



Comparison of water quality in the Sa Kaphang Surin Trang Thailand

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Research : Comparison of water quality in the Sa Kaphang Surin

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Abstract

This research Comparison of water quality in the Sa Kaphang Surin. Sa Kaphang Surin Area is in Thap Thieng, Amphone Muang Trang. To compare the water temperature in all 3 points by studying the pH (pH), oxygen (O₂) and temperature (°C) in the water of each point. Temperature, PH and Depth measurements of the water surface Point 1 Temperature 30°C pH7 Point 2 Temperature 29°C pH6 Point 3 Temperature 29.33°C pH7 Monitoring of oxygen in the water surface water. Point 1 5.5 Point 2 6.0 Point 3 6.5 Diversity of aquatic animals found at Point 1 (a very small number of fish Can live) Point 2 (very few fish able to survive) Point 3 (big fish can survive from the relationship between the temperature and the amount of oxygen in the water at all 3 points, it can be concluded that the water source has a high amount of oxygen in the water. The water temperature is low. The third water source is very good because big fish can survive. The second water source and the third water source had very few fish.

key words : pH value, oxygen content in water, diversity of aquatic animals

Introduction

At the moment, Progress of society and Economy , Tourism , The development of the industrial sector causes impacts on the quality of the environment in various aspects. Whether as, the release of waste water into the water source. Those problem will affect the quality of human life both direct and indirect. Whether as, the use of agricultural toxins. Heavy metals in the human body climate change makes global temperature Higher affects the quality. human life and other environments.

Sa Kaphang Surin is The water hole or Large natural swamps. Sa Kaphang Surin is a recreational places people of trang popular came . Sa Kaphang Surin Park is one of the oldest of Trang. The word "Kaphang Surin" is named after Phraya Surintaracha (Nok Nok Wisetkul), former Governor of Phuket Province. It is the habitat of Aquatic Animal. Consumption will must be disinfected and improves the quality of water.

Water will use physical indices to analyze water quality. having living things in Water sources can be indicators of water quality, which is considered a method. That can be used to indicate the quality of water for animals living in water for life. or period of life These organisms are sensitive to changes in water quality in water bodies. Therefore, it can be used as an indicator for Check the quality of the water whether What level is the water quality?

Aquatic Animal was the creatures that were living in water source. Some of these organisms live water clean. Some of these organisms live the polluted water. The different environments are a good indicator of the health of water source and quality.

So researcher are interested in studying Physical properties of water, temperature of water, The acid and base of the water, Dissolved oxygen in Sa Kaphang Surin Area , Thap Thiang, Amphone Muang Trang. To bring knowledge about water to use in various fields and the occurrence of stability in water resource utilization.

Research question

Is there a difference Ph Dissolved oxygen and temperature of water in Sa Kaphang Surin Area

Hypothesis

There is a difference Ph, Dissolved oxygen and temperature of water in Sa Kaphang Surin Area

Purpose

Studying and comparison of water quality in the Sa Kaphang Surin. There are three area Sala enshrined, Phutthasihing , Waterfront Pavilion, Aerobic area

Scope of the Research

Sa Kaphang Surin Area , Thap Thiang, Amphone Muang Trang Thailand

Method of study

1. Scientific Equipment

1. Reagent Bottle
2. Laboratory Bottle
3. Litmus Paper
4. Forcep Stainless
5. Watch Glass
6. Beaker
7. dissolved oxygen test : V-unique model v-color
8. Thermometer

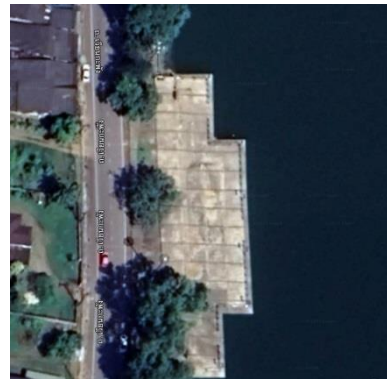
2. Methodology

2.1 Scope of the Research

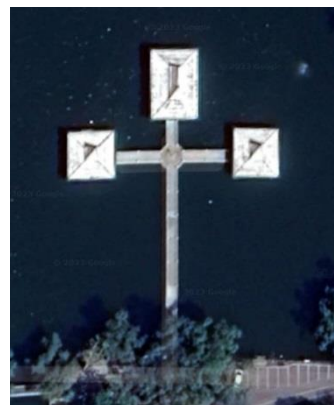
This research study in the Sa Kaphang Surin. There are three area such as Sala enshrined Phutthasihing position 7.5777980 degrees north atitude , position 99.6242907 degrees East longitude . Aerobic area position 7.5765530 degrees north atitude, position 99.6235728 degrees East longitude. Waterfront Pavilion position 7.575018 degrees north atitude, position 99.624111 degrees East longitude. Determine water collection Site. There are three area Sala enshrined Phutthasihing , Aerobic area, Waterfront Pavilion .



Picture 1 shows that Sala enshrined, Phutthasihing in Sa Kaphang Surin Area



Picture 2 shows that Aerobic area



Picture 3 shows that Waterfront Pavilion

2.2 Methodology

Water quality measurement

Water quality measurements were conducted according to the GLOBE methodology by studying water quality. temperature of water, The acid and base of the water, Dissolved oxygen
Water quality data collection

Water sampling Here's how

1. Determine water collection Site. There are three area Sala enshrined Phutthasihing , Aerobic area, Waterfront Pavilion
2. draw water Location 1, Location 2 , Location 3 : 1 meter depth.
3. also measure the temperature Alcohol thermometer, depth of 10 centimeters, point 3 times, be averaged
4. The pH of the water was measured at all 3 points using litmus paper, measuring 3 times per point and then averaged.
5. Measure dissolved oxygen in water by using dissolved oxygen test kit, brand V-unique, model V-color. Standard quality water will have a DO value of about 5 - 8 mg/L. Wastewater will have a DO value of less than 3 mg/L. oxygen in water.

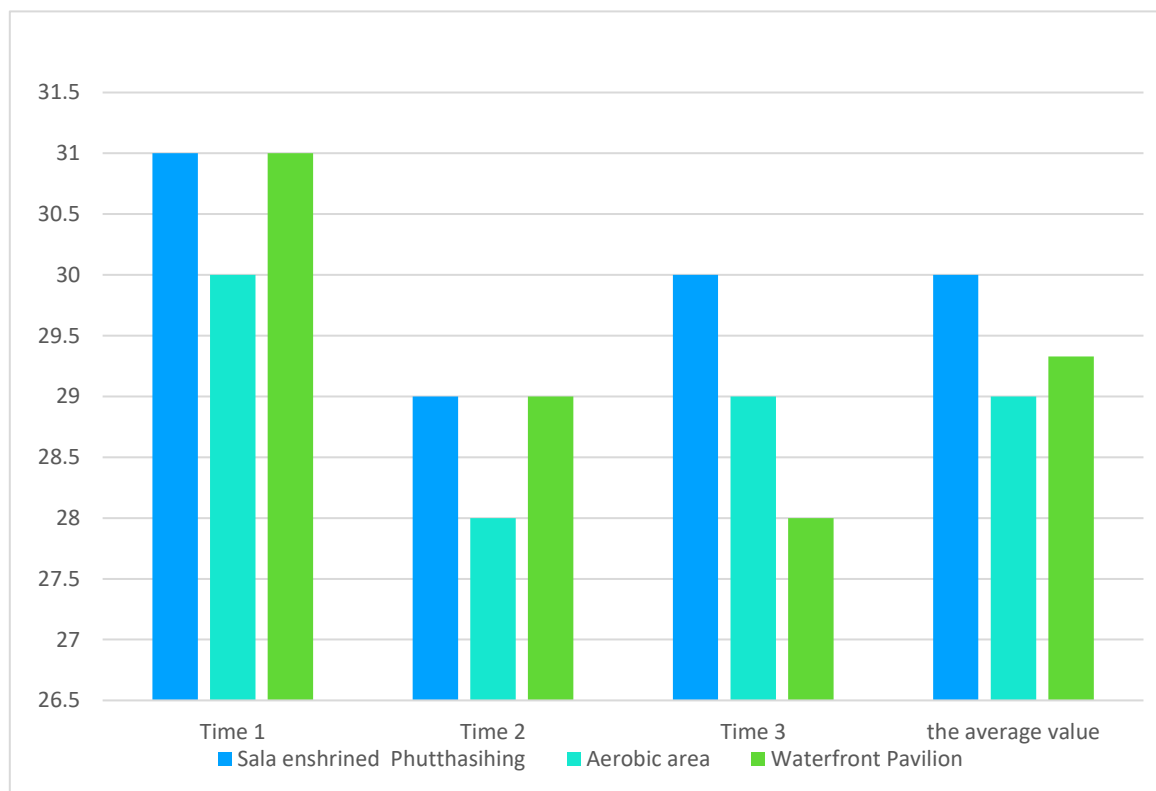
Results

The results of the experiment to study the water quality in Sa Kaphang Surin Area , Thap Thiang, Amphone Muang Trang. Such as

1.studying temperature of water Sa Kaphang Surin Area, Trang

Table 1 shows temperature of water Sa Kaphang Surin Area, Trang

Place	Sala enshrined, Phutthasihing	Aerobic area	Waterfront Pavilion
Time 1	31	30	31
Time 2	29	28	29
Time 3	30	29	28
the average value	30	29	29.33

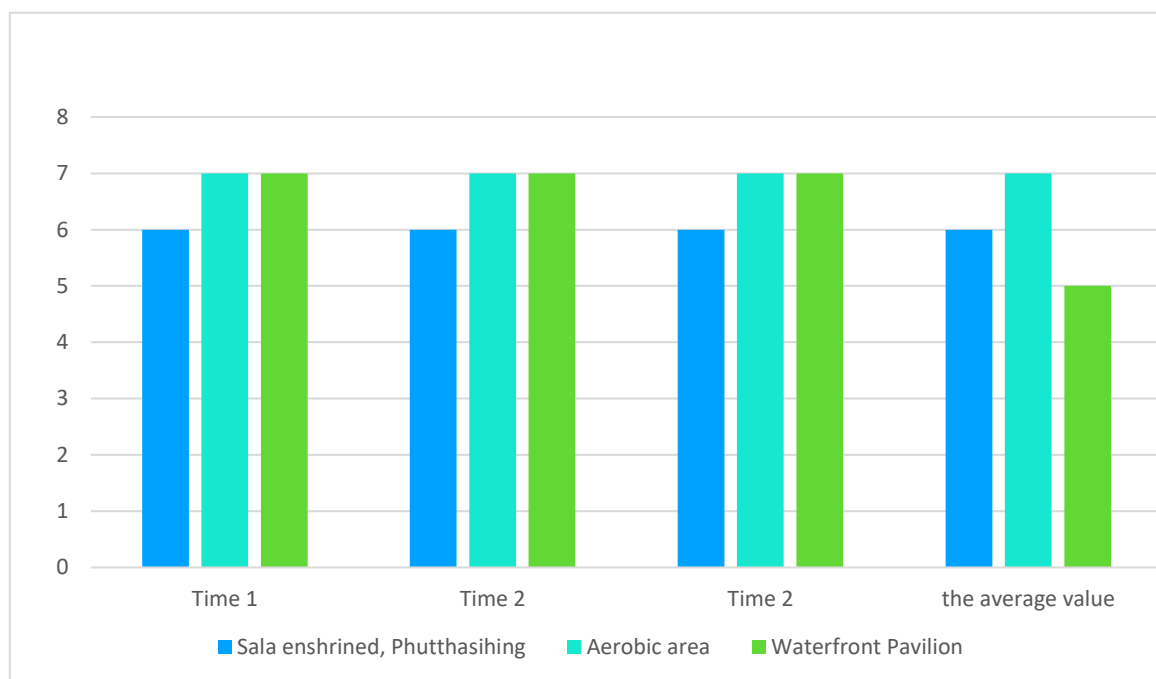


From Table 1 showed that Sala enshrined, Phutthasihing It has an average temperature of 30 degrees. Aerobic area It has an average temperature of 29 degrees. Waterfront Pavilion It has an average temperature of 29.33 degrees.

Studying PH test of water Sa Kaphang Surin Area, Trang

Table 2 shows PH test of water Sa Kaphang Surin Area, Trang

Place	Sala enshrined, Phutthasihing	Aerobic area	Waterfront Pavilion
Time 1	6	7	7
Time 2	6	7	7
Time 3	6	7	7
the average value	6	7	7

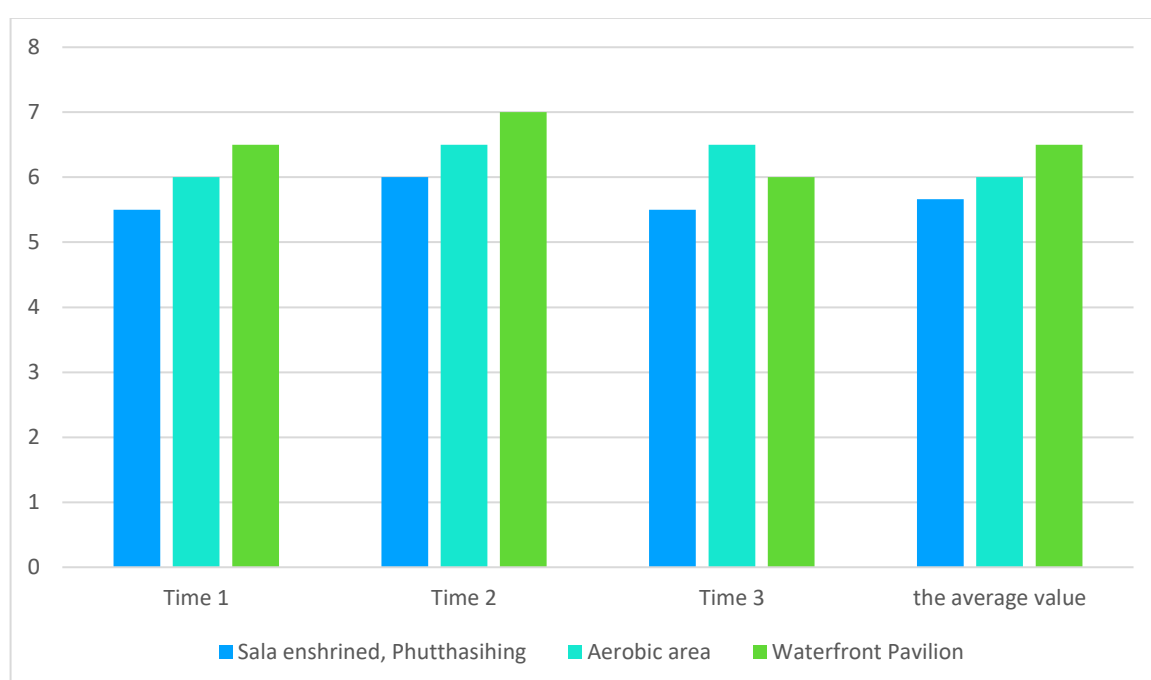


From Table 2 showed that Sala enshrined, Phutthasihing had an average pH of 6, an average pH of 7 on the bottom of Aerobic area, and an average pH of 7 in the Waterfront Pavilion area.

3. Studying Dissolved oxygen Sa Kaphang Surin Area, Trang

Table 3 shows Dissolved oxygen Sa Kaphang Surin Area, Trang

Place	Sala enshrined, Phutthasihing	Aerobic area	Waterfront Pavilion
Time 1	5.5	6	6.5
Time 2	6	6.5	7
Time 3	5.5	5.5	6
the average value	5.66	6	6.5



From Table 3 showed that The area where Sala enshrined, Phutthasihing The average oxygen value is 5.66 mg/L. There are very few fish that can survive. The shore on the bottom of Aerobic area. The average oxygen value is 6 mg/L. There are very few fish. able to survive Waterfront Pavilion area The average oxygen value is 6.5 mg/L L. Large fish can live small fish can't live

Conclusion and Discussion

From this study, it was concluded that the quality of water is important for aquatic organisms because the research team has done. Water measurement, pH measurement, temperature measurement measure oxygen Water measurements found that Point 1 in the area of Sa Kaphang Surin Area , Thap Thieng, Amphong Muang Trang had a temperature of 30 degrees, a pH of 7 and an oxygen value of 5.66. Thap Thieng Sub-district, Mueang District, Trang Province, with a temperature of 26 degrees, a pH of 6, and an oxygen value of 6. Water measurement found that the third point in the Sa Kaphang Surin Area , Thap Thieng, Amphong Muang Trang had a temperature of 28 degrees, a pH of 7, and an oxygen value of 6.5. The average temperature for all 3 points was 29.44, and the average pH for all 3 points was 6.66. Therefore, position 1 had a higher temperature than position 2. and position 3, position 1 had a lower pH than position 2 and position 3.

Reference

Chaiwat Sukdee (1997) conducted research on the quality of water in Lam Nan. for use in consumption Phitsanulok Province by studying chemistry which randomly draws 4 points

Suda Silpipat and others (1984) conducted a study on water quality in the mouths of Bang Pakong, Chao Phraya, Tha Chin, Mae Klong, Phetchaburi and Pranburi rivers

Mr. Kasem Kerdpuet (1997) conducted a research on the pH of water in the Chao Phraya River from Somdet Phra Pinklao Bridge to Taksin Bridge. (นายเกษม เกิดพิชณ์ (2540) ได้ทำการวิจัยเรื่องค่า pH ของน้ำในแม่น้ำเจ้าพระยา จาก สะพานสมเด็จพระปิ่นเกล้าถึงสะพานพระเจ้าตากสิน)

Wisoot Sukorn and Pairat Sihuathon (2010), i.e. Studying soil quality and water quality in Takha Canal, Bang Khae Canal and Khwae Om Canal

Siwapan Chu-in (2010) studied water quality in Amphawa Canal near Amphawa Floating Market, Samut Songkhram Province, collecting samples in parameters such as temperature, turbidity and smell of water, salinity, electrical conductivity, pH , Acid-base, dissolved oxygen, BOD

Annexes



Picture 4 Collecting water sample at Sala enshrined, Phutthasihing



Picture 5 Collecting water sample at Aerobic area



Picture 6 Collecting water sample at Waterfront Pavilion



Picture 7,8 Dissolved oxygen levels in water



Picture 9,10 The results obtained when dripping the solution



Picture 11 pH value measured from water