

# SUSTAINABILITY QUARTERLY NEWSLETTER

Edition 2, Q3 2020



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## NEW STAIRCASE OPENED AT KRAILART NIWATE INTERNATIONAL DAY FOR THE CONSERVATION OF THE MANGROVE ECOSYSTEM



To commemorate the International Day for the Conservation of the Mangrove Ecosystem, we officially opened the new staircase that provides easy access from the Krailart Niwate mangrove boardwalk to the mountain temple of Wat Khao Krailart on 31 July. The construction of the staircase was made possible by the THB 1 million donation from Siam Commercial Bank PCL. SCB representatives Ms. Narida Adethepworaphan and Ms. Anistha Thaiarry visited Krailart Niwate to get a first-hand experience of the ecosystem and climb the staircase to the temple.

## GENERAL MANAGER'S MESSAGE



Particularly nowadays, due to the growing environmental and social issues faced by society, Sustainability is commonly practiced in a broader spectrum.

Therefore, Sustainability is the actionable process through which humankind avoids the depletion of our precious natural resources to maintain an ecological balance and preserve our current quality of life, as well as for future generations to grow and prosper.

Our Walk-Through Energy Audit in September was productive and insightful and we thank our Chiva-Som family for continuing to implement innovative preservation practices in simple yet result-driven ways.

*Vaipanya Kongkwanyuen 'Vp'  
General Manager*

## MANGROVE STAIRCASE PROJECT

After a refreshing morning walk throughout the lush, mangrove forest, Chiva-Som provides meditation and yoga services for our guests in a tranquil setting on top of the mountain among the Buddhist temples. The viewpoint overlooks the Gulf of Thailand and is open to the general public to enjoy as well.



The construction of the staircase took two months to complete during June and July at the cost of THB 1.3 million. The staircase is made from concrete with internal steel reinforcement and matches the design of the mangrove boardwalk.



Chiva-Som sponsored the renovation of the yoga and meditation area on top of the mountain with new floor tiles and paint work, and repair of the roof structure on the sala at the cost of THB 268,864 in January 2020.



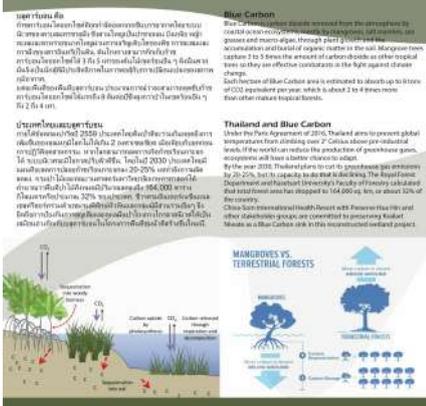
## MANGROVE EDUCATION SIGNBOARDS

To help educate the visitors to Krailart Niwate, we installed signboards with pictures and diagrams to explain the unique characteristics of mangrove ecosystems. The topics include mangrove ecosystem services, threats to mangroves and Blue Carbon systems.



### MANGROVE CONSERVATION IN THAILAND

On 10 May 1991, His Royal Highness King Bhumibol Adulyadej addressed the importance of mangrove ecosystems in Thailand. The Marine and Coastal Resources Management Act was enacted in 2015 as a mangrove conservation and restoration policy to help protect the 2,600 km of coastline shared between the Gulf of Thailand and the Andaman Sea. This law enables the participation of communities, local governments and other stakeholder groups in the rehabilitation and conservation of mangrove forests.



*“Trees should be planted first in the hearts of the people. Then the people will plant trees on the land and nurture them.”*

His Majesty King Bhumibol Adulyadej



## BANGKOK OFFICE SUSTAINABILITY COMMITTEE ACTIVITIES CELEBRATING MANGROVE DAY

On the same day, members of the Bangkok Office Sustainability Committee joined together to plant 100 *Rhizophora mucronata* seedlings at the newly developed six-rai mangrove area. They joined the activity as part of the annual sustainability excursion activity for 2020.



Pran Buri Forest Park was founded by the Department of Forestry of Thailand in 1982 following a visit made by Her Majesty the Queen Mother Queen Sirikit to the Pak Nam Pran village in Pran Buri District. HRH Queen Sirikit recommended planting more mangrove trees along the coastline to prevent coastal erosion.

The project was launched with the development of 1,984 rai at Khlong Kao and Khlong Doi forests, with mangrove forests, mixed deciduous forests and coastal plains. Currently the forest park serves as a forest reserve, a conservation project, an education centre and a natural place for relaxation and forest walks.



The committee members learned about mangrove ecosystem characterisation, its fauna and flora types, the importance of mangrove ecosystem services, and the commitment and leadership of the Royal family to protect nature. Everyone had a relaxing visit away from the busy and fully-urbanised city of Bangkok.

After attending the morning's events, the sustainability team visited the mangrove ecosystem of Pran Buri Forest Park near Hua Hin. Pran Buri Forest Park is a mangrove preservation site located at the mouth of the Pran Buri River connected to the Gulf of Thailand in Prachuab Khirikhan Province. The park covers an area of 2.17 sq. km.



*Pran Buri Forest Park*



*Sustainability Committee Members 2020  
Corporate Office Bangkok*



Image Reference: <https://en.unesco.org/commemorations/mangroveday/2018>

## INTERNATIONAL DAY FOR THE CONSERVATION OF THE MANGROVE ECOSYSTEM

The International Day for the Conservation of the Mangrove Ecosystem was adopted by the General Conference of UNESCO in 2015 and celebrated annually on the 26 July, and aims to raise awareness of the importance of mangrove ecosystems as “a unique, special and vulnerable ecosystem” and to promote solutions for their sustainable management, conservation and its uses.

### KRAILART NIWATE MANGROVE PROJECT

Chiva-Som is the environmental preservation steward of the Krailart Niwate Mangrove Ecosystem Preservation Project, the last remaining mangrove forest in Hua Hin, Thailand. Located on property of the Buddhist temple ‘Wat Khao Krailart’, we began reforesting the 12-rai ecosystem in 2007 as a public-private partnership and have planted over 5,000 seedlings that have grown into the luxuriant forest that it is today.

Krailart Niwate is a reconstructed wetland project and an urban nature reserve known as the *Mangrove in the City* raising awareness on the importance of mangrove ecosystems while promoting eco-spiritual tourism in the region. Chiva-Som sponsored the construction of the 1,000-metre, elevated boardwalk throughout the forest in 2015 and we completed the construction of the elaborate staircase from the boardwalk up to the mountaintop temple in July this year with the support from Siam Commercial Bank PLC.

The wetland area of Krailart Niwate has been expanded by 50 percent on an adjacent six rai of barren floodplain with the construction of 25 canals last June and the new mangrove is now home to 2,000 seedlings of five mangrove species. The afforestation is continuing with the planting of 5,000 trees in total by the end of 2020 to completely forest the area.



### MANGROVE ECOSYSTEMS

Mangrove forests are among the most productive marine ecosystems on Earth, providing unique habitats for many species of plants and animals. Mangroves are trees and large shrubs that grow in brackish water at the intertidal zones in tropical and sub-tropical latitudes. They are a rare group of plants that make up less than 0.4 percent of the world’s forests.

Mangrove ecosystems represent natural capital capable of producing a wide range of goods and services for coastal environments and society as a whole. These includes carbon dioxide absorption and storage, habitats for wildlife, coastal water quality improvement, shore protection against storms and tsunamis, wood and indigenous medicine and nature-based tourism in coastal regions.

Mangroves around the world face a number of threats including deforestation for commercial development, pollution and sea-level rise. The main causes are increasing populations and land-use alterations in coastal areas, and climate change. Mangrove forests are diminishing at a rate of 2 percent per year and over 35 percent of the world’s mangroves have been lost since 1980.

### MANGROVE ECOSYSTEMS & BLUE CARBON

Blue Carbon is carbon dioxide removed from the atmosphere by coastal and ocean ecosystems, mostly by mangroves, salt marshes, sea grasses and macro-algae, through plant growth and the accumulation and burial of organic matter in the soil. Mangrove trees capture three to five times the amount of carbon dioxide as other tropical trees so they are effective combatants in the fight against climate change.

### KRAILART NIWATE ACTIVITIES

**28th July:** The Chiva-Som family planted 100 *Rhizophora mucronata* seedlings to commemorate the birthday celebration of HRH King Maha Vajiralongkorn.



**12th August:** We planted 200 seedlings of *Rhizophora mucronata* and *Rhizophora apiculata* species in honor of Her Majesty Queen Sirikit’s Birthday and Mother’s Day in Thailand.



**26th August:** Our gardeners and other staff planted 200 *Rhizophora mucronata* at the six rai area.

**16th September:** We planted 250 seedlings of the *Ceriops tagal* species and five *Sonneratia caseolaris* trees at the six rai plot.

**27th October:** Our staff planted 250 *Rhizophora mucronata* seedlings, 100 *Avecinnia marina* trees and 25 *Nipa fruticans* palms in the six rai mangrove.

### MONTHLY MANGROVE CLEANING



**23rd July:** Forty Chiva-Som staff visited the 12-rai mangrove forest in the afternoon to remove any rubbish polluting the area. The waste collected were primarily plastic bags, cups and paper waste.

### INTERNATIONAL FORUM REPRESENTATION

Our Head of Sustainability, Mr. Brian Anderson was invited to present Krailart Niwate as a public-private partnership for mangrove preservation at the International Forum on Research of Natural Resources Rehabilitation, Environment and Energy held at the Sirindhorn International Environmental Park in Phetchaburi, Thailand on 31 August. Appreciation for participation was received from Prof. Sanit Aksornkaew, President of the International Society for Mangrove Ecosystems.



## CORPORATE SOCIAL RESPONSIBILITY NEWS - PRESERVE HUA HIN GROUP

To help address the issues of the rapidly growing population’s increasingly demanding ecological footprint on the municipality, the Preserve Hua Hin Group (PHH) was formed as a community development organisation in 2004.

Mr. Boonchu Rojanastien, the founder of Chiva-Som and honorary chairman of PHH with Mr. Krip Rojanastien the Chairman & CEO of Chiva-Som, enlisted support from private and public sector organisations to spearhead the development of PHH. PHH is under the Royal patronage of Her Royal Highness Princess Maha Chakri Sirindhorn.



### REPLACING TREES AT KRAILART NIWATE CAR PARK

**15<sup>th</sup> July:** Preserve Hua Hin and the Chiva-Som Grounds & Landscape team replaced seven dead trees in the car park area at the entrance to Krailart Niwate. The trees planted were of the species Chamchuri, Mahogany and Plumeria and a total of THB 43,500 was spent on this project. The car park area has also been used as a community gathering venue to host marathons, citywide clean-ups and other outdoor activities over the last five years.

### JOINING TREE PLANTING AT HUA HIN HOSPITAL NO. 5

**24<sup>th</sup> July:** The Chiva-Som family joined together with various community stakeholders to plant 2,000 trees on vacant land at the newly opened Hua Hin Hospital No. 5. The hospital’s director Dr. Niran Jantrakul presided over the occasion with the Mayor of Hua Hin Mr. Nopporn Wuthikul and several other dignitaries, and over 1,000 local participants in attendance. The event was coordinated by the Provincial Department of Public Health in conjunction with the Hua Hin Municipality.



### RESTORATION WORK AT KRAILART NIWATE

**7<sup>th</sup> September:** A few locations of the mangrove boardwalk’s damaged guard rail were repaired as part of the maintenance work at Krailart Niwate. Approximately THB 12,000 was spent for the necessary repairs to keep the areas safe for visitors.



## ORGANIC FARM NEWS - NEW CROPS AT THE FARMS



Our farmers have been busy developing and expanding our organic farms during the wet season with new fruit trees and vegetable plants growing well. An abundant crop of cantaloupe plants produced 558 kg of fruit from September to October and 49 bunches of bananas were collected as well as the continuous salad and herb varieties.

In addition to the organic produce sold to the general public in our Wellness Delivery programme, our staff also purchase the fruit and vegetables at a lower cost than can be found at the local fresh food markets.



## FARM TO TABLE



This roasted bell pepper puree is one of the most popular dishes in our wellness cuisine menu with some of the ingredients grown at our organic garden. The health benefits of this gluten-free puree are rich in vitamin A and C providing great antioxidant activity along with several minerals. Red bell peppers are also high in lycopene for heart health and to help prevent certain types of cancers including lung and prostate.

### NUTRIENTS PER SERVING

Kilocalories	65	kcal
Protein	2	g
Carbohydrate	14	g
Fat, Total	8	g

## ROASTED RED BELL PEPPER PUREE

### INGREDIENTS

5,000 g	Red bell pepper
500 g	Sweet potato (peeled and roughly cut)
1,000 g	Onion (chopped)
2 tbsp	Rice bran oil
500 ml	Vegetable stock
1 tbsp	Sea salt

### METHOD

1. Preheat oven to 250°C
2. Place the bell peppers in a tray and bake for 8-10 minutes
3. Remove from the oven and cover with plastic wrap and let it cool down to let the red peppers release liquid (transfer the liquid and save on the side)
4. Peel off the red pepper skin and remove all the seeds
5. In a large pot under medium-high heat add oil and sauté onions until fragrant
6. Add sweet potatoes and stir until almost cooked, then add red peppers and vegetable stock stirring well and simmer for 30 minutes
7. Remove from heat and let it cool down completely
8. Use a blender to blend soup mixture and strain
9. Season with salt

Servings:	25
Serving size:	230 g

## DEPARTMENTAL CORPORATE SOCIAL RESPONSIBILITY PROJECTS UPDATE

Chiva-Som has a long history of giving back to the local community the benefits derived from it, and we have considered CSR to be in our DNA for the last 25 years. All of the departments conduct CSR initiatives that are outlined in their annual business plans with measurable targets and outcomes. The initiatives can be related to the departments' areas of expertise or specifically designed to satisfy a community needs assessment. All staff actively participate in the initiatives' design, implementation and follow-up with enthusiasm. Oftentimes, internal fundraising activities by the departments take place throughout the year to generate the necessary funding to complete the initiatives.

### GROUNDS & LANDSCAPE DEPARTMENT

**29th July:** Our Grounds & Landscape team have been busy helping local schools beautify their areas and planted vegetable gardens for use in the schools. The team installed a tree and plant garden in front of Ban Nong Pran Puk School to provide a natural setting for the students and teachers to enjoy and help them learn about working with nature for a beautiful environment. The plants were propagated from our organic farms and the nutrient-rich soil needed to fill the area was purchased for THB 5,250. The school provided the brick materials to contain the new garden.



**18th August:** Our gardeners worked with the students and staff at Ban Nong Kratoom School to install a garden around the new flagpole centerpiece for the school. They also helped the students build vegetable beds to produce fresh items for use in the school's kitchen. The soil for the beds was purchased for THB 5,250, the plants were propagated from seeds at our organic farms and the school provided the building materials.



## DEPARTMENTAL CORPORATE SOCIAL RESPONSIBILITY PROJECTS UPDATE

### GROUNDS & LANDSCAPE DEPARTMENT

**9<sup>th</sup> September:** Our gardeners visited Ban Wang Khoi School to install seven new vegetable beds to augment the school's current vegetable garden that provides fresh ingredients to prepare the daily meals for the students. The plants were propagated on our organic farm and the beds were constructed from materials provided by the school. The students and teachers work together to maintain the garden while learning about organic agriculture and self-sufficiency.



### SPA DEPARTMENT

**24<sup>th</sup> September:** Our Spa team visited the School for the Blind with Multiple Disabilities in neighboring Cha-am city to donate personal care items and host a special lunch for the disadvantaged children living at the school. The total of THB 15,500 worth of goods was raised by providing specially-priced spa treatments to our Resort staff.



### ENGINEERING DEPARTMENT

**29<sup>th</sup> July:** Our Engineering Department with support from our Spa therapists and the hospital healthcare workers volunteered their time and effort to repaint the exterior walls at the Ban Tha Health Promotion Hospital in nearby Cha-am city. The total length of the walls is 150 metres and the paint and supplies cost THB 20,000 which was raised by donations from the Engineering staff, our Heads of Departments and other generous friends.



## DEPARTMENTAL CORPORATE SOCIAL RESPONSIBILITY PROJECTS UPDATE

### FITNESS DEPARTMENT

**September:** The Fitness Department completed their beach-cleaning programme entitled ‘Give Breath to the Beach’ where they cleaned any rubbish from the beach every afternoon for 30 days. They also cleaned areas of the Buddhist Temple Wat Khao Krailart and the Krailart Niwate mangrove ecosystem.



### FRONT OFFICE & ACCOUNTING

**10<sup>th</sup>-11<sup>th</sup> August:** Our Front Office and Accounting staff visited the Kui Buri National Park to conduct their CSR project named ‘Rak Chang’, which translates to ‘Love Elephants’. On the first day, 20 staff cleaned mud and debris from one of the concrete bathing pits and filled it with fresh water for the elephants.

Kui Buri National Park is one of the best wild elephant and guar sighting areas in Thailand. The park covers 969 sq. km in Prachuab Khirikhan, and is the habitat for one of Thailand’s largest wildlife populations including 320 elephants, 100 gaurs and 245 species of birds.



### CORPORATE OFFICE

Another 20 staff constructed a salt-lick area three metres wide by one metre deep on the second day. After completing the work on both days, the staff went on a sightseeing tour throughout the mountainous jungle to observe the wildlife. In the week before, the participants conducted a sale of food and snacks to the resort staff to raise funds for the activity along with personal donations to cover the cost of THB 9,900 for the project.

Our Corporate Office and Chiva-Som Academy created a project by making paper bags from used office paper. The paper bags were donated to the Umpang Hospital Foundation located in Tak province in September. The bags will be used for medicine dispensing activities at the hospital.



## WELLNESS TEAM CSR ACTIVITY



Mr. Dilshan David, Corporate Director of Sustainability and Compliance with members representing all the Wellness departments were present at the handover event. The villagers were grateful to receive the donations especially during the challenging times brought on by the COVID-19 pandemic.

The village headman presented two native fish species to the Chiva-Som team and they were released in a natural pond in the village to help develop fish resources for the community. The families now have the vital supplies they need to get by particularly during this time of crisis.

The Chiva-Som Wellness Team representing all the departments' six wellness modalities launched a dry food donation at the Kareon community at Pala-U district.

By collecting generous contributions of both cash and goods, the Wellness professionals as well as other members of the Chiva-Som family were able to distribute items worth THB 20,000 in total.

The donation consisted on 500 kg of rice, 2,175 g of mackerel canned fish, 90 packs of noodles and clothing.



After finishing the morning activities, the team visited the village school and observed the sustainability implementations such as the waste management process and the organic farm located in the school.

Finally the team visited the nearby Pala-U National Park after the donation event and joined together in a wellness activity by climbing the first two of the 15 levels of Pala-U waterfall.

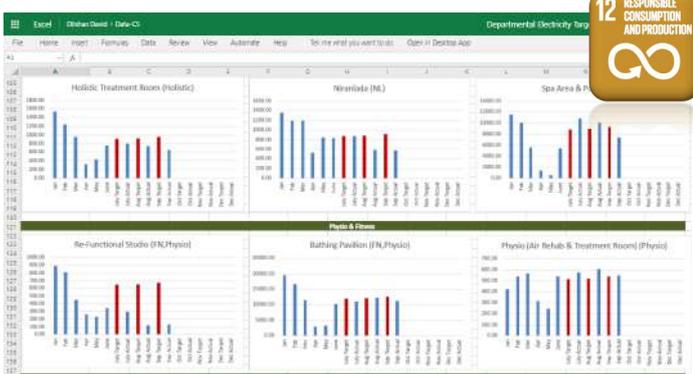
The Moo 3 sub district of Karoen villages was selected and Mr. Kanit Chan-u-patam, the village Headman and representatives from village families gathered at the village administration office on the 28<sup>th</sup> July to accept the donations.



## ENERGY-SAVING INITIATIVE

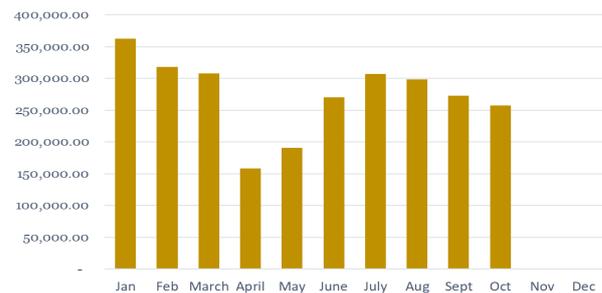
The Sustainability Department with the Engineering Department conducted several initiatives to collect departmental electricity consumption data, analysis, and set up targets for each department aiming for a 2% reduction in electricity use compared to year 2019 and 2020 during normal occupancy months.

Adding another initiative to the electricity-saving plan, the Sustainability Department launched an online electricity consumption monitoring platform that was shared with all the departments so they can monitor their progress online at the end of each month.



Expanding the scope of the audit, departmental solid waste separation practices were also examined to increase recycling and minimise waste sent to landfill. A comprehensive audit report was generated at the end of the walk-through audit and the findings were communicated to the relevant departments. Continuous monitoring is being conducted to improve savings.

By the end of September during the third quarter, we were able to reduce our electricity consumption by 34,509 kWh resulting in a 11.24% reduction from July to September, thereby reducing our operational cost during this challenging time. The initiatives paved the way not only to reduce the electricity consumption but also to implement new initiatives to improve the efficiency of our energy use.



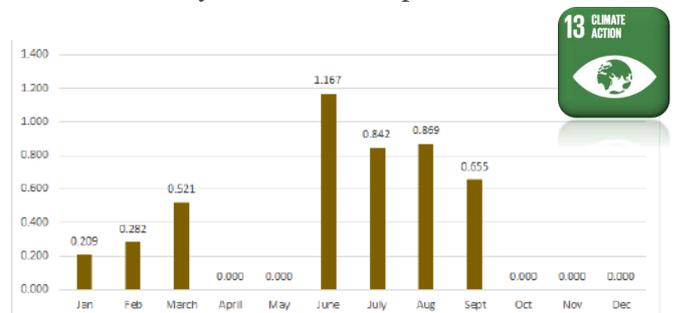
Total Electricity Consumption (kWh)

With the guidance received from our Chairman Mr. Krip Rojanastien, *to increase awareness and grow momentum*, a competition was launched among the departments at the Sustainability Committee meeting held in September.



Simultaneously, the Sustainability Committee members from the Engineering team conducted a full, Walk-Through Energy Audit of the entire Resort operation with aim to reduce energy consumption. Over 250 areas were inspected with focus on air-conditioning systems and temperature set points, lighting and other equipment usage.

As a result of the reduced electricity, LP gas and other fossil fuel consumption, we were able to reduce our greenhouse gas emissions by 0.177 metric tons of carbon dioxide equivalents per room night which is a 21% reduction from July to the end of September.



Carbon Footprint (Metric Tons per Occupied Room)



Sustainability Newsletter is a joint publication of the Sustainability Department and Sustainability Committee of Chiva-Som.

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