

## **Beach Tourism and its Positive Environmental Impacts** **(Related to the Unawatuna coastal area)**

**M.V.R.M. Suvimali Rathnayake<sup>1</sup>**

### **Unawatuna and Beach Tourism**

Unawatuna is a one of famous beaches which has high attention among both local and international tourists. It holds owned a leading place among the natural beaches all over the world and it was identified as one of the twelve of the most attractive beaches in the world by Sir Arthur C. Clarke. And also it was named as one of the best beaches, comparing with a lot of beaches in various countries such as Australia, Maldives, in a program called “The Beach Hour” by the Discovery Channel. And also the beach Unawatuna is included into world’s 100 best beaches by the CNN media network, with world’s famous beaches such as the Sun Island of Maldives, Sunrise of Thailand, Rubit beach of Italy, Boulder beach in Cape Town etc.

The Unawatuna beach area consists Yaddhimulla and Unawatuna central *grama niladari* divisions. The semicircular shaped Unawatuna beach is very clean and can be bathed all over the year, because of shallow sea without strong sea waves and floating currents. Tourists can join in activities safely. Lots of tourists can be seen in this area in the period of November to March. So many tourists come to Kudawella and Suduwella daily (Pathirane, 2010, P37). The beach Unawatuna situated with the guardians of two coral reefs in the Indian Ocean. Galapitela Reef and Napoleon Reef provide comfortable surroundings for divers. So Unawatuna is one of the famous diving locations in Sri Lanka (Ganewatta, 2012, P127). It is a very popular beach for diving, scuba diving, surfing and snorkeling, sun and sea bathing like activities. Whale watching is also a very popular tourist activity among both local and international tourists. That experience can be obtained at sea of Unawatuna also. Tourists can watch whales after traveling 20 minutes from the sea belly by boats.

Unawatuna has a rich bio-diversity. This beach has a high potential for eco-tourism. Mangroves, Mashies and Corals are main eco-systems in this area. Very rare fish species can be seen in this area due to the high density of coral reefs. 36 Species out of 72 endangered fish species are living around coral reef Bonavista. Coral reef Bonavista, which is situated near the coastal area Unawatuna was named by Mr. William Carmichael Gibson in 1976 which means ‘beauty scene’. This beautiful coral reef is a reproductive region for fish. 49% of fish are reported in this coral reef rather than other coral reefs as it is a very protective region for fingerlings. 25 species out of 36 species of “*Panaa Malu*” can be seen in this region. The Rumassala coral reef is also situated near to this coral reef.

Ornithologist Clive Byers said that over 60 species endemic birds can be seen in

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<sup>1</sup> Department of Archaeology, University of Kelaniya, Sri Lanka.

Unawatuna. (<http://en.wikipedia.org/wiki/Unawatuna>). These birds are mostly sighted in the remaining marshy area and Rumassala hillock. Lesser Whistling Duck, Asian Palm Swift and Black Bittern are some special species. Tourists can join with turtle conservation projects in the Turtle Conservation Centre which is situated around 3km distance from Unawatuna.

Another main product of beach tourism is Shipwrecks. Shipwrecks are very important in marine tourism and marine archeology is a main developing tourist product at present. Shipwrecks and its surrounded area are studied by diving in Unawatuna sea area. So Unawatuna beach and sea area is a very important location for tourists who are interested in shipwrecks. The shipwreck “Rungan” which has a history around a hundred years, is a main famous diving area in Unawatuna. Unbroken mast of this ship can be seen even today. Other shipwrecks of this area are cargo ship called “Tango” and a ship called “Lord Nelson”. There are diving schools in Unawatuna area. They train to divers and provide guidance for tourists who dive in this area. Jungle beach which is situated 4km far from Unawatuna beach also suitable coastal area for tourist activities. There are a lot of hotels, restaurants and rest houses which are related to tourism industry. There are lots of guest houses which are registered in tourist board, tourist shopping complexes, boat services, and also there are illegal accommodations, unofficial guides, street sellers, etc.



fig. 1 Unawatuna beach

Source: <https://www.google.com/maps/d/viewer?mid=zjFo4xY7VLU.kZoAUbscFx2Y&ie=UTF8&t=m&oe=UTF8&msa=0>

## Environmental impacts of study area

Any industry which bounded with the environment is causing impacts on the environment. Tourism is mainly based on environment. Therefore, high impact is occurring by tourism to the environment. These can be negative or positive.

Unawatuna coastal area consists Yaddhimalla and Unawatuna (central) are high attractive tourist zones. The environmental stability was rapidly changing with the development of tourism over the British period in beach area. The impacts on the environment of the study area can be identified as positive and negative impacts. This study discusses about the positive environmental impacts of beach tourism.

## Positive environmental impacts of tourism in study area

### Environment Preservation Projects

The main environmental benefits of tourism are preservation projects. There are some preservation projects which are based on Coastal area. Turtle conservation project, sea water management projects, coastal conservation and specific area management projects are preceded in the study area.

### Turtle Conservation Projects

A turtle conservation project called “Silver Green” is situated in a 3km way from the Unawatuna coastal area. Sri Lanka is one of the famous destinations for turtles, because we can see 5 species of turtles related to Sri Lankan beach area. Those are,

- 1) Green Turtle (*Chelonia mydas*)
- 2) Leatherback Turtle (*Dermochelys coriacea*)
- 3) Hawksbill Turtle (*Eretmochelys imbricate*)
- 4) Loggerhead Turtle (*Caretta caretta*)
- 5) Olive Ridley Turtle (*Lepidochelys olivacea*)

Source: [http://www.srilankaecotourism.com/turtle\\_species\\_in\\_sri\\_lanka.htm](http://www.srilankaecotourism.com/turtle_species_in_sri_lanka.htm)

First three types among those five types come to the unawatuna coastal area for laying eggs. But these animal species has become as an endangered species due to various kind of reasons. Use shell of turtles to make fancy items, damage by boats, consume turtle eggs and use as meat, caught from fishing nets, turtle eats waste products which removes to the sea, disturbance for laying eggs due to noisy sounds and flashing lights of beach festivals are some threats for turtles.

The center was established in 1986. The main aim of this center is to conserve turtles for future generation. The center conserves turtle eggs in incubators and releasing them back to the sea after birth. Other than that these projects treat turtles who victim diseases and face accident by fishing nets and release them back to sea after recovery. There are two incubators in the center. Around 4000 eggs were preserved in one time. Around 3100 – 3200 healthy baby turtle are birth and they care about very well until come suitable age to release.



fig.2 Baby turtles conserve after birth

And they exhibit turtles in the center and create awareness among people about the value of protecting turtles for future generation. Exhibit turtles released back to sea after 4 or 5 years. Many local and foreign tourists come to the conservation center. They appreciate project very much and provide donations to success with this project. It helps to conduct a good conservation project for the future.

### Water State Management Project

Sea water is commonly polluted by entertaining activities. This pollution is mainly occurred due to tourist activities and removal of waste products from hotels, restaurants and other related agencies in the sea. It is very important to measure the quality of water state regularly. The Coastal Conservation Department has selected main entertaining destinations and launched the programs to protect sea water. Hikkaduwa, Mount Lavinia, Unawatuna, Polhena, Nelaveli beaches such as main tourist destinations selected site as this project. If there is any change in water condition Coastal Conservation Department takes action to clean water. In addition to that Coastal conservation Department takes action to prevent pollution by,

1. Educate the related parties.
2. Co-coordinate and develop the unity among the related parties who are responsible in protection of quality of work.
3. Introduce and Update new rules and regulations.

The Coastal Conservation Department has introduced rules and regulations for hotels, boat services and other agencies related to the tourism industry in the study area. And introduce rules and regulations related to the site. Coastal Conservation Department guides to measure and to protect the quality of water in this area.

### Conservation of Coral Reefs and specific area Management

Coral reefs are specific ecosystems. There are three kinds of coral reefs called, coral reefs, sandy rocky reefs and rocky reefs in sea area. Watching coral reefs have become a famous tourist activity. Coral reef locally called 'Gatipara' which in the north western coastal area. This type of coral reef can be seen in Hikkaduwa, Unawatuna and Rumassala coastal areas. In Unawatuna tourists can observe coral in Unawatuna Coastal area by glass bottom boats. This can be seen in the Yaddehimulla area in the field visit.

Direct and indirect impacts of tourism make the destruction of coral reefs though tourists have a great interest in watching corals. The Coastal Conservation Department takes action to manage coral reefs. The priority has gone to areas such as Arugambokka, Kalkuda to Pasikuda, Polhena, Weligambokka, Nilaweli, Pigeon Island, Silawatura, Trincomalee bay. Mr. T. L. D. Vinod, Engineer of Galle branch of the Coastal Conservation Department says that these steps were taken according to the Coastal Zone Management Plan 2004. According to this plan, take actions to protect coral reefs in Unawatuna area. And also launch a specific area management project in the study area. Specific area management plan means managing natural resources with the contribution of a living community of the area. Here few priority areas were identified by using four criteria.

1. Problems of resource management
2. Biodiversity
3. Area feasibility
4. Economic importance

Source: Coastal Zone Management Plan - 2004

According to those 4 criteria, 23 places were selected and again selected 9 places and included in the high priority list. Those nine places are; Arugambokka, Batticaloa, reef of Bar, Beruwala, Bentota coastal area, Chilaw lagoon, Hikkaduwa Town, Negembo out flow, Rakawa Lagoon and Bay of Unawatuna. The Bay of Unawatuna means the coastal area of Unawatuna associated with Yaddehimulla. Unawatuna included in the high priority list because of the biodiversity and its economic importance. As well as developing research management in high level.

### Coastal Conservation

Study area erosion happened once for each and every four or five years. It is a natural process. Slope ratio, extreme waves, tidal waves, collecting sand of the lower sand dune, the changing of sea level and the



fig.3 Water break created in Unawatuna Coastal area

changing effects of wind climate are the natural causes to north –western coastal erosion. And this natural erosion is becoming worse and rapid due to human activities. Tourist activities such as scuba diving, wind surfing, watching coral reef, motor boat tours for tourist entertainment and constructions made for tourist facilities makes the rapid coastal erosion in Unawatuna area.

The Coastal Conservation Department has started to conserve the Unawatuna coastal area to make a solution for coastal erosion. Protective ramps built for very long sea shores and most of them were built in the northwestern coastal area. (Silva, 2007)

The Coastal conservation department has made 200m long stone water break, Unawatuna *Welle Devalaya* to Ballangala, to prevent coastal erosion.

This water break planned to extend up to 1.8Km and Coastal Conservation Department preserve the coastal area by filling sand to prepare that coastal area for the usage of public and tourists. This water breaks creates barriers for sea waves and kept sand inside.

### Improving the quality of the beach

Qualities of environment are improved by well-designed geological states, proper building constructions, and maintain a clean environment by removing waste products. Government agencies get leadership of these projects. Through interviews and field observation, it was identified that the organizations such as,

1. Coastal Conservations Department
2. Habaraduwa Local Council
3. Police Station - Habaraduwa
4. Marine Environmental Protection Authority are some of the contributing agencies for the programme.

### Current proceeding processes



Mr. Salinda Jayasekara, Grama Niladhari of two divisions Yaddelimulla and Unawatuna (central) said that in present local council has made a program to collect garbage removed from tourist hotels and other related agencies. It is a procedure which taken to prevent the removal of waste products into the sea by hotels and other related agencies, to maintain a clean environment. This process is helped to maintain a good hygiene among the living community and tourists and tourist attraction will be increased.

As well as responsible organizations educate the tourists for the preservation of clean environment, the Coastal Conservation Authority and Habaraduwa Police Station exhibit the notice boards about the preservation of the coastal area to educate the tourists.

Lots of illegal constructions are already removed by coastal conservation department. In developmental projects, constructions should be done with the minimum of 10m surrounding area and all constructions should get the legal permissions. These things are included in the Coastal Conservation Act. Coastal erosion gets increase through the constructions near by the coastal zone.

Hitting the sea waves of the walls of hotels and restaurants near to sea is stopped natural rehabilitation of sea waves. The removal of illegal constructions that build without a formal procedure is appreciated by tourists, living community. It is very important to preservation of coastal area for tourism industry.

### Suggested Processes

Lots of future plans are designed to protect the quality of the environment other than proceeding programs at present, under the guidance of director of the Coastal Conservation Department. According to that, two main processes are suggested. Mainly,

1. Making one beach entrance for every 500m by removing buildings and walls that are constructed across the beach
2. Creating green boarders (*Haritha Theera*) along the beach

(Balasooriya, 2012)

are suggested processes. It will be helpful to increase the tourist activities by making high quality coastal zone in Unawatuna area.

### Increase the preservation and awareness of place spread in the coastal zone, which has with historical and archeological value

There are lots of historical and archeological heritage sites associated with the Sri Lankan coastal area. Specially southern and south- western coastal area has the high potentials Coastal Conservation department did survey to identify those religious places and monuments of Buddhists, Hindus, Islam and Christians. This survey was done in 1989 and updated in 2002. Results included in Coastal Zone Management Plan of 2004.

When making the priority list Coastal Conservation Department considered three criteria.

1. Places with major priority  
(Places and monuments which has aesthetic and religious values, and belongs to a considerable historical era before 1825.)
2. Places with medium priority  
(Places and monuments which have aesthetic or religious value of very famous places, belongs to the time period after 1815 but older more than 100 years)

3. Places with low priority

(Current religious places and monuments without any special aesthetic value or without popularity)

(Source: Coastal Zone Management Plan of 2004)

Welle Devalaya situated in Unawatuna coastal area is included in the category of major priority, by considering its historical and aesthetic values.

Unawatuna Welle Devalaya is a main religious place of a living community of that area. And also local tourists who come to coastal area, visit to *Devalaya*. It can observe that a considerable amount of international tourists also visited to *Walle Devalaya*, through field observation. The donated funds for this *Devalaya* is very helpful to maintain the temple. Cultural and religious places of Sri Lanka benefited due to the industry of tourism. *Walle Devalaya* also is benefited by the tourism.

**Suggestions for improving positive impacts on the environment**

The study proved that there are positive impacts of beach tourism on the environment of the Unawatuna coastal area. By improving positive impacts it can be reached sustainable tourism development.

The turtle conservation project, which is preceded in Unawatuna coastal area is managed by the private sector. Government administrates coastal conservation projects, coastal resource management projects and water quality management projects and other related conservation projects. High quality, effective results can be obtained through proceeding these all projects by administration of a combination of private and government sectors. This combination will be more effective by joining these two parties together.

Quality of water rapidly polluted due to tourist activities. This destruction is mainly occurred directly and indirectly due to tourist activities such as scuba diving, wind surfing and unlimited development of beach tourist facilities. It should be maintained a good condition of quality of water. Suitable measures can be preceded through these regular observations. Regular observations are more important.

It is very important to educate all the people such as tourists, living community of that area, and employees of tourism about negative impacts of tourism on the environment and the importance of preserving the environment. Rather than notice boards, leaflets, handouts can be used as a method of creating awareness of people. It is very important to print these leaflets in several languages, for instance, Chinese, Korean etc. If so, international tourists also can be educated through these leaflets. Other than that it is very important to organize workshops and seminars for the living community of coastal area and employees of a tourist industry to educate how to reach the sustainable tourism development and to reach sustainable economic and social preservatives of community through coastal conservation. These phenomena are tightly bound to each other as a chain. Preservation of the environment caused to protection of tourism and it further protects the quality of the community.

The Coastal Conservation Department had already removed most of illegal constructions of the coastal area. An illegal construction in the coastal area is a prohibited according to the Coastal Conservation Act. There is a permit procedure to launch construction and development projects on Coastal area. Regular monitoring and assessment should be done by responsible organizations such as Coastal Conservation Department, Police and Marine Environment Protection Authority. Illegal constructions can be prevented by this regular monitoring. Through punishments, offenses can be reduced the negative impacts on coastal environment. At present, though Coastal Conservation Department had already removed the most of illegal constructions. It is very essential to remove the other remains also to preserve the beauty of the beach. However, the government has a responsibility to introduce alternative procedures for related communities after removing illegal constructions.

The Coastal Conservation Department suggests to build Green Borders (*Haritha Theera*) to improve the quality of the Unawatuna Coastal area as a future plan. But still it has not come into effect. Government should pay attention and sponsored to precede such schemes to conserve the coastal area. Green Borders are very successful preservation procedure to prevent coastal erosion. Other than that, this is a good solution to transfer unstable coastal areas to stable areas and to prevent the blowing sea breeze mixed with salty vapor to land. Here the land is cultivated with flora which is most suited for environment. In green borders concept, for first 10 meters select inheritance flora for planting, because these plants are affordable for environmental conditions of relevant areas. Next selected flora which enhance the natural beauty and has commercial value. When planning the “Green Borders”, having the participation of the Provincial Councils, Divisional Councils, Non-Governmental Organizations, Schools and Universities make this planning procedure in an expeditious and effective scheme.

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