tourism will be the main focus.

This Project has been introduced to develop the Tangalle fishery harbour inclusive of all the related sectors and components of a successful tourism industry.



This Project is introduced to develop the Tangalle fishery harbour inclusive of all the related sectors and components of a successful tourism industry inducing the local and foreign tourists visiting the Tangalle fishery harbour by making facilities available to go on Elephant watching in Yala sanctuary and Udawalawa "Eth Athuru Sewana" to visit Rekawa beach (10km from Tangalle city) where many species of Sea Turtles such as loggerhead, leatherback and green turtles visit to nesting and laying eggs and also to go for diving in Kuda Ranwana Fort and Maha Rawana Fort and many other Recreational activities which can be experienced within one hour from the harbour.

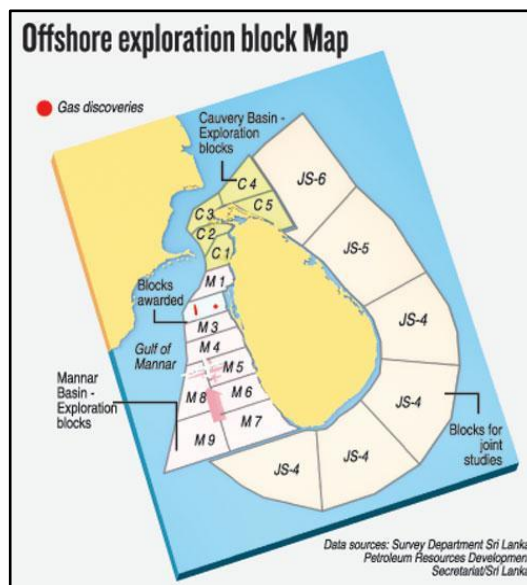


I also wish to develop the Tangalle city under the proposed city development plan by locating factories and residencies of town folk in separate locations which are currently located in an unorganized manner and to position name boards, and bill boards effectively within the city and most importantly to introduce a proper water management system to accumulate rain water in rainy seasons for the areas lacking water such as Tangalle and Hambantota.

Secondary Objectives

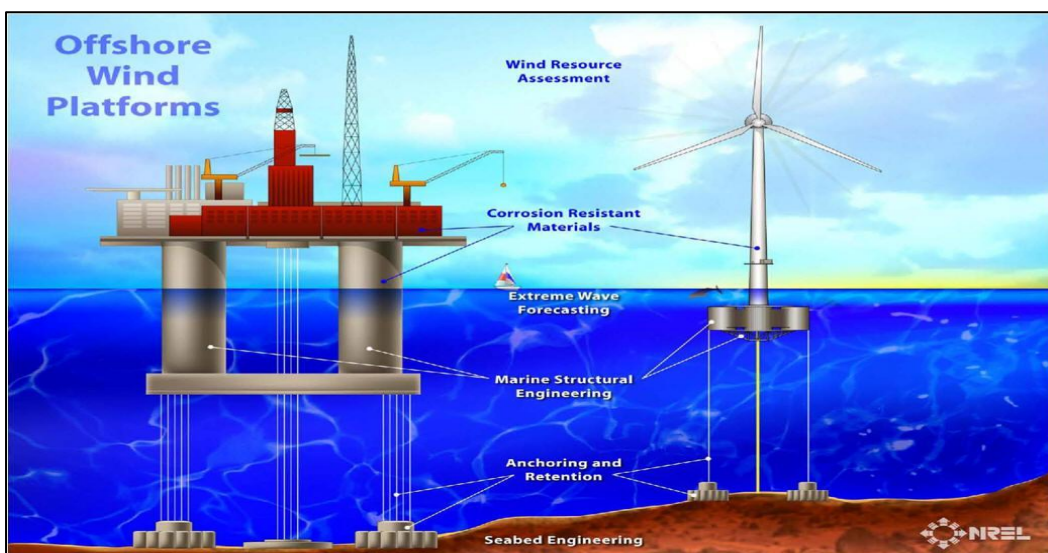
Furthermore, in terms of a secondary objective, Project Blue believes that the following resources too will play a major role in the process of adopting Blue Economy, although they do not directly connect with the scope of the Ministry.

➤ **Oil and Gas**



At present, many countries, especially the Middle Eastern Countries, are investigating the sea bed for oil fields. There is a very high demand for fossil fuel and its necessity is emphasized concerning the possible fuel shortage in future. Even though Sri Lanka too is in search of fuel and gas we have still not achieved the necessary results. However, via Project Blue, such investigations will be extended in other sea areas in order to achieve good results.

➤ **Renewable Energy**



Many countries are attempting to generate electricity out of using sea waves and tidal waves as an alternative to the fossil fuel. Historical records show several incidents of generating electricity using these methods. In addition to everything else, Sri Lanka is also blessed with other ocean-based energy resources which have yet to be fully tapped. Sri Lanka has a good potential for ocean generated wind power.

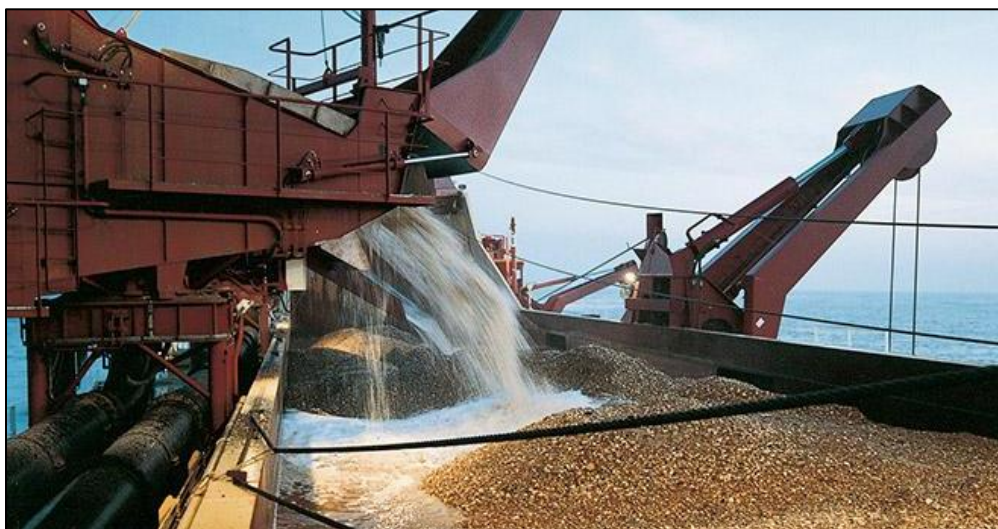
According to the Sustainable Energy Authority, nearly 5000 km² of land has excellent wind resource potential. As of June 2012, 6 wind power projects have been in operation, closer to the sea and another 9 projects are under construction. In addition, Sri Lanka's strategic geographical location can be used to generate wave energy as the country has been identified as retaining a huge potential for wave power.

➤ **Ocean Energy**

Sri Lanka has now called for the second round of bidding for petroleum exploration licenses. It has been an encouraging sign that world's leading oil exploration companies have shown interest in Sri Lanka's petroleum resources. It is important that Sri Lanka look to other countries, such as Norway, that showcase the best practices with regard to this. Domestic capacity building has been a main policy priority in the case of Norway, which was achieved through the establishment of a national oil company, specification of licensing conditions, and where technology transfers from foreign companies to domestic institutes was often a requirement.

➤ **Sand and Gravel**

Many countries use sand and gravel for their constructions and the United Kingdom is the main figure among them. Sand from rivers is used for constructions in Sri Lanka and it has created many natural disasters and this situation will only worsen in the future. Therefore turning to the alternative of using sea sand and gravel is essential. Project Blue hopes to use sea sand and gravel for all the future constructions under the Blue Economy programme.

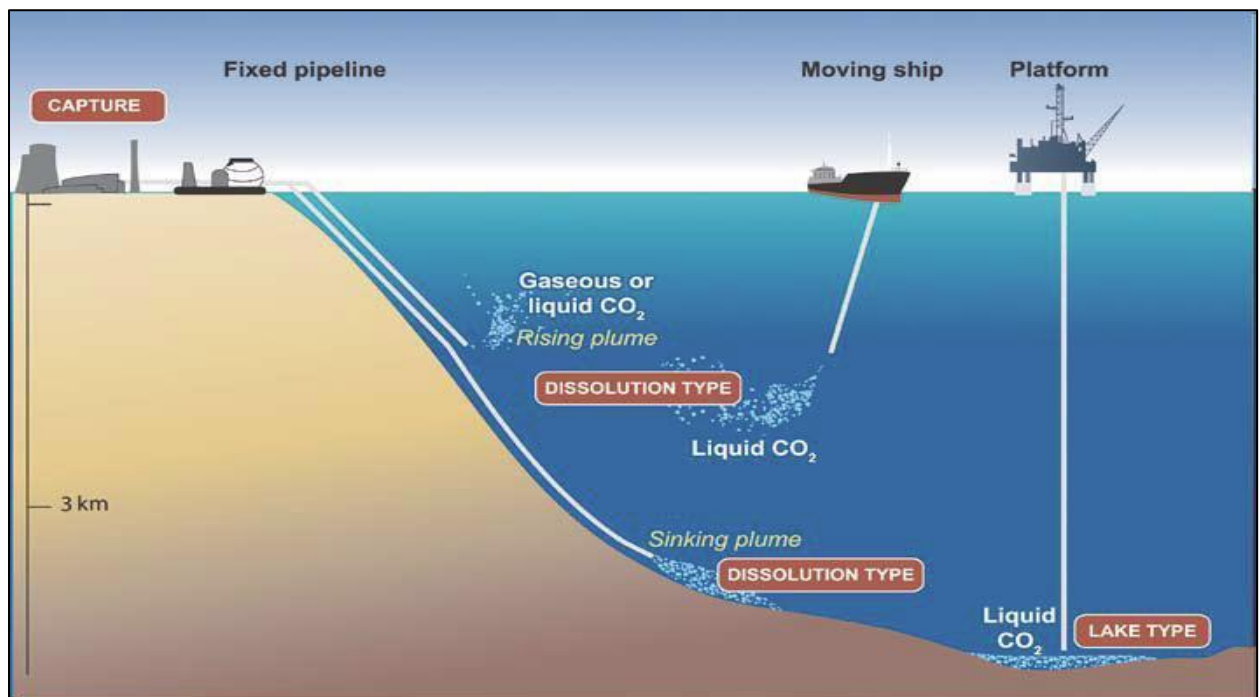


➤ Minerals



Among the numerous inanimate resources of the sea, Sri Lanka is harvesting only one mineral which is salt. Sri Lanka has not attempted to harvest any other mineral. The Indian Ocean is hugely famous for minerals and scientists mention that its water contains chemicals that could be of immense value. Gold, Titanium, Diamond are believed to be stocked in the sea bed and Project Blue aims to pay attention to this area.

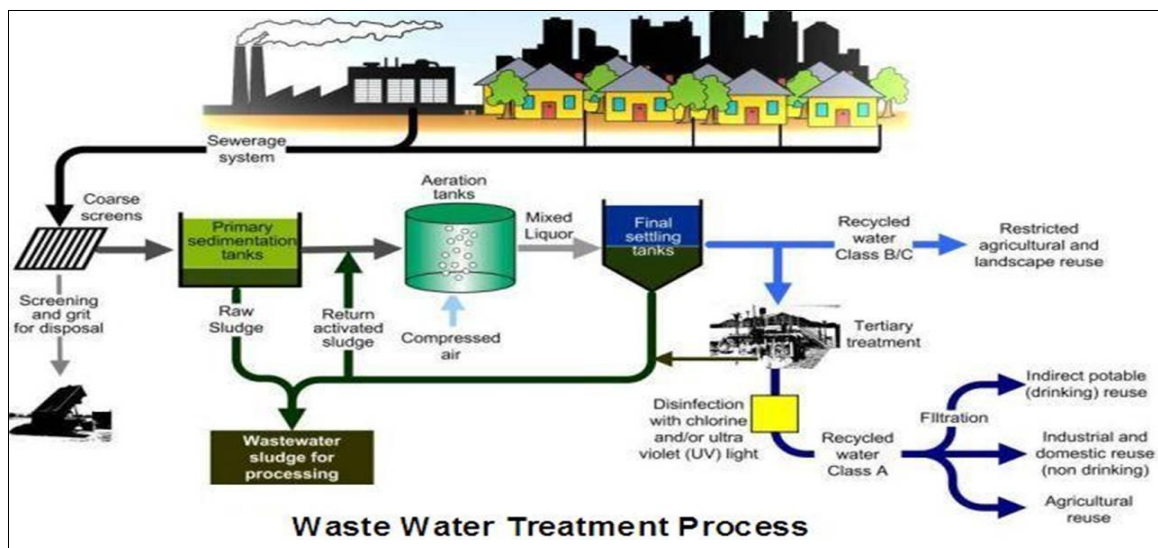
➤ CO₂ capture and storage



Many scientists doing researches on environmental changes are investigating to stock CO₂ created on land within the sea bed. Sea absorbs 25% of CO₂ created by the burn of fuel and its performance lessens in sea warming conditions. This directly affects global warming. Therefore Project Blue aims to take initial steps in future in stocking CO₂ inside the sea bed which is released in fuel burn by machinery and imposing laws in this regard.

This will help to minimize extreme weather conditions such as rise of sea level which is caused by global warming and it will be a better prospect for the entire human kind. Even though many of the above mentioned marine resources are not relevant to the scope of the Ministry, Project Blue is taking efforts to make the Ministry aware of such resources, and what they could mean for the Country. Project Blue also intends to arrange basic measures to convert Delft Island in to a fisheries city in establishing the proposed multipurpose fishery harbour in Delft. It is expected to use sea sand and gravel for all its constructions, utilize sea potentials in generating electricity, convert seawater into drinking water and conduct researches in Co 2 absorption, The Blue Economy project will favor in many ways for an island state like Sri Lanka.

➤ **Waste disposal, Absorption and Detoxification**



Waste management is the collection, transport, processing, recycling or disposal of waste materials. The term usually relates to materials produced by human activity, and is generally undertaken to reduce their effect on health, the environment or aesthetics. Waste management can involve solid, liquid, gaseous or radioactive substances, with different methods and fields of expertise for each. Waste management practices differ for developed and developing nations, for urban and rural areas, and for residential and industrial, producers. Management for non-hazardous residential and institutional waste in metropolitan areas is usually the responsibility of local government authorities, while management for hazardous commercial and industrial waste is usually the responsibility of the generator. Solid wastes typically may be classified as follows:

- a. Garbage: decomposable waste from food
- b. Rubbish: non decomposable wastes, either combustible (such as paper, wood, and cloth) or noncombustible (such as metal, glass, and ceramics)
- c. Ashes: residues of the combustion of solid fuels
- d. Large wastes: demolition and construction debris and trees

Think Tank through Blue Economy

The concept of Blue Economy depends on the information and advice from those who live among these resources - the fishermen and other residents of the coastal areas. Thus, the essential necessity of a Think Tank is compulsory; it will be setup in order to optimize these resources, and the concept will be introduced under Project Blue.

This Think Tank will consist of advocates such as environmentalists, engineers, economists, legal experts, financial experts, coastal engineers, navigational and naval architects, in addition to representatives from the coastal areas such as fishermen. As mentioned above, there will be both voluntary experts as well as those who will be on a payroll for their expertise. Possible contribution of the Fisheries sector to the Blue Economy is huge and Sri Lanka being an island in the Indian Ocean is situated in a location environmentally favorable for adopting the concept of a Blue Economy.

While we will be running this Think Tank forum under the concept of “Blue Economy”, marine tourism and fisheries are the two main sectors the Ministry of Fisheries deal with. However, there are several other sectors that belong to other Ministries which deal with oceanic resources. Project Blue will be consulting such institutions as well during this venture.

On the other hand, the Think Tank forum will be focusing on the following three aspects on a broader sense.

- To collect ideas, solutions and various other information that will assist in using our territorial waters, the Exclusive Economic Zone, the vast area of marine habitat surrounding our island for sustainable economic development.

Through activities such as sustainable fishing, renewable energy production, ecotourism, and “green” shipping, Project Blue aims to increase the rates of employment and good sanitation while decreasing poverty, malnutrition and pollution.

- The information the Think Tank collect during the course of this endeavour will be useful in all future ventures the ministry will tackle.

Project Blue will be collecting a vast collection of information which will and can be used to tackle future issues and endeavours. The information itself will be collected from everyone including those at the grassroots levels like fishermen and the fishing community to topnotch environmentalists, ecologists, sociologists, engineers and such. Seeing as information is a powerful tool in tackling problems, Project Blue believes that issues that could come up later into the endeavour can also be tackled rather than ignored.

- Project Blue aims to increase marine tourism which goes hand in hand with fisheries and the Ministry. We also to give a new face to the fisheries trade by presenting new business models to the society for future funding, grants, loans etc.

Therefore, the core objective of Project Blue is to investigate the variety of marine resources that can be used in the sustainable development of the country.

Conclusion

Through Project Blue, we aim to commence and continue to make Sri Lanka a leading producer of fishery products on the world stage, and to make the nation able to meet its food security needs and a massive expansion in the tourism industry.

Project Blue will identify the ways and means that Sri Lanka can make the best use of the ocean resources via tourism, fisheries, sea transportation, petroleum/gas, and other resources. Investments in the appropriate technologies for gaining the maximum benefits in most of these sectors are a mandatory need at least to be done now, which could have been realized and attended some long time before.

Sri Lanka has been given a major opportunity by Nature itself to optimize its natural resources in a sustainable way to develop the economy. Project Blue aims to tap into these resources to achieve this goal. By identifying the ways and means that Sri Lanka can make the best of its ocean resources, we can, as a nation go further in the international arena, as well as grow economically.