



The Development of the Chaipattana Foundation's Land and the Environmental Conservation and Rehabilitation in the Songkla Lake Mangrove Area

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“Mangrove”, is a term of Portuguese origin; “Mangue” means a group of plants that grows along alluvial coast. This word is widely used only in Latin American countries. Other words for “Mangrove”, in other countries, are used according to their native languages.

For example, people in South Malaysia call this type of forest “Manggi-Manggi”.



Thai people call this type of forest “Chai Lane Forest” or “Kong Kang Forest”. Mangroves can be seen around the areas of seacoast, estuary, bay, lake, canal and islands which can be submerged. The most suitable areas for this type of forest is, therefore, a sea floor which holds still water, and receives water from large rivers. When currents from the river meet with currents from the sea, river the current will decelerate and then become still. And once the water is still, mud, together with other kinds of organic substances brought by the currents, are combined creating a vast piece of mud land around the area of that sea floor.

Getting to Know the Mangrove

“Mangrove” means a group of plants which grow along an alluvial coast. It includes various kinds of evergreen plant species which have similar physiology and environmental needs. Mangrove also means a group of plants which grow along an estuary, seacoast, or bay. These areas are inundated during the highest tide period. Genus *Rhizophora* usually grows in mangroves, and they act as a system that connects the ground and water ecological systems together. The mangrove, therefore, plays a vital role in producing biological products and serves as an aquatic animals breeding and nurturing center.



As mangroves are also found in the brackish water estuary areas where they are connected to the sea or on the islands, they function as a protector to prevent coastal erosion, as well as prevent the coastal line from monsoons.

Another very important role of the mangrove is as a food produce. It produces basic food supplies in the food cycle which are critical to living beings of the sea and of the mangrove. Another important mangrove that we should not overlook is the mangrove around Songkla Lake.

Three Kinds of Water in Songkla Lake

The vast Songkla Lake is one of the significant water sources of the country. It has a combination of three kinds of water, fresh water, brackish water and salt water. When the salt water flows into the lake, fresh water from the forest side helps dilute the salinity and the water then becomes brackish. It is a revolving action due to the rains and the high and low tides in the Thai Bay. These two factors vary the saline level of the water in the Lake in different areas and different periods of time. A biological diversity was created as a result of constant changes in the ecological system. The Songkla Lake’s ecological characteristics are then more complicated than the ecological characteristics of other estuaries.

Because there are different sub ecological systems, within the major system such as mangrove, sea grass, aquatic plants, clay and rock sand, thus, aquatic animals and plants in this Lake are comprised of the ones that live in salt or sea water, the ones that live in brackish water which can tolerate a certain level of saltiness, and the ones that live in fresh water.

In the past, the Songkla Lake was abundant with fertile natural resources and various kinds of aquatic



most parts around the Songkla Lake. The area has gradually turned into shrimp farming industry which generated negative impacts to the ecological system of the mangroves in Songkla Lake area.

On 16 January 2006, Her Royal Highness Princess Maha Chakri Sirindhorn, Executive Chairperson of the Chaipattana Foundation visited this piece of land and granted the

animals, as well as aquatic plants and mangroves, which served as a food and nutrient source and dwelling place for these living beings.

initiative to develop this land into a project where the study and research on the biological diversity of the Songkla Lake mangrove.

At present, the Lake has greatly changed. The water circulation was cut off and economic expansion has deteriorated the nature as well as the environment around the Lake. The activities of agriculture, livestock, fishery, general industries and mining industry, plus tourism, also have a deep impact on the environment.

The Chaipattana Foundation, therefore, responded to Her Royal Highness' initiative by establishing the Songkla Lake Mangrove Biological Diversity Demonstration Plot Project, which acts as a center where a variety of mangrove plants is collected, and also a knowledge distribution to illustrate how to grow each type of mangrove according to each type of area. Not only can they gain useful knowledge, but interested people will also become aware of the importance of mangroves to the ecological system. This constructive knowledge will make them appreciate, cherish and see the value of the country's natural resources.

Land Development according to His Majesty's Initiatives

Mr. Thakerng Karnchana and family presented a piece of land with a total area of 30-2 *rai* (12.2 acres) in Pakror Sub-district, Singha Nakorn District, Songkla Province to His Majesty King Bhumibol Adulyadej. Later, His Majesty granted this land piece to the Chaipattana Foundation to be developed in order to create optimum benefits and to serve as a study and demonstration plot for his people in the vicinity.

This piece is a wet deserted land that is comprised of different soil conditions. Some parts of the area are filled with water, and shrimp farming is carried out in

