

The Little Green Book



Soneva Kiri by Six Senses



SONEVA KIRI
BY SIX SENSES

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Responsible Business Summary

Energy Management

- Solar PV Plant for energy production at the Eco Villa
- Water distributed by gravity from resort's highest point improving energy footprint
- Medium voltage (6,6kV) underground electrical cables to reduce power loss and radiation
- Energy efficient light bulbs "megaman" PAR 38 (20 Watt) and LED lights, which help save electricity

Water Management

- Self-sufficient water supply through collection of rain water and deep well, which improves water costs if compared with buying water
- Production of Six Senses Drinking Water, with re-useable glass water bottles for hosts and guests
- Waste water treatment plant (WWTP) where all treated waste water is used for garden irrigation
- Water saving taps, shower heads, 'push' valves and low flush toilet systems

Waste Management

- Waste separation in recycling corner
 - Paper, plastic, metal, glass, used cooking oil, kitchen waste and garden waste recycled
 - Battery collection and recycling
 - Natural rubbish bags, such as potato sacks, used to reduce plastic waste
 - Shredding and re-use of garden waste for garden, walkways and compost
 - Own composting site where kitchen waste and garden waste is composted creating fertile soil
 - Re-use of printed paper for notes on the reverse side
 - Raising earthworms to compost vegetable waste and produce fertilizer
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Biodiversity

- Local plants and fruit trees used
- Garden planted to give a natural look as well as shading from sun and noise. As much as possible of the natural vegetation was kept
- Own Herb & Vegetable Garden

Responsible Purchasing

- Preference of local products and suppliers
- Preference of eco-labelled products
- Suppliers asked to reduce packaging

Chemical Management

- Biodegradable cleaning chemicals used as much as possible and automated filling of cleaning chemicals in laundry
- Unbleached and naturally dyed cotton used
- Saline and ionization pool systems
- Re-chargeable batteries used

Air Quality

- Low VOC or VOC free paints and wood treatment
- Natural ventilation

Mobility

- 4 stroke boat engines
- Kayak, sailing and cycling activities

Stakeholder Engagement

- Preference of local hosts
 - 0.5% of total revenue to Social & Environmental Responsibility Fund
 - Mangrove planting project
 - Waste management education project
 - Six Senses Carbon Senses Fund
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Health & Safety and Wellbeing

- Occupational Health & Safety audits
- SLOW LIFE Trail

Responsible Design & Construction

- Wood in the furnishings is locally sourced from small producers using wood from sustainable sources
 - Driftwood and other recycled items used in decoration
 - Natural ventilation used instead of air-conditioning as much as possible
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SONEVA KIRI's Environmental and Social Sustainability Policy

*We care for a better environment
and our place with the local community!*

Soneva Kiri, Six Senses Spa and the hosts are committed to improving the ecological and carbon footprint from activities associated with the resort and spa industry namely providing accommodation, dining, excursions, spa, sports and aquatic activities. We are committed to developing a sustainable environment by using the indicators highlighted below. We will continuously monitor our performance and sustainable activities against the targets and goals set by Six Senses, which will be adjusted, amended and acted upon wherever appropriate, and we will continue to submit performance data to Six Senses. Our top 10 indicators include:

- We shall improve our carbon footprint through improving overall energy usage, consumption and operating efficiency and use of Clean Technology.
 - We shall reduce our water footprint through improving overall water usage, consumption and operating efficiency as well as treating all our waste water to avoid polluting discharges.
 - We shall improve our waste footprint through reduction, reuse and recycling.
 - We shall improve our chemical footprint through with consideration of biodegradability and volatile organic compound.
 - We shall improve our responsible purchasing practices.
 - We shall improve the overall footprint of air quality and pollution (indoor/outdoor).
 - We shall improve the carbon footprint of all the various forms of transportation.
 - We shall improve the ecological footprint of biodiversity conservation, preservation and restoration within the resort as well as nearby surrounding areas.
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- We shall improve social and cultural issue through stakeholder engagement and contribution to local communities.
- We shall improve the health, safety and welling of host, guest and local community.

To support our environmental and social sustainability activities we have developed policies and procedures in line with Six Senses standards. These policies and procedures will be renewed at least annually to ensure that we are always current in our approaches.

We are committed to comply, wherever possible improving upon, Thai and international legislative environmental requirements, such as environmental, public and occupational health and safety, hygiene and employment legislation. We shall, wherever possible and feasible, give preference to the employment of persons living in Koh Kood, Trat or nearby areas, local products and services which do not adversely affect the resort's operational activities, viability and environmental and social impacts.

This environmental and social policy is freely available to all interested parties on request.

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Ms. Marteyne van Well
General Manager

HELP US IMPROVE OUR FOOTPRINT

Whilst Soneva Kiri team try to improve the ecological and carbon footprint of resort's operations, your help is needed to further improve energy, water and waste footprint. The resort's responsible practices are outlined in this book with suggestion on how you can help improving the ecological and carbon footprint.

It is Six Senses core purpose "to create innovative and enlightening experiences that rejuvenates our guest's love of SLOW LIFE" (Sustainable-Local-Organic-Wholesome Learning-Inspiring-Fun-Experience).

Soneva Kiri team are constantly working on achieving this. It is recognized that there is always room for improvements, and welcome any suggestion on how things can be done better.

Soneva Kiri team wishes you a pleasant stay.

Energy Management

Producing energy usually creates pollution and is the biggest cause of global warming. At Six Senses and Soneva Kiri we have worked on several projects during construction to improve our energy usage and to use clean energy.

The improved energy efficiency ensures an improved carbon footprint as well as bottom line.

For example, the lighting around the property is turned automatically on at dawn step-by-step improving energy consumption.

The lobby and food & beverage outlets are naturally ventilated instead of air-conditioned. Not only does this improve the carbon footprint, but also air quality.

Normally, low voltage cables above the ground are used in Thailand; however Soneva Kiri has installed medium voltage (6,6kV) underground electrical cables. Several benefits are achieved such as less power loss, less fluctuations, less radiation, less fire hazard as well as it avoids unpleasant looking electrical cables visible around the property.



The Eco Villa is a prime example of the innovative ways that we have designed and built to minimize our impact on the environment. Light is provided by a central skylight for daylight and for viewing the stars at night. Super efficient lighting is provided by LED



bulbs in environmentally friendly light fittings designed by Six Senses. The building is cooled using two experimental methods - firstly, the use of a 24,000btu solar air conditioning unit from

Solcool, that consumes only 1,200w peak load, and secondly, a passive cooling system incorporated into the thermal mass of the building. The fundamental idea is to cool the mass and maintain the temperature with insulating materials. A solar panel provides hot water for the showers and washbasins.

All the buildings' energy will be produced via a hybrid system composed of a 1.7 kw Skystream wind turbine, 6.2 kw of photovoltaic solar panels and a micro-hydro system using waste water from the restaurant



above. It will be stored in batteries for nighttime use and a 3-day backup. Guests and members of the local community will have access to this area to learn about sustainable power generation and storage.

You can help improve energy footprint by:

- Avoid using the air-conditioning. Open the windows and enjoy the fresh air - you are not in the city now!
- If you do use the air-conditioning, keep the temperature as high as comfortably possible and low fan speed.
- Try just using sheets and not using the duvet while you are sleeping.
- Avoid leaving water taps running, especially hot-water taps.

Energy-saving measures:

- use natural ventilation and avoid air-conditioning
 - shut doors and windows when using AC
 - avoid wasting water, especially hot water
 - turn off lights
 - reduce laundry
-

Water Management

All the water you are using for washing, taking a shower and flushing the toilet comes from our own water reservoir and deep-water wells making the resort self-sufficient.

The water is treated through a sediment tank, carbon and ceramic filters as well as chlorine peroxide. Some water is then further treated by reverse osmosis and UV light. This is the common way bottled water is created. However, as reverse osmosis kills both bacteria and minerals the water gets high in alkaline level and will drain your body of minerals. To overcome this Soneva Kiri adds minerals to the treated water and thus Six Senses Drinking Water - Still and Sparkling - is produced. Served in reusable glass bottles ensure carbon emissions from both transportation and plastic production are improved.



Water saving measures such as "push" valves, water saving shower heads and dual flush toilet systems are installed. These help improve water usage.

Main and sub-feed metering systems are installed to control water usage. The resort has also installed zones with valves for fresh water and fire-water allowing us to close down certain areas if leakages are discovered without disturbing the whole system.

All waste water is collected and treated in an on-site waste water treatment plant (WWTP) with waste water storage facility. All the treated waste water is then used for garden irrigation around the resort, ensuring that no waste water discharges into the ocean and no fresh water is used for watering the garden. So if you see the

garden is being watered during rainfall it is merely the way to discharge treated waste water safely.

At the Eco Villa, the natural swimming pool acts as both a rainwater storage system, a wildlife magnet and a swimming pond - the water is circulated via a pump through reed beds filled with aquatic plants that will lower the



nutrient content and filter the water. A Mangnapol system used magnesium hydroxide to filter the pool water. No toxic chemicals are used; it is simply filtered rainwater. Also, a reed bed (constructed wetland) receives all waste water and septic tank effluent, and the treated water is reused for landscape irrigation to feed the bamboo privacy hedges with nutrient rich water and thereby provide food (bamboo shoots) and rapidly renewable construction timber.

Despite being self-sufficient, water footprint is a concern as the resort's reservoir and deep-water wells have their limits.

You can help avoid this scenario by trying to improve your water consumption.

Water-saving measures:

- avoid leaving taps running when washing and taking a shower
- reduce laundry
- avoid wasting water, especially hot water

Waste Management

Waste is a huge source and cause of environmental degradation. It pollutes the land, sea and washes up on beaches. Also it kills thousands of animals, small and big, each year.

Soneva Kiri is actively looking for ways to improve waste footprint. The 3 R principles are followed - Reduce - Reuse - Recycle.

The main focus has been to minimize waste produced in the first place. Suppliers are asked to reduce packaging when delivering supplies. Printing paper is eco-labelled and the reverse side of printed paper is used for notes, reducing numbers of trees needed to be cut down. Plastic has been eliminated through introduction of Six Senses Drinking Water using reusable glass bottles, natural rubbish bags, such as potato sacks, and biodegradable plastic where required. Rechargeable batteries instead of disposable batteries are used to improve toxic waste.

A recycling corner (see picture) where waste is separated into paper, plastic, metal, glass, used cooking oil, kitchen waste, garden waste and toxic waste has been created. This is sent for recycling and proper handling. Garden waste is shredded in the chipping machine, where soft materials are used for composting.



All food waste from the kitchen and restaurants is composted together with garden waste. The composting soil generated from this activity is reused in the landscape and gardening.

To make the composting as effective and odourless as possible waste separation in the kitchen has been implemented where all the food, except meat and seafood, is collected for composting. The reason meat and seafood is excluded is that these items decompose slower as well as to avoid attracting stray dogs and rodents. The garden waste is shredded using our chipping machine, in which some garden

waste is used for composting and some for footpaths and around plants reducing unwanted weeds. The composting is taking place in a specially built area at the Eco Centro.

Soneva Kiri has been raising earthworm in the species named *Eudrilus eugeniae* (African Night Crawler (AF)). They are excellent and its size is the largest one in the red composting worms group. We raising them in plastic boxes which have small holes for air, stored in cool and well-shaded areas. We will be used animal manures, coconut fiber and sandy loam topsoil for bedding materials. We feed them twice a week with leftover food (around 30 kg. per week) from host canteen. This can also help us reduce the food scraps.



The hosts at Soneva Kiri are involved with a number of environmental initiatives working with the local Or Bor Tor (local council) on a number of clean-up projects collecting litter and also members of the local community have access to the Eco Villa and other areas to learn about sustainable power generation and storage.

Some items, such as batteries and any electronic equipment, release very toxic chemicals into the air and water. You can help reduce these by disposing of your batteries or any electronic equipment in designated areas or taking them back to your home country for disposal.

As a final note, you are encouraged not to wrap you luggage with plastic wrapping as plastic is non-biodegradable. When thrown away it takes over 100 years for it to degrade.

Ways to reduce garbage on Koh Kood:

- separate dry waste (paper, cans, bottles) from wet waste (food, not recyclable waste)
 - take used batteries, electronic equipment and plastic waste to your home country
 - do not use plastic wrapping around your luggage
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Biodiversity

Whilst building Soneva Kiri, a lot of consideration was put into minimizing the impact on the local environment. Trees and plants were transplanted where possible, avoiding cutting them down.

Treated waste water is used for garden irrigation, ensuring zero discharge in the ocean. So if you see the garden is being watered during rainfall it is merely the way to discharge treated waste water safely. Some areas have been planted with the intent to create shade both from the sun and from noise.



In order to keep the local nature in an ecological balance and the organisms healthy, you can take a few easy steps to help us:

- Please do not touch anything under water. Many animals are sensitive to touch and can easily be damaged. Corals, for example, have a mucus layer around them, while other animals, such as turtles, may suffer from stress.
- Do not break off any corals by standing on the reef or by flapping your flippers. Corals are living animals and require many decades to build those reef formations.



- Please refrain from feeding the fish. It changes their natural behaviour (they may get used to being fed and become too lazy to search for food on their own; some fish may also become aggressive), it may make them sick, and it is considered a major disturbance for the whole ecosystem.



- Please do not collect any shells, broken coral pieces or other objects on the island or from the sea. They may serve as homes for hermit crabs and, consisting of calcium carbonate, are very important for generating new sand.
- Please do not buy any marine products, i.e. coral jewellery, shells, shark jaws etc. Even though these items are not available at the resort, you may find them elsewhere in Thailand. The concern is that most of the animals those shells originally belong to have deliberately been killed for the tourism industry and are often endangered species. You may also risk fines at the border.

The resort's Herbal & Vegetable Garden, provides the kitchen with fresh herbs and vegetables that are suitable to be grown in this climate.



By no means does it supply all the resort's food needs, but works as a great supplement for the chef, who can enjoy fresh produce with no carbon emissions from transportation. Abalone and black & white oyster mushrooms are grown in the Mushroom Hut. Also cooking classes are offered in the Herb & Vegetable Garden kitchen.

Soil from the resort's composting facility is used to provide good nutritious growing conditions with out need for chemical fertilizer. Lemongrass and citronella are grown in abundance as they work as a natural pesticide.

A great way to learn more about the resort Environmental practices and biodiversity is go on a SLOW LIFE Trail.

Biodiversity:

- Go on the SLOW LIFE Trail
- Take Thai Cooking classes

Responsible Purchasing

Responsible purchasing is a key aspect of responsible business to ensure money is streamed back to the local economy, fair trade and carbon footprint from transporting products.

As much as possible of the resort's supplies are locally sourced. E.g. 98% of food is locally purchased. Most fixtures and fittings are locally produced, mainly in Northern Thailand.

Koh Kood also has local handicrafts made from coconut shell. Examples include tissue box, desk lamp, key rings etc. These can be bought from local people's houses at Ngam Kho village.



On Koh Mai-Si, where the Soneva Kiri airport located, there is a honey-farm which makes natural honey from wild flowers and cashew nut flowers. If you wish to visit, please contact your Mr./Mrs. Friday.



Certain food items, such as shark and red snapper are not purchased and have been placed on Six Senses F&B No No list. Timber used in the property is either from recycled material or managed forests. Suppliers are asked to reduce packaging when delivering supplies. Furthermore suppliers and products with eco-labels, e.g. recycled paper, biodegradable cleaning chemicals, are preferred.

Imports of water have been banned and instead Six Senses Drinking Water - Still & Sparkling is served. Served in re-usable glass bottles ensure carbon footprint from both transportation and plastic production are improved.

Ways to purchase responsible:

- Choose local products
- Choose eco-labelled products
- Six Senses Gallery has many local product options

Chemical Management

Soneva Kiri continuously works on improving the resort's Chemical Footprint. As much as possible biodegradable and low volatile organic compound (VOC) chemicals are used.

For example all interior paints are water based low VOC to improve air quality. No lacquer is use to treat wood rather wax or low VOC oils.

As a Six Senses signature all colourful cotton used for day beds, curtains and napkins use naturally dyed cotton and bed linen are unbleached, which improves chemical footprint of production.

The swimming pools saline and ionization systems use salt instead of chlorine to treat the pools. This gives a better feeling when using the pools without jeopardizing cleanliness.

Re-chargeable batteries are widely used, for instance for the torch in your room, instead of alkaline batteries which improves the chemical footprint.

The laundry system uses automated filling of cleaning chemicals to ensure just enough is used. Furthermore, biodegradable detergents are utilized as much as possible as these do not harm the environment.

You can help us improve chemical footprint by leaving the towels hanging and not placing the laundry palm on the bed. The towels and linen will then not be changed. They do not only improve chemical footprint, but also improves water and energy footprint from heating the water, run the machines, dry and iron the clothes.

Another way you can help improve chemical footprint is to take batteries and electronic equipment back to your home country. The reason why we ask you to do this is that no proper facilities to recycle used batteries or electronic equipment exist in Thailand. We do collect used batteries at the Six Senses Gallery, but have to send

them abroad for recycling. It would be very much appreciated if you could take them back home for disposal.

Ways to reduce chemicals:

- reuse both towels and bed sheets and communicate your wish to the room attendant
 - take batteries and electronic equipment to your home country
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Air Quality

Soneva Kiri tires to ensure the air quality at the property is at highest quality so you can enjoy your stay breathing fresh air.

A key aspect has been to ensure open spaces as much as possible. For example, the food & beverage outlets are naturally ventilated instead of air-conditioned.

All interior paints are water based low VOC to improve air quality. No lacquer is use to treat wood rather wax or low VOC oils. As a Six Senses signature all colourful cotton used for day beds, curtains and napkins use naturally dyed cotton and bed linen are unbleached, which improves air quality.

A lot of plants and vegetation exist to provide shading from sun as well as noise.

Mobility

To improve the ecological and carbon footprint of mobility (transportation) is important to Soneva Kiri.

At the property, activities utilizing non-fossil fuel powered energy, such as kayaking, sailing and bicycling, are encouraged. These activities are both good for the air quality and your health.

When there is an increasing awareness on the need to preserve and protect the environment, choosing to use an electric golf buggy can contribute in many ways. For one thing, the buggies run on a bank of batteries that prevents emission of harmful chemicals in the air. The buggies practically release zero exhaust emission and thus, no damage to air is done. Secondly, since the buggy is particularly designed to optimize battery life for long life and performance, we save on energy consumed.

All boats used at Soneva Kiri, have 4 stroke diesel engines, which is of the most efficient engine types. The reason why it is important to use 4 stroke engines is that they combust diesel much better and recycle the engine oil. In a 2 stroke engine, petrol and engine oil is mixed. About 30% is not combusted and ends up polluting the ocean. Unfortunately, 2 stroke engines are the most common engines used in Thailand and Koh Kood.

Ways to improve mobility footprint:

- Go sailing or ride a bicycle instead of using power engines
 - Share transportation
 - Walk
-

Stakeholder Engagement

Soneva Kiri has a strong commitment to contributing to the local community. This is clearly reflected in the preference of local products, local suppliers and local hosts. Through this commitment the local community and economy is greatly benefiting from the resorts operation, and great pride it taken to keep a good relation with all stakeholders.

In addition to this, 0.5% of total revenue it dedicated, through the Social & Environmental Responsibility Fund (SERF), to various projects on local, national and global level.



Examples of initiatives include:

All the Hosts get together every month for an activity, cleaning the local beaches on the island.

There is also a waste education project for local schools for them to learn about the importance of proper waste management to preserve the environment.



Also groups from local schools come to the resort to learn about responsible resort operation through the SLOW LIFE Trail.

Carbon Sense Fund

Soneva Kiri is greatly concerned about climate change. Whilst the resort's carbon footprint is improved through energy efficiency, clean energy, sourcing local products etc. the biggest impacts of a typical stay are caused by flying. Unfortunately, there is not much that can be done with this other than mitigate it. For this reason, a Six Senses Carbon Sense Fund has been established. 2.5% of the total bill will go to mitigate your carbon footprint.

A large reforestation project is linked to existing forest areas have been created together with other Six Senses Thai properties. 220,000 trees covering 180 acres in Northern Thailand will be planted annually. Not only will this mitigate 180,000 ton carbon, but it will create wildlife corridors, prevent erosion, restore biodiversity and generate local jobs. A Six Senses Forest Learning Centre will provide training facilities for local communities on forest and wildlife preservation, seed bank for distribution of local tree species. Also a basic wildlife clinic for treatment of rescued wild animals will provide basic quarantine area of illegally traded wildlife from neighboring countries that will be released back into the wild.

The project is run by PATT Foundation, a registered Thai Foundation and UK Charity. They cooperate with the Forest Research & Restoration Unit of Chiang Mai University and WildLife 1 to ensure sound scientific measures are taken. Carbon Fix Standard will be followed to verify the carbon mitigation. A framework of 20-30 different indigenous tree species specially selected for their ability to shade out weeds and attract seed-dispersing wildlife. For more information please see www.pattfoundation.com

Stakeholder engagement :

- Participate or visit one of our projects
 - buy the soft animal in your room
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Health & Safety and Wellness

Health & Safety and Wellness to guest, hosts and local community is important to Soneva Kiri. The resort constantly reviews its Occupational Health & Safety Standards. Furthermore, much emphasis it put on awareness rising. The resort is equipped with state of the art fire systems and has a trained fire brigade ready at all times. All hosts dealing with cleaning chemicals or heavy lifting are trained on how to prevent injury. To raise awareness and the wellbeing of hosts, regular training sessions as well as information on the notice boards are issued. Focus is also put on healthy eating and exercise, which is reflected in the resorts offering for guests' as well. Soneva Kiri openly shares its experiences, particularly with regards to raising awareness of responsible business practices.

Health & Safety and Wellness :

- Enjoy Healthy food in the Resorts restaurants
 - Enjoy a rejuvenating spa treatment
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Responsible Design & Construction

Soneva Kiri is in many ways an excellent example of a responsible business model. Soneva Kiri has been built with the principles of ecological sustainability whilst providing the utmost in luxury and innovative design. Typically the manufacture, transportation and installation of construction materials represent a huge proportion of the total carbon footprint of a building.

Wood for the furnishings has been locally sourced from small producers using wood from sustainable sources. No rainforest wood is present, but instead we have used wood from managed forests of easily grown trees or recycled wood. Driftwood and other recycled items are used for decoration. The food & beverage outlets are naturally ventilated instead of air-conditioned. Not only does this improve the carbon footprint, but also air quality.

Responsible Design and Construction :

- Make use of naturally ventilated areas rather than air-conditioning

