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LOOLA ADVENTURE RESORT

RE-DEFINING ECO-TOURISM

TOURISM IS AN INDUSTRY THAT GENERATES A CONSIDERABLE AMOUNT OF GLOBAL ECONOMIC ACTIVITY. IT IS ALSO A SOURCE OF CARBON DIOXIDE (CO₂) EMISSIONS, PRIMARILY FROM CONSUMPTION OF ENERGY RESOURCES.

A booming industry, global tourism accounts for about US$1.5 trillion dollars annually according to the World Tourism Organization (WTO)¹. The WTO estimates that global tourism is responsible for 4-5% of global CO₂ emissions². As more and more people travel around the world, the tourism sector brings forth opportunities for its stakeholders to address the impacts of climate change.

One way to achieve this is through ecotourism, also known as sustainable tourism or sustainable travel. Origins of the concept can be traced back to the early 1980s³; however it only became prevalent in the late 1980s and 1990s. Ecotourism can be loosely described as alternative tourism that establishes a bridge between experiencing nature and wildlife, and conservation efforts. Minimising the impact on the environment, creating awareness about nature and natural resources, and engaging the local community are classified as core principles of ecotourism.

Ecotourism is also regarded as an extension of sustainable tourism which combines learning about nature in an environment-friendly way, while promoting economic and social empowerment of the immediate local community. Due to its perceived potential to mitigate climate change impacts, both developed and developing countries are increasingly embracing ecotourism as a major part of their economic and social strategies.

LooLa Adventure Resort (referred to as LooLa) in Bintan, Indonesia is doing exactly this by providing its guests an insightful and participatory travel experience. The resort showcases a unique mix of activities that involve learning about nature and natural resources, working and respecting local communities and creating value through meaningful contributions. The resort’s efforts have paid dividends through multiple national and international sustainability awards, as well as being regarded as ‘World’s Top 1% Family Resorts’ by international travel review website TripAdvisor for five consecutive years from 2013 to 2017.

COMPANY PROFILE

LooLa is the South East of Bintan, see https://goo.gl/maps/WZHfKySOWd82. Bintan Island is part of Indonesia’s Riau Archipelago and is widely known for resort destinations, lush golf courses, secluded beaches and a diverse range of water sports. The provincial capital of the island is Tanjung Pinang; rich in Dutch architecture and was once a bustling trading port.

LooLa is the nucleus of three inter-linked organisations: LooLa Adventure Resort, LooLa Adventure Group Pte Ltd (headquartered in Singapore) and its travel agency arm Educational Bookings and Management (EBM). A licensed travel agency by the Singapore Tourism Board, EBM functions as the sales agent of the resort and manages both domestic and international revenue. The three organisations work in cohesion to make LooLa Resort a champion of sustainable travel.
LooLa is one of the recipients of Singapore’s 2016 Singapore Apex Corporate Sustainability Award, while winning the 2017 award of “Singapore’s Most Sustainable SME” which distinguishes businesses that excel in implementing sustainable practices within their core operations. As an eco-resort, LooLa offers its guests an assorted range of activities aimed at bringing people closer to nature. The resort hosts various adventure sports, conservation of environmental resources and local community engagement to create awareness on sustainability. Its target clientele are local and international schools, corporate groups, sports and other youth groups, and families as well.

BACKGROUND
The resort was founded in 1999 by Dr Marc Van Loo, who hails from the Netherlands. The name LooLa is a combination of Dr Van Loo’s last name (‘Loo’) and Dr Van Loo’s wife, Ms Lacoste’s last name (‘La’). It was set up on a parcel of land originally occupied by a few rustic chalets. The initial investment of SGD 100,000 enabled the purchase of land, the building of six chalets, a climbing wall and a boathouse with the help of the local community. Gradually, the resort expanded from the income it generated. Later onwards, dormitories were built with a capacity to house 300 people, to cater to the demand of regional/international schools and other youth groups.

To expand its business and attract a wider customer base, the resort built two luxury eco-villas with four individual rooms in each villa in 2014. Both villas are equipped with an innovative cooling system that uses solar energy for air-conditioning. Fast forward to 2017, LooLa is now praised as one of the most decorated eco-resorts with an international sustainability recognition, including the prestigious 2015 London World Responsible Tourism award for ‘World’s best overall Responsible Tourism Operator’.

LooLa’s unique blend of adventure sports and community engagement activities. Its internationally trained and certified instructors offer a variety of water sports such as kayaking, rafting and boat trips to nearby islands. Guests can also engage in tree climbing, rock climbing and experience zip-lining directly into the resort’s swimming pool. A village walk/orientation tour is also offered along with hill treks. The resort also offers a custom-designed survivor island adventure to groups with an aim to educate them about the different aspects of life on the island, its environmental challenges and solutions adopted by its people.

SUSTAINABILITY AT LOOLA
LooLa is committed to being an innovative eco-resort as sustainability considerations play a central role in its operations and activities. Apart from adventure and sports, guests experience first-hand eco-solutions at the premises upon the belief that a sustainable business can be designed to benefit all relevant stakeholders.

The resort’s level of involvement with the local community has raised living standards and the overall socio-economic status of the locality. With this in mind, the approach towards sustainability encompasses economic, environmental and social issues that are relevant to LooLa’s business operations. The resort firmly believes that it is possible to operate a successful and long-lasting hospitality business built on the following principles:

STAFF EMPOWERMENT
The resort has a total staff strength of 50 members, associates and trainers, all recruited from the local community. Each staff has the freedom to voice out their opinions in daily morning meetings via internet chats. Furthermore, groups of employees are given the responsibility for key parts of the resort’s operations such as food and beverage. This move by the management has actually led to higher productivity and better guests ratings. Resort staff are also empowered through ownership of drinks stalls as their own businesses.

ENGAGING THE LOCAL COMMUNITY
A major component of LooLa’s unique selling point is the interaction and engagement with the local community. The resort has designed activities and programs where guests participate in various community building activities such as roads, sports facilities for schools, computer literacy for villagers, mosquito net distribution, and most importantly, the distribution of life-saving sanitation systems for individual rural households (known as Safe Water Gardens). This way guests familiarise themselves with the local culture and obtain a first-hand account by mixing with different groups of locals.

TEST-BED FOR ECO-SOLUTIONS
For tackling environmental and energy issues, LooLa strongly embodies an attitude where reasonable solutions on energy efficiency and water recycling are put in place. The resort has teamed up with Singaporean universities and independent firms who have been able to help set up clean and green solutions. More details relating to LooLa’s collaborative work on eco-solutions are discussed below.
**Sustainable Tourism Policy**

LooLa’s mission is to showcase the real beauty and hospitality of Indonesia through an immersive experience filled with activities, fully run by local staff. The resort’s sustainable tourism policy is a continuous work-in-progress, which entails the inclusivity of all stakeholders in its operations. In the hospitality business, the location of operations and its impacts on the community play a vital role in business’ success. LooLa hence took it within its strides and involved the immediate community in every step of the way to develop and grow the resort.

**Eco and Green Initiatives at LooLa**

**Safe Water Gardens Project**

This project was implemented by building wastewater gardens (now called Safe Water Gardens) for the local community households that helps to eliminate diseases connected to insufficient household sanitation (in a 2016 UNICEF report, it is estimated that 370 Indonesian children die to lack of basic sanitation every day). A scientific survey undertaken by the research teams connected to Loola’s Safe Water project has shown that 70% of the recipients of an SWG have reported a sharp reduction in diarrhoea and other water-borne diseases. Furthermore, the gardens regenerate the ground water table with cleaner water with the help of an additional ceramic filter, enabling the villagers to enjoy clean drinking water. LooLa embarked on this initiative in 2013, and is now utilising a Dutch government grant and a growing coalition of education and industry partners to achieve the target of supplying all Indonesian villagers with safe and sustainable water management systems within the next 5 years.

The main partners of the project are:

- LooLa Adventure Resort
- World Business Council for Sustainable Development (WBCSD)
- Centre for Water Research, NUS and
- Borouge (one of the world’s leading plastic producers)
- NTU and 2 Indonesian universities and a leading Dutch university have also joined

The technology and components used in the Safe Water gardens include the following:

- A waterproof septic tank and piping
- A vegetated leach field made of stones, gravel, white sand and a brick rim
- A separate ceramic filter (kept at the house to filter the water collected at the well)
- Land and labour

As the items required are minimal and their market prices are reasonable, the total estimated cost of each garden is around US$500. The upfront investment is practical considering the benefits and the lifespan of such a system. Guests at the resort have contributed to building these wastewater gardens for as little as SGD50/person. To date, over SGD 70,000 per year has been contributed to such projects in the local community.

In the first phase of the project, over a hundred of local village households systems were built to gain experience with practical building and social issues. The project has now entered a scientific research phase with 6 scientific test gardens, and 110 in-depth surveys, with around 20 more test gardens and 100 more surveys to be taken by mid 2018. The aim of the research is to obtain a (cost) optimised Open-Source system which can be scaled up nationally.
HOW THE WASTE WATER GARDEN WORKS

**STEP 1**  Wastewater flows from the toilet into a waterproof septic tank

**STEP 2**  Septic tank size is designed to hold roughly two days of wastewater production. The most harmful bacteria die here because of oxygen deprivation, while “useful” bacteria turn the waste into nutrients.

**STEP 3**  The wastewater still contains nutrients, mainly nitrates. Residual nutrient-rich wastewater flows through a perforated pipe in the vegetated leach field made of small stones at the bottom, white sand on top, and banana or palm oil trees on top. The trees feed directly off the nutrients coming through the pipe.

**STEP 4**  Clean wastewater sinks into groundwater and water from the well is filtered through a ceramic filter kept in the house before consumption.

**BENEFITS OF THE WASTEWATER GARDENS**

The water garden system has enabled local households to save on costs of buying bottled water. LooLa’s staff estimated that villagers in Bintan Island spend roughly around SGD6/month on bottled water, and they are able to save approximately SGD70/year from using the garden system. The intangible benefits derived from the garden system are tremendous and noteworthy. As it is maintenance-free, it does not produce any foul smell, it beautifies the household area, and most importantly, villagers acknowledge its huge health benefits. The improvement of social living standards in the locality has been the central benefit through the garden system, which the locals have welcomed wholeheartedly.

The trial setup was carried out at the resort itself for both functional and learning purposes. It is an on-site treatment and disposal system that uses up the nutrients from wastewater so that the ground water becomes safe to drink, after being run through a ceramic filter. At the resort, a total of seven wastewater gardens have been in operation for more than four years. LooLa has also built over 140 wastewater gardens in neighbouring villages either through local community engagement or through company and school group sponsored corporate social responsibility (CSR) programmes. The benefits have been highly encouraging as villagers prefer drinking clean water from the well compared to bottled water. This simple yet novel eco solution has been a huge success for LooLa, to the extent where households in the neighbouring villages have requested LooLa’s help in building the systems in their homes. As of now, LooLa is managing a waiting list and building it accordingly.

**HARNESSING SOLAR ENERGY**

In 2014, the resort installed more than 70 solar photovoltaic panels in its boathouse rooftop space covering 70 square meters which provides the resort with over 50% of its energy needs. Due to efficiency and space constraints, it is not yet possible to completely use solar energy, hence a mix of diesel generators are also used at the resort during peak usage time. Although investing in green and clean energy is the right thing
to do, the resort still believes the best way to achieve sustainability is through education and awareness. Guests are reminded and given energy and water usage tips, where the simple focus is to reduce wastage and usage as much as possible.

In collaboration with the Solar Energy Research Institute of Singapore (SERIS, NUS), LooLa aims to fulfil 90% of its energy needs through solar energy from 2018 onwards. This, LooLa feels, is a reasonable target as most of its guests have given feedback that they are willing to use little energy in the day time, hence reducing a bulk of the energy resources needed. The partnership with SERIS has been successful as a new 2-year research agreement was signed in 2016, further allowing expertise from SERIS on data collection and analysis to refine the solar power grid system which is sometimes prone to mechanical failures.

ECO AIR-CONDITIONING
LooLa has developed a unique environment-friendly air-conditioning system designed by a Bali-based organisation in its two luxury eco villas which operate completely using solar power, chemical-free and battery-free. Using solar energy to operate the compressor, a block of ice is frozen during the day under each villa, which is subsequently used to cool the villa at night. The green air-con system came at a cost of about SGD 30,000 per villa and is a great investment for the resort as not only is it beneficial for the environment; it is also big on cost savings compared to using 30 liters of diesel per day to power the compressors. This unique air-conditioning system allowed LooLa and SERIS to commit to another a 2 year Joint Research Programme to collect data for analysis, and develop a proto-type that can be scaled up for commercial production.

HARVESTING RAINWATER
In November 2014, LooLa installed its rainwater harvesting collection system in two 500 square meters of newly designed roofs. While still in a developmental stage, the system has demonstrated the possibility of drawing 80% of the resort’s water needs from rainwater collected at the beach, while recycling that water clean back into the water table via LooLa’s Safe Water Gardens. The target of 80% is expected to be reached by early 2018. This system is extremely useful both in functionality and as an educational tool for students to show how a simple solution can have such a profound positive impact on water conservation.

CHEMICAL-FREE MOSQUITO SYSTEM
The Eastern part of Bintan Island is less populated and arguably less developed compared to the town centre. Due to some drainage issues, mosquitoes and sand-flies have been a longstanding problem for the local community. One of the LooLa’s clients introduced a Java-based German scientist who had developed a chemical-free electrical system of ovi-traps (water-filled devices that entice the female mosquito to lay their eggs in it so as to allow the abortion of the resulting larvae).

LooLa immediately partnered with the couple and installed a dozen of these systems in 2012. But these systems turned out to be critically sensitive to malfunctioning (if the automated procedures don’t work, you’ve got a mosquito explosion), so the resort went back to the use of successful manual ovi-traps and careful (chemical-free) cleaning of the area, which turns out to be the best way of insect control.

MEASURE OF LOOLA’S SUCCESS

AWARDS AND ACCOLADES
LooLa has won several international tourism-related awards over the years as a proof to their effort of operating a sustainable eco resort. Their efforts were first recognised by the Malaysia-based social enterprise ‘Wild Asia’ in 2012 which awarded them the Most Inspiring Responsible Tourism Award. This led the resort to embark on further eco initiatives which led to other awards and accolades listed below:

• 2017 TripAdvisor’s Traveler’s Choice Award Winner as Top 25 Hotels for Families – Indonesia
• 2017 Winner of Singapore’s Most Sustainable SME
• 2016 Sustainable Business Award Winner by GCNS
• 2015 and 2014 Sustainable Business Awards for CSR in the Community and Land Use Biodiversity and Environment respectively
• 2015 WTM London World #1 Responsible Tourism Operator and World #1 Responsible Beach Operator
• 2015 EcoAction Day Winner by EcoAction
• 2013 World Travel and Tourism Council Finalist
• 2012 Winner of Most Inspiring Responsible Tourism Operator by WildAsia
• TripAdvisor’s Traveller’s choice 2013, 2014, 2015, 2016 (World top 1% family hotel)

GUEST RATING AND FEEDBACK
LooLa regards guest and visitor feedback as a strong indicator of its success in sustainability achievements. Each guest is requested to fill a detailed feedback form about their visit and activities completed. The feedback received has been positive and encouraging, as they help the resort to focus on important issues and constantly develop their engagement activities
to suit the needs of the guests. These ratings have also resulted in multiple awards and commendations from travel review websites for the resort’s hospitality, activities and initiatives.

**FUTURE ENDEAVOURS**

From the initiatives undertaken, LooLa has maintained a strong focus on both environmental and social sustainability in terms of stimulating development to the region through their business. With this humble approach, the resort plans to build on its foundations of eco solutions and has targets to improve its current systems. For example in renewable energy, LooLa aims to have 90% of its needs met by solar PVs from 2018 onwards using net-metering. As net-metering is currently being promoted by the Indonesian government through feed-in tariff systems, LooLa intends to use this resource to meet its energy needs.

For water resources, the resort plans to have 80% of its water needs through its rainwater harvesting system. From current estimates of 50 litres of water per guest per day, the resort is actually supplying most of it from the collected rainwater. At times, much of the water is drained to the groundwater making the resort a net contributor to the water table of the region. In addition, the resort plans to distribute the chemical-free mosquito control systems to more communities for a wider reach.

LooLa is determined to leverage on its eco awards and the successful installation of 140 Safe Water Gardens to date through its Safe Water Garden alliance, consisting of LooLa’s educational, corporate, and local and national government partners. The research currently undertaken (funded by the Dutch government) indicates that it is possible to bring the cost of one SWG to below SGD 400, possibly even below SGD 350 per household, a number well within reach of the government housing upgrade allowances.

**CONCLUSION**

Natural resource conservation, community engagement and an immersive experience enjoyed by guests has played a major role in making LooLa a responsible business. Furthermore, the resort’s approach of ‘hire local, buy local’ has also enabled them to make a difference to the overall economic and social situation of the region. These efforts have contributed greatly to the success of the resort’s business model.

LooLa has championed its focus on local community relations in multiple aspects of their business operations. From staff empowerment to employment and management style, such practices are bearing fruit with zero staff turnover rate and a resort that promises to deliver ‘something really different’ to its guests.

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- En-trak
- Keppel Corporation
- Loola Adventure Resort
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