

Sustainable Management Plan

SONG · SAA
PRIVATE ISLAND



LUXURY THAT TREADS LIGHTLY

The Environment Policy of Song Saa Private Island

Song Saa Private Island's exclusive setting, the relationships it enjoys with local communities and the dedication and commitment of its staff to environmental improvement are all assets of the resort.

The maintenance and enhancement of these are grounded in a commitment by Song Saa to the promotion of the triple bottom-lines of sustainability. To achieve them the following environmental policies are to provide an umbrella for the planning and operation of the resort:

1. Song Saa Private Island will give effect to its environment policy through its *sustainable management plan* and the procedures and processes set out in this document.
2. Song Saa will implement an 'avoid, remedy and mitigate' approach to the assessment and management of all adverse environment impacts.
3. Song Saa will reduce the ecological footprint of the resort by promoting the reduction, reuse and recycling of materials and water, and the conservation of energy.
4. Song Saa will comply fully with all national environmental legalization.
5. Song Saa will continually seek to build our understanding of sustainability within the resort's biophysical, social and economic context and communicate this information to our employees, guests and others.
6. Song Saa will communicate its environmental procedures to staff and guests.
7. Song Saa will monitor, evaluate and review its operations constantly to ensure that best environmental practices are maintained in all aspects of the resort's operations.
8. Song Saa will promote positive relations with local communities through the support of livelihood projects, environmental education and a waste management programme.
9. Song Saa will promote eco-literacy by supporting the research of graduates and research fellows.
10. Song Saa recognizes the importance of local knowledge and heritage and respects local intellectual property and does not undertake any activities that jeopardize or exploit it.

Our General Manager, Mr. Greg Williams provides the leadership in the implementation of Song Saa's environmental policy.

This policy will be communicated to all staff and key stake holders and is available at Guest Experiences, on our staff notice boards, in our guest

rooms, included in our sales and marketing materials, in our staff village and on our web site. This policy will be reviewed annually and updated.

Signed:



Date: 1st June 2012

Wayne McCallum
Director of Sustainability
Song Saa Private Island

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PART A

Background

Introduction

Since the late 1980s the term 'sustainability' has grown in popularity as an approach for steering and framing development. Common to most expressions of the term is the appreciation that traditional ways of doing business cannot be maintained within the bounds of contemporary environmental, social and economic limits. This recognition has inspired new ways of managing human activity; ensuring that these 'triple bottom-lines' are maintained and improved in the relationships people share with the planet.

Against this background international and domestic tourism has enjoyed progressive growth, both globally and within Cambodia. In Cambodia, where tourism has traditionally been driven by the attractions of Angkor (Siem Reap), new opportunities have inspired a broadening of tourism in the country, with visitors now seeking out new attractions in the country's mountains, plains and coastal environments. With this development have come new opportunities and challenges in the relationships that tourism shares with the natural environment, people and the economy.

Internationally, experience has shown that tourism can have a variety of impacts on local environments and communities, which may be positive or negative, and short or long term. In managing for this, the adoption of a triple bottom line approach to any tourism operation is considered by Song Saa Private Island to be pivotal to ensuring that tourism is sustainable; where adverse impacts are controlled and positive effects maximized.

Song Saa Private Island and Sustainability

Song Saa Private Island is a private development being undertaken by Brocon Investment Co., Ltd. Song Saa Private Island is intended to be the first of several high-end, luxury resorts that the company will develop and operate in the region.

With an emphasis on sustainability and high exemplary environmental standards, Song Saa is at the forefront of efforts within Southeast Asia to integrate commercial development with the triple bottom lines of biophysical, social and economic sustainability. The importance and relevance of sustainability and the triple bottom lines that underpin it are central to the vision and mission statement of Song Saa Private Island:

Vision Statement

Taking a leadership role in creating sustainable luxury in emerging Southeast Asia.

Mission Statement

Song Saa exists to create a sustainable business model that focuses on a triple bottom line approach; ensuring the environment and local communities are protected and cared for, while shareholder returns are maximized.

We will always nurture our team, while providing a unique, engaging and luxurious experience for our guests.

The vision and goal of Song Saa Private Island is an ambitious one – a high-end and exclusive resort development that improves the environment, the condition of local communities and the economy in which it is situated. Behind this vision and goal is the appreciation that no development can call itself genuinely sustainable if it does not commit to these values. For Song

Saa Private Island, where the goal is to tread lightly, with care and consideration, the commitment to these bottom-lines is not an aspiration, it is an imperative.

The objective of this management plan is to show how this vision and goal are to be achieved. Please read the rest of the document to see the policies, indicators, and monitoring regimes that we intend to implement in order to achieve our aspiration of promoting *'luxury that treads lightly'*.

Before proceeding, however, it is necessary to understand the physical and social context within which Song Saa lies, for it is this context that provides the components of the physical and social environment that it interacts with.



Context

The Koh Rong Archipelago

Although less well known than its Angkorian ruins, rainforests and the great lake of Tonle Sap, the country of Cambodia also includes 69 tropical islands (*Koh* in Khmer). These range from small outcrops of sand and coral to larger forest-clad isles of hills and plains. Off the coast of southwest Cambodia lies a cluster of such islands that form the Koh Rong archipelago. Taking its name from the archipelago's largest island, Koh Rong, it is the green hills and long beautiful beaches of this isle that form the backdrop to Song Saa Private Island (see Figure 1).



Figure 1: Koh Rong and the sites of Prek Svay village and Song Saa Private Island

Environment and People

The natural world of the archipelago comprises a grouping of island and sea environments. The former is dominated by an assemblage of evergreen, open deciduous and littoral zone forests, punctuated with wetlands, mangroves and areas that have been cleared for farming and settlement. In the sea, fringing reefs, sea-grass beds, and deeper offshore reefs are prominent ecosystems.

From a human perspective, the history of settlement in the archipelago remains unclear, but it is thought that the islands have been continually occupied for several hundreds years. An exception to this pattern occurred during the Khmer Rouge era (1975-1979), when most villagers were relocated to the mainland; leaving only soldiers, tasked with frustrating the territorial ambitions of the Vietnamese and Thais.

In the 1980s people started to slowly return to the archipelago, settling in small villages along the shoreline. The returning people continued their traditional livelihoods of fishing, small-scale farming and the harvesting of wild fruits and vegetables. Some families reoccupied old coconut groves, while others planted new plantations, adding mangos and cashew nuts to their gardens. Today, it is this mixed system of crops, along with fishing and the sale of labour that provide the basis for the archipelago's village economy.

Development wise, the remote location of the archipelago has kept it largely insulated from the detrimental impacts that change has brought to other parts of coastal Southeast Asia. Consequently, it is still possible to enjoy empty beaches and long quiet days; experiences increasingly rare along the coasts of the region.

Song Saa Islands

Song Saa Private Island comprises two small adjacent islands, 30 kilometers west of Sihanoukville, on the Cambodian mainland. Officially known as Koh Bong and Koh Ouen, they are four and three hectares in size respectively. Comprising sandstone lay down in the Jurassic era and fringed by tropical reefs, the islands are renown for the shelter they provide from Gulf of Thailand storms and for the rich and diverse marine life in their surrounding waters.



Figure 2: Mangrove environments exist in close proximity to Song Saa and are important habitats for wildlife as well as a guest encounter opportunity.

PART B

Song Saa's Sustainable Management Approach

Approach to Sustainable Management

Song Saa Private Island accepts that, in reality, preventing all the adverse impacts that come from operating the resort is impossible. Because of this a *practical* management plan needs to be organized so that, where possible, adverse impacts are firstly avoided. When this is not possible, then the emphasis should be on remedying negative effects; finally if this is not possible, then the final recourse should be the assurance that any outstanding impacts are mitigated for.

*This represents an **effects** based approach to sustainable management, with the emphasis, in order, being the **avoidance, remedying and mitigation** of adverse impacts, and the maximization of any positive benefits. It is this tiered methodology that serves as the approach adopted in this sustainable management plan.*

What this approach offers is a process for resolving *all* challenges that the maintenance of triple bottom lines pose for the sustainable operation of Song Saa Private Island. Practically, it means that there is a process for dealing with problems that are simply unavoidable by considering remedies and mitigating measures. What this means is that **all** impacts can be addressed and not simply left or an activity not undertaken because of the unavoidability of an impact.

The tiered method provides a comprehensive strategy for promoting sustainability on Song Saa Private Island.

Format of the Plan

The Sustainable Management Plan of Song Saa is set out in a logical way, which follows the format set out below:

- Inspired by the sections and indicators of Green Globe the plan is divided into the following two key sections
 - Environment
 - Socio-cultural and Economic

What is Green Globe?

Several global industries have developed environmental management systems designed to bench-mark and quantify their capacity for achieving sustainable outcomes in their operations and activities. Green Globe is one such system, specifically designed for businesses participating in the tourism and hospitality trade. As an internationally recognized operating standard for sustainability, Green Globe provides Song Saa with the framework for weaving sustainability into all aspects of the resort's activities.

What this means is varied and detailed. At the broad level, for example, the resort must ensure that it has a comprehensive sustainable management plan in place and a set of related environmental policies beneath this. This is the purpose of this document.

Beneath the document comes an extensive range of indicators that cover everything from the handling and storage of cleaning products, through to the benefits that the resort provides to local communities.

- Each section is provided with an introduction, which provides descriptive detail on aspects of the *environment, socio-cultural and economic* context of Song Saa Private Island.
- This is followed by a series of tables that sets out a series of areas where effects are considered to arise that require a management response; this ranges from *biodiversity* through to the management of *pollution and contaminants*.
- Under each of these headings different possible adverse effects associated with the construction and operation of the resort are described, followed by, in the adjacent column, different response measures that will be followed by Song Saa to deal with these impacts. Finally, on the far right is a column that sets out the indicators that will measure the achievement of a particular management response.

Overarching

Background

There are ranges of responsibilities that are overarching to the entire operation of the sustainable management plan. These are direct expectations and do not relate to any specific effects from the development and operation of the resort.

- Compliance with all national environment, land and cultural laws and regulations.
- A company environmental policy that will include guiding principles for:
 - Water
 - Land
 - Biodiversity
 - Waste management
 - Energy
 - Community Engagement
 - Staff interaction with the environment
 - Guest interaction with the environment



Environment

The marine and terrestrial environment of Song Saa contains many of the values that make the area special and attractive to guests. Clear water, fringing reefs and evergreen shrubs and trees are part of this natural character. The environment also sustains a range of ecosystems that contribute to the operation of the resort, including fresh water supply, food from the surrounding sea and landscape vegetation.

It is appreciated that the construction and operation of Song Saa Private Island will give rise to a variety of effects, some negative and others positive for the local environment. For the purpose of this management plan these effects have been divided into the following categories:

- *Water Quantity & Quality*
- *Energy*
- *Solid waste*
- *Biodiversity*
- *Pollution and Contamination*

Drawing from the effects-based approach, in the tables below, the anticipated negative adverse impacts associated with each of these areas is set out, alongside measures that will be adopted by Song Saa Private Island to avoid, remedy or mitigate these and the indicators that will be used to assess the effectiveness of these measures.



Figure 3 & 4: Song Saa is supporting the graduate research of Cambodian (left) and international students (right), in an effort to build the knowledge-based required for sustainable decision-making, as well as contributing to the professional development of the participants.

Song Saa & Environmental Conservation

The protection and sustainable management of Song Saa Private Island's natural assets is an imperative of the development and is the primary focus of the Conservation and Community team. This team comprises four full-time staff, who include experienced marine biologists and scientists, who work alongside other Song Saa Private Island personnel, government and non-government organizations, conservation authorities and community leaders, to maintain the aspects of the natural environment – clear water, vibrant fish and coral life and unique land animals - that make Song Saa special. The conservation and education program has four key prongs, which together create a comprehensive marine and coastal conservation and education initiative.

1. Marine Reserve Management, Research and Monitoring

The program has established a marine reserve covering one million square meters, extending 200 meters from the outer edge of the reefs that fringe both of the islands of Song Saa. This reserve is a *first* for Cambodia, inspiring, we hope, further marine protected areas in the future. The reserve is being managed to international standards and studies are underway to significantly expand its boundaries.

A key factor in the development of this reserve had been the collaboration with local communities. Partnering with a fisheries group from Prek Svay, the value of the reserve has been discussed and recognized, while income alternatives to replace opportunities foregone by its creation have been developed. The understanding and support for the initiative has been demonstrated by the commitment of the local fisheries committee to patrol the demarcated area and undertake the education of local fishers on its rules.

In conjunction with Cambodian authorities, Song Saa Private Island's marine biologists are engaged in marine surveys, which are gathering data on the health of local reefs, fish stocks and other saltwater species. Water quality and sediment levels are also being monitored to keep a record of the health of the surrounding marine environment. Collectively these provide a database that can be used to benchmark the condition of the local marine environment and against which data can be monitored to evaluate change and improvement.



figure 5: Sea horse, song saa marine conservation area.

2. Land Conservation Initiatives

On the islands of Song Saa a plant and animal study has been completed, which identified bat-breeding colonies, roosting sites for hornbills, sea eagles and owls, and microhabitats for orchids and lichens. Management plans are now in place to preserve these species and their habitats,

3. Research and Learning Incubator

A core part of the conservation program is the development of a learning center for marine field research and education – a Cambodian first. Through alliances with national and international universities including James Cook in Australia and Victoria University in New Zealand, the program is bringing together Cambodian and foreign students and researchers to undertake pioneer marine research in the nation. An exciting initiative, investigations are currently underway on crab farming and mangrove ecosystems, while studies of sea turtle and sea horses are proposed for later in 2011.

Human-based research, focusing on economic and social aspects of development, will also be championed through the hub and investigations are now underway to identify suitable partners for this research sector.

Forthcoming visits from New Zealand and North American researchers promise to bring more focus onto the marine environments of the country which, combined with a domestic intern program, will ensure that the capacity of the Cambodian scientific community is nurtured and empowered by the project.

4. Environmental Education

The conservation program has an evolving education component focused on raising the awareness and understanding of environmental issues and opportunities amongst local communities. An innovative first for the area was the recent completion of a leaflet entitled *Conserve Your Marine Environment*. Printed in Khmer and English. This has become a center point in efforts to increase the knowledge and understanding of marine conservation amongst the inhabitants of local fishing villages in the Koh Rong archipelago. A similar education program, devoted to sanitation, is also underway and links to the waste management livelihood project described in the community section.

In June 2012, meanwhile, the Song Saa Sea Turtles youth education group was formed as a means of promoting environmental awareness and knowledge sharing amongst the younger Prek Svay demographic. Regular workshops are held with this group (see Figure 6) and participation is very popular.



Figure 6: Song Saa Sea Turtles mangrove workshop, July 2012.

Song Saa is also actively supporting the efforts to establish a state-of-the art wildlife conservation park in southwest Cambodia (Kampot). This *ex-situ* project represents a primary opportunity to build protection for Cambodia's 'natural wonders' that goes beyond the confines to the resort islands. This project is consistent with Song Saa's vision and brand DNA.

Environment

Management – Effects, Responses & Indicators

Effects	Response	Indicators
<p>Water Quantity</p> <ul style="list-style-type: none"> • Water abstraction has adverse impacts on local communities • Water foot-print exceeds capacity of the environment • Water abstraction has adverse impacts on local wildlife • Alteration of water causes adverse impacts on local ecosystems and human communities. 	<p style="text-align: center;"><i>Avoidance measures</i></p> <ul style="list-style-type: none"> • Water use is benchmarked at opening. Reduction goals are specified, recorded & monitored. • Water efficiency devices to be included in resort guest and operation facilities, including low flush faucets, motion sensor taps. • Use of plants that are native and tolerant of season rainfall differences. • Water for the resort will not be abstracted from surface water sources. • Irrigation of landscape areas in early mornings (before 9:00 am) and evenings (after 5:00 pm) in order to minimize evapo-transpiration loss. • Guest towel reuse programme implemented for the resort. <p style="text-align: center;"><i>Remedying measures</i></p> <ul style="list-style-type: none"> • Reuse of grey water on the resort for watering of landscape plants. 	<ul style="list-style-type: none"> • Monthly water use benchmarked and monitored using water meters. • No watercourses on Koh Bong or Koh Ouen are altered. • All external water sources are to be from locations approved by the villagers who use this water. • On-going liaison with these villagers to ensure use of this water source is not having an adverse impact upon them.
<p>Water Quality (marine and fresh)</p> <ul style="list-style-type: none"> • Local freshwater sources may be contaminated. • Water discharged from Song Saa Private Island causes damage to surrounding wildlife and ecosystems. This includes grey-water, sewage and storm-water sources 	<p style="text-align: center;"><i>Avoidance measures</i></p> <ul style="list-style-type: none"> • Natural storm-water conservation measures result in no net discharge of contaminated water into the surrounding sea environment. <p style="text-align: center;"><i>Remedying measures</i></p> <ul style="list-style-type: none"> • Filtered water to be supplied to guests and staff for all food preparation and drinking. • Grey-water is reused on the resort for the irrigation of landscape plantings. • Black-water is treated and, when discharged, is of the same chemical and 	<ul style="list-style-type: none"> • Any water discharge from the resort is monitored on a monthly basis and do not cause a change in the condition of local reefs or background water quality. • Storm-water discharges are monitored to ensure no discharges occur into the seawaters surrounding the resort.

	microbiological standard as the receiving environment.	
<p>Energy</p> <ul style="list-style-type: none"> • Energy use releases carbon into the atmosphere, contributing to global warming. • Energy use is inefficient. 	<p>Avoidance measures</p> <ul style="list-style-type: none"> • Energy use is benchmarked at opening. Reduction goals are specified, recorded & monitored. • Energy efficient technology used in guest and operational facilities, including digital timers, motion sensors and low energy light bulbs. • Employment of green architecture to reduce energy needs (e.g., thatch covered roofs to provide protection from heating by the sun). • Measures for energy conservation promoted to staff and guests. • Resort to supply own energy sources, including diesel generators and renewable energy sources (e.g., solar power). <p>Remedying measures</p> <ul style="list-style-type: none"> • Greenhouse gas emissions from infrastructure and operation of the resort are benchmarked and a strategy for reducing releases is developed and implemented. <p>Mitigation measures</p> <ul style="list-style-type: none"> • Greenhouse gas emissions from infrastructure and operation of the resort are benchmarked and a strategy for <i>offsetting</i> releases is implemented. Options include a blue carbon programme linked to an international pilot study being coordinated by Conservation International. 	<ul style="list-style-type: none"> • Green house emissions from the infrastructure and operation of the resource are benchmarked and compared annually. • Plan for reducing green house gas emissions developed and implemented within 5 years of resort opening. • Song Saa to contribute to an offset programme. • After 5-years, 20 percent of the resort's energy supply is to come from renewable sources, up to 50 percent after 10 years.
<p>Solid Waste</p> <ul style="list-style-type: none"> • Solid waste inflows result in contamination of the local environment, including the sea. • Solid waste inflows have adverse impacts on local flora and fauna and associated habitats. • Solid waste contributes to the ecological footprint of the SSPI. 	<p>Avoidance measures</p> <ul style="list-style-type: none"> • A waste minimization policy is established and implemented by the resort operation's team. • Procurement programme for resort includes policy that favors waste minimization through avoidance of over-packaging and the purchase of durable items. • Paper use minimized in the resort, includes paperless check-in and double-sided printing. • Measures for energy conservation promoted to staff and guests (e.g., organic 	<ul style="list-style-type: none"> • Waste volume and weight is recorded and monitored for the resort. • Waste minimization policy established and implemented within 1 year of resort opening. • Disposal levels for waste generated by the resort reduced by 50 percent, 2 years after the opening of the resort. • A waste diversion rate of 80 percent set as

	<p>straws in the bar, paperless newspapers, promotion of filter over bottled water etc).</p> <ul style="list-style-type: none"> • No disposal plastic and Styrofoam purchasing policy established and implemented within 2 years of the resort opening (e.g., disposable cups). <p style="text-align: center;">Remedying measures</p> <ul style="list-style-type: none"> • Obsolete towels and blankets from the resort are gifted to a Cambodia-based community support programme. • Re-use and recycling policy included within the waste minimization policy document. • Required infrastructure for waste management, including recycling bins, installed • All green waste from the resort restaurant and staff village is composted for use in the staff village garden. • Use of environmentally certified non-harmful cleaning products, only, within the resort (e.g., those with an Ecolabel certification). • The staff village includes a solid waste management centre. <p style="text-align: center;">Mitigation measures</p> <ul style="list-style-type: none"> • Collaboration with other nearby resorts to investigate and, if possible barge, recyclable waste to closest treatment station. • End of construction, total waste removable from resort and labour camp to recycling and off-site disposal locations. • Staff participate in regular community and reef clean-up events 	<p>2-year goal of the resort [calculated as the percentage of reused or recycled items verse the percentage that is disposed of].</p> <ul style="list-style-type: none"> • Disposable plastic and styrofoam island-free policy developed and implemented within 2 years of opening. • Register of cleaning products maintained to list cleaning product usage on the resort. • Waste minimization publicity material developed and promoted to staff and guests. • Obsolete towel and bedding agreement reached with Cambodian agency within 1 year of opening. • Solid waste management centre constructed and operational in the resort staff village. • Compost facilities established and operational.
<p>Biodiversity</p> <ul style="list-style-type: none"> • Construction and operation of the resort has an adverse impact on local biodiversity by destroying, displacing or stressing animals, vegetation or their associated ecosystems. 	<p style="text-align: center;">Avoidance measures</p> <ul style="list-style-type: none"> • Avoid the introduction of evasive plants or animals to the resort islands. • Lighting and noise management harmonizes with the needs of native wildlife. 	<ul style="list-style-type: none"> • Independent study of biodiversity on the resort islands is completed and submitted. (marine and terrestrial). • Reef and coastal margins rehabilitation plan completed by November 2011;

<ul style="list-style-type: none"> • Guest and staff activities have an adverse impact on local biodiversity by destroying, displacing or stressing animals, vegetation or their associated ecosystems. • Invasive animal and plant species impact negatively on local biodiversity. 	<ul style="list-style-type: none"> • Vegetation disturbance minimization policy established for the resort during construction. • All national wildlife laws are complied with. • Landscaping plan prepared and implemented, includes strategies for maintaining, rehabilitating and remedial plantings, using native species, for the main resort island. • Marine protected area established and maintained around the resort; expanded over time. • Promotion of local biodiversity and responsible behavior guidelines for interact with local biodiversity to be developed as part of the resorts interpretation policy. Formal presentation to be made to all Song Saa staff and biodiversity section to be included in staff handbook. Guests to be provided with interpretative information to help them understand the natural values of the resort. • Non-extraction, no artificial feeding and no captive animal clauses included in Song Saa Private Island Environment Policy document. <p style="text-align: center;"><i>Mitigation measures</i></p> <ul style="list-style-type: none"> • Reef and shoreline restoration plan developed and implemented for the rehabilitation of the coastal margins affected by the development of the resort. • Oriental pied hornbill nest box strategy developed as means for compensating for lost nesting opportunities caused by the development of the resort. • Song Saa supports active biodiversity conservation programme, which includes research and practical protection components 	<p>implementation completed by May 2012.</p> <ul style="list-style-type: none"> • Landscaping plan excludes evasive non-native plants. • Independent audit of the resort shows that it is compliant with all national wildlife laws; completed by November 2012. • Marine protected area of 5 ha in place. Actions underway to expand area, with expansion promulgated by November 2011. • Interpretation documentation for the resort includes guidelines for responsible behavior around local biodiversity. • Responsible behavior guidelines included in staff training. • All new Song Saa staff receive presentation on local biodiversity and responsible behavior guidelines. • Oriental pied hornbill nest box strategy developed, with minimum of six nest boxes installed by May 2012. • Minimum of 30 artificial reef structures created by December 2011. • Conservation and Community strategy developed by March 2011 • Environment Policy includes no extraction of species, artificial feeding and captive animal clauses.
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Management of Wildlife Species	<i>Avoidance Measures</i>	Indicators
<ul style="list-style-type: none"> • Song Saa is home to a number of unique and varied species, both on its land and in the waters around the islands. • These can be affected by human activities associated with the construction and operation of the resort. • Impacts can relate to habitat alteration and disturbance of natural habits by aspects such as lighting and noise. • Guests and staff may inadvertently cause damage by removing materials from the land and sea, or by their movements through fragile environmental habitats (e.g., coral reefs). • Song Saa will look for external opportunities to promote the protection of Cambodia's indigenous wildlife 	<ul style="list-style-type: none"> • Prior to construction Song Saa will employ qualified professionals to undertake a study of the wildlife of the resort islands. This will be used to: (a) identify the presence of Red List Species (IUCN) on the resort islands; (b) the identification of management needs in terms of avoiding, remedying and mitigating adverse impacts of development on the wildlife and their habitats. • Management plans will developed for Red List Wildlife Species (IUCN) identified as living on the islands of Song Saa. • Song Saa will employ qualified biologists to implement all conservation work, including development of wildlife plans for the resort island's Red List species. • Prior to any construction work surveys will be undertaken to ascertain anticipated effects on wildlife and their habitats. • Efforts will be made to avoid work in areas that has significant adverse effects on the environment. • No permanent artificial light will be placed on the island of Koh Bong that causes disruption to its natural inhabitants. • Guests and staff will be informed about the non-removal of natural artifacts via the Guest Directory and during staff training. <p style="text-align: center;"><i>Remedying Measures</i></p> <ul style="list-style-type: none"> • Temporary relocation of habitat, such as corals, will be used to remedy the potential adverse effects of development. <p style="text-align: center;"><i>Mitigation Measures</i></p> <ul style="list-style-type: none"> • In areas where deleterious effects are unavoidable on significant areas of habitat, the Song Saa Conservation team will implement replacement programmes (e.g., artificial reefs). • Song Saa will look for external opportunities to promote the protection of Cambodia's indigenous wildlife, including assistance with the development of a wildlife education project in Kampot. 	<ul style="list-style-type: none"> • Qualified biologists employed by Song Saa Private Island. • Flora and fauna study undertaken within the terrestrial and marine environs of Song Saa. • Management plans developed for Red List (IUCN) wildlife present on the resort islands. • Non-removal and environment care information provided with the Guest Directory and during staff training. • Records of relocations of species maintained by the Conservation and Community team. • Artificial reefs developed and installed around the Song Saa resort islands. • Song Saa has supportive relationship with the bodies establishing a wildlife education park in Kampot.

<p style="text-align: center;">Pollution & Contamination</p> <ul style="list-style-type: none"> • Physical and visual pollution – detracts from amenity, intrinsic and cultural values of the landscape. • Ambient pollution - detracts from amenity, intrinsic and cultural values of the environment; adverse impacts on biodiversity. • Chemicals (cleaning products, insecticides, chlorine & herbicides) adversely impact on local environment & community, staff & guests. • Guest and staff sunscreens and insect repellants cause damage to reef systems. • Sediment pollution during construction affects water quality and health of near-shore marine habitats. 	<p style="text-align: center;">Avoidance measures</p> <ul style="list-style-type: none"> • Resort design and landscaping plans harmonies with the visual environment, including use of existing and new native vegetation reused and recycled materials, and natural building products. • All chemical storage complies, use & disposal complies with 'best practice' and manufacturers use instructions. • Chemical use by designated and qualified staff only. • Contractors informed and liaised with in regard to sediment impacts. • Resort stocks of sunscreen and insect repellent are all biodegradable and not harmful to marine life. <p style="text-align: center;">Remedying measures</p> <ul style="list-style-type: none"> • Sound and lighting from the resort is monitored to determine any adverse impacts on local wildlife and peoples. • Staff aware of protocols for managing inadvertent release of chemicals into the local environment. • Protocols in place to do with any release of sediment into the surround marine environment. • All guests undertaking reef encounter experiences are supplied with biodegradable sunscreen and insect repellants that are malign to marine life. • Conservation & Community staff undertakes sediment patrols after rain events during construction and report any incidents to the construction contractors for amelioration. <p style="text-align: center;">Mitigation measures</p> <ul style="list-style-type: none"> • Reef and shoreline restoration plan developed and implemented for the rehabilitation of the coastal margins affected by the development of the resort. 	<ul style="list-style-type: none"> • Design and landscape plans prepared and incorporated into construction of the resort. • Bi-monthly audit of chemical storage, use and disposal practices. • Chemical spillage incidents recorded, including steps taken and any consequences from the accident. • Noise complaints registered and monitored. • Registration of sediment incidents and recording of response during period of resort construction.
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Socio-cultural & Economic

At the centre of the Song Saa Private Island approach to sustainability is a programme of engagement with local communities. This programme seeks, on the one hand, to ensure that adverse impacts on the local community emulating from the resort are avoided, remedied or mitigated; while, on the other, building the capacity and opportunities for these communities to maintain sustainable livelihoods. The emphasis, of the latter, in particular, is on processes that create *enabling conditions* that generate and support community well being.

The development of these conditions is based on mutual processes of support, understanding and collaboration; working with government and community institutions, networks and norms to achieve tangible and positive outcomes. Much of this work focuses on the community of Prek Svay, on the nearby island of Koh Rong, which is the largest settlement in proximity to Song Saa Private Island.

The socio-cultural aspects of the Song Saa Private Island *Sustainable Management Plan* reflect these themes in the policies and indicators set out below.

An example of the collaborative approach has been the development and operation of the Solid Waste Management centre in Prek Svay. Sponsored by Song Saa with support from the local community, the centre handles the collection and management of discarded solid materials from the environs of the Prek Svay village. This work includes the grading of compostable, recyclable and non-recyclable materials, with the latter being moved off the island for disposal on the Cambodia mainland.

Finally, consideration is given in this section to the way the resort will provide for those with special needs.



Figure 7 (left) Community waste management collection event, Prek Svay. Figure 8 (right) Community waste education event, Prek Svay

Song Saa & Community Engagement

The Song Saa community program seeks to weave together the needs of local peoples, with the opportunities created by the development of Song Saa Private Island and its conservation program. The focus here is given to the support communities receive through activities that promote sustainable livelihoods. The emphasis here is on processes that create *enabling conditions* that generate and support community well being.

The development of these conditions is based on mutual processes of support, understanding and collaboration; working with government and community institutions, networks and norms to achieve tangible and positive outcomes. Much of the present focus is with the village of Prek Svay, on the nearby island of Koh Rong, which is the largest settlement in the area, with 148 families.

The following livelihood projects are either underway or being developed to support the Song Saa livelihood's program:

1. Hospitality Training Centre

A key feature of the Song Saa livelihood program will be the development of a hospitality-training centre. This will be a regional first, providing a facility where people from Prek Svay and the wider Koh Rong archipelago can obtain expert training in the provision of hospitality services, including language training and courses in restaurant activities.

A unique feature of the centre will be the direct route it will provide into potential employment opportunities with Song Saa Private Island. This will offer a goal for student's to aspire to, representing an employment opportunity both unique and traditionally unavailable to Cambodians from coastal communities.

2. Agriculture

The Song Saa Private Island Conservation and Community team is working with *Community Translation Organization* (a local non-government organization) to investigate and develop community-based agriculture opportunities, centered on the propagation of local vegetables, fruit and berries for sale to Song Saa Private Island. A special focus of these activities will be the encouragement of organic methods, removing the emphasis on herbicides and chemical fertilizers, which are ultimately expensive and damaging to human health and the environment.



Figure 9 & 10: Livelihood support, in the form of agricultural training & assistance is a feature of Song Saa Private Island's community engagement programme

3. Solid Waste Management

The Conservation and Community team are working with the community of Prek Svay to manage the flow of solid waste from the village and nearby beaches. While contributing to the health of the village, the activity is providing an income stream through the provision of incentive payments to the village waste collectors. It is anticipated that the sale of recyclable materials will also provide an additional income stream for the community.



Figure 11: Teaching good solid waste management practice, even at a young age, is a feature of the Song Saa Community engagement programme.

4. Water security and sanitation

A reoccurring problem for coastal communities is the provision of safe domestic water supply and the protection of this supply from contamination. Further, community health is recognized as a core component of sustainable livelihood maintenance. Why? Because families that incur ill health from water borne diseases are less able to work and often need to borrow money to meet the cost of medical treatment. This can generate a cycle that spirals a family downward into poverty.

It is intended to work with the community and local providers to develop environmentally sensitive water treatment and waste reticulation systems, drawing on constructed wetlands, gravity flow and solar tertiary treatment as potential management options.

The resulting systems will not only provide an effective means for water management but the associated wetlands could offer environments for unique livelihood activities such as snail and frog rearing.

5. Education and Health Care

Although not direct livelihood activities, the availability of education and reliable health services are core *'enabling conditions'* that provide the platform for the success of any livelihood scheme.

Planned English language courses, for example, will enable villagers to participate in employment opportunities generated by Song Saa Private Island. Provision of reliable health care, meanwhile, can cancel out the negative effects that illness places on family budgets and well-being (as noted above).

In support of these two components Song Saa Private Island is investigating options, with an investor and local authorities, for the erection of a secondary school at Prek Svay. As there is no secondary school in the vicinity, the development of this facility will benefit a large part of the Koh Rong archipelago. Health care needs, meanwhile, require investigation and assessments should be completed by late 2011.

Mr. Chan Ren and the Solid Waste Management Team of Prek Svay

Mr. Chan leads the dedicated team of five that manages the flow of waste from the village of Prek Svay, the largest settlement in proximity to Song Saa Private Island.

An inhabitant of Prek Svay for twenty years, Mr. Chan formerly made a living fishing the waters that surround Song Saa Private Island; however age and declining catches caused him to find an alternative living. Says Ren of his new occupation: *“I was selected by the village chief to lead the solid waste management group. I think the project is good. A clean village will encourage tourists and improve our health”.*

Mr. Chan is especially excited about the development, in cooperation with Song Saa Private Island, of a solid waste management center. A focal point of the waste management program the facility includes a sorting area for recyclable materials, a composting area for organic wastes, and a well supplying water for the cleaning of equipment.

The center is illustrative of the collaborative approach being taken by Song Saa Private Island in its work with local communities, where partnerships are encouraged through joint contributions. In the case of the solid waste center, for example, villagers have donated the land on which the facility is being built while Song Saa has provided financial support for the building of the center.

A special event, which entailed the blessing and opening of the Solid Waste Management Centre, was held in April 2011.



Figure 12: Opening and blessing of the Prek Svay Solid Waste Management facility in April 2011.

Socio-cultural & Economic

Management – Effects, Responses & Indicators

Effect	Response	Indicators
<p>Engagement & Community</p> <ul style="list-style-type: none"> • Lack of environmental & community awareness or understanding leads to unsustainable behavior by staff, guests & communities. • Staff & guests interaction with local communities result in disruption or exploitation of the local community. • Lack of understanding between the resort & community leads to misunderstandings and conflict • Local resource and economic situation is not improved or deteriorates due to the presence of the resort. • SSPI impacts on sanitation services of the surrounding communities. • SSPI impacts on the food supply of the surrounding 	<p style="text-align: center;"><i>Avoidance measures</i></p> <ul style="list-style-type: none"> • SSPI supports a strategic community engagement programme that seeks to understand and address the livelihood needs of the local community. • Regular liaison is maintained between the officials from the local community and the staff of SSPI. • SSPI supports sports & recreational opportunities with the local community, including a junior conservation & recreation group, Song Saa Sea Turtles. • Interpretation materials, including Song Saa Nature Guide, <i>Reef Notes</i> newsletter and intranet articles provide detailed information on local environment & communities & protocols for responsible behavior. • Staff orientation handbook and training includes sections on the local environment & communities and protocols for responsible behavior. • Information is provided in the staff orientation manual and to guests that dissuade people from purchasing items that are important cultural artifacts. • Song Saa purchasing policy promotes the use of local produce and fair trade items. <p style="text-align: center;"><i>Remedying measures</i></p> <ul style="list-style-type: none"> • SSPI supports a comprehensive livelihoods programme within Prek Svay, focused on agriculture and aquaculture. • Agricultural & fisheries resources grown & caught by the local community are purchased & used by SSPI. • Procedures for addressing problems between staff & guests & local communities are 	<ul style="list-style-type: none"> • Community engagement strategy is in place and an annual work programme is operative. • SSPI meet with village and island chief at least once a month to discuss issues and opportunities arising from the operation & management of SSPI. • Record of monthly meetings is maintained, including minutes, points raised & agreed resolution procedures are documented. • Song Saa Sea Turtles group established & a programme of activities devised by November 2011. • A livelihoods programme is implemented from April 2011. • A village cooperative is established to supply sustainable harvested fish species to SSPI. • Staff orientation training manual includes environment and community sections, including protocols for responsible behavior. • SSPI Nature Guide completed and published & copies made available to guests by November 2011. • Conflict resolution procedures for issues arising between staff, guests and community re included in SoP of resort operating manuals by

<p>communities.</p> <ul style="list-style-type: none"> Local cultural artifacts are sold and lost to the community. 	<p>developed and included in SoPs for SSPI</p>	<p>November 2011.</p> <ul style="list-style-type: none"> Information on responsible behavior in terms of purchase transactions with local communities included in staff orientation manual and on guest intranet. By November 2011. Procurement register differentiates locally produced and fair-trade items from other products.
<p>Health & Safety & Risk Management</p> <ul style="list-style-type: none"> Improper conduct or lack of awareness leads to health & safety issues arising from the operation of the resort for staff, guests & local communities. Improper conduct or lack of awareness causes harm to the environment and local communities. 	<p><i>Avoidance measures</i></p> <ul style="list-style-type: none"> Risk assessment undertaken for resort, including operations, guest interactions and interactions with environment and communities. Knowledge & awareness of risk and health and safety issues on tropical island resorts is included in staff interview processes. SoPs established to ameliorate all risk areas identified through the risk assessment process, this includes guest encounter experiences and interactions with the local communities. Staff operating encounter experiences identifies risks to guests prior to the commencement of any activity. Regular liaison is maintained between the officials from the local community and the staff of SSPI. SSPI supports sports & recreational opportunities with the local community, including a junior conservation & recreation group, Song Saa Sea Turtles. Interpretation materials, including Song Saa Nature Guide, <i>Reef Notes</i> newsletter and intranet articles provide detailed information on local environment & communities & protocols for responsible behavior. Staff orientation handbook and training includes sections on the local environment & communities and protocols for responsible behavior 	<p>Indicators</p> <ul style="list-style-type: none"> Risk assessment completed. Includes risk identification, risk minimization and risk management sections. Completed November 2011. SoPs for all areas identified through the risk assessment process drafted and implemented from December 2011. Risk minimization and health and safety SoPs are included in the staff orientation manual and the guest intranet. Guest satisfaction survey includes sections on the health and safety standards of the resort. Completed December 2011. Responses to guest survey are reviewed monthly and adjustments are made to address any identified problem areas. SSPI meet with village and Sangkat chief at least once a month to discuss issues and opportunities arising from the operation & management of SSPI.

	<p style="text-align: center;">Remedying measures</p> <ul style="list-style-type: none"> • SoPs established to deal with accidents arising from staff or guest interaction with the local environment, communities; or arising from the operation of the resort. <p style="text-align: center;">Mitigation measures</p> <ul style="list-style-type: none"> • Incident report maintained and reviewed monthly, with policy of addressing practices or SoPs for re-occurring or significant incident areas. 	<ul style="list-style-type: none"> • Record of monthly meetings is maintained, including minutes, points raised & agreed resolution procedures. • Staff orientation training manual includes environment and community sections, including protocols for responsible behavior & risk management. • Annual report prepared by the Conservation Community team detailing the impacts and consequences of staff and guests interaction with the local environment and communities, including recommendations for management changes to address any identified problem areas.
<p style="text-align: center;">Special Needs</p> <ul style="list-style-type: none"> • Lack of appropriate services & infrastructure prejudices people with special needs 	<p style="text-align: center;">Avoidance measures</p> <ul style="list-style-type: none"> • Resort accommodates opportunity for special needs guests through the provision of rooms and services that are suitable to their situation • Areas suitable for special needs guests are identified to them upon reservation & check-in. <p style="text-align: center;">Remedying measures</p> <ul style="list-style-type: none"> • Guest satisfaction survey includes questions on the quality of service and facilities for special needs guests. • Monthly review of guest satisfaction survey and incorporation of re-occurring issue areas into facility and service amendments. 	<p style="text-align: center;">Indicators</p> <ul style="list-style-type: none"> • Reservation & check-in information includes section, identifying areas of the resort accessible to special needs guests. From November 2011 • Register of special needs issues maintained and responses to these issues detailed. From November 2011.
<p style="text-align: center;">Employment & Hiring</p> <ul style="list-style-type: none"> • Hiring policy discriminates on the basis of gender, ethnicity & sexuality. • Terms & conditions of staff 	<p style="text-align: center;">Avoidance measures</p> <ul style="list-style-type: none"> • Staff hiring policy includes non-discriminatory clauses. • SSPI complies with local & international labour laws, conventions, standards & regulations. 	<p style="text-align: center;">Indicators</p> <ul style="list-style-type: none"> • Non-discriminatory clause is included in hiring guidelines. • Staff are hired on basis of competency &

<p>employment result in the exploitation of staff.</p> <ul style="list-style-type: none"> • Non-hiring of local people reduces the benefits of the resort to the local economy. 	<ul style="list-style-type: none"> • Salaries & benefits meet or exceed local & national regulations. • Employees receive opportunity to up-skill through training & capacity building. • Health insurance or equivalent is supplied to full-time employees. <p style="text-align: center;">Remedying measures</p> <ul style="list-style-type: none"> • Hospitality training centre is operated to provide local community members with the opportunity to qualify & work in SSPI. 	<p>suitability for positions.</p> <ul style="list-style-type: none"> • Staffing records identify the composition of gender, ethnicity & sexuality of employees on a numerical basis. • Complicity with national & international labour laws is monitored & recorded. • Staff contracts include an annual provision for staff training, and a provision for healthcare. • Hospitality training centre is constructed & operational by December 2012.
<p>Procurement & Purchasing</p> <ul style="list-style-type: none"> • Purchasing policies do not generate sustainable outcomes. Issues include carbon & water footprints, & the generation of solid waste. 	<p style="text-align: center;">Avoidance measures</p> <ul style="list-style-type: none"> • An environmental sustainable criteria & preference system is developed to guide purchasing policies & decisions. Criteria include, (a) minimum of non-recyclable materials; (b) packaging minimization; & (c) preference for reusable & recyclable products. • A register is established & updated of sustainable goods & services available in Cambodia, including those from local communities. • Purchasing preference is given to fair-trade & eco-certified goods & locally produced environmentally friendly products, where available & competitively priced. • Procurement strategy is communicated to guests so they are aware of rationale. <p style="text-align: center;">Remedying measures</p> <ul style="list-style-type: none"> • Use of non-reusable & non-recyclable plastics & other items is minimized. <p style="text-align: center;">Mitigation measures</p> <ul style="list-style-type: none"> • Solid waste management system operational & results in the reuse, recycling and non-disposal of materials into the local environment. 	<p style="text-align: center;">Indicators</p> <ul style="list-style-type: none"> • A procurement criteria & preference system is developed & placed on the procurement page of the staff. • Register of sustainable goods & services is developed on the procurement page of the staff intranet. • Water volume/weight & reduction goals are specified, recorded & monitored. • Solid waste management system in place & operational.

	<ul style="list-style-type: none">• Thorough post-construction clean-up of site is undertaken; waste is sorted & processed in accordance to status (re-usable, recyclable, non-recyclable).	
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Conclusion

Sustainability and its triple bottom-lines are central to the vision and mission of Song Saa Private Island. Behind this is an appreciation that the wellbeing of Song Saa requires us to 'tread lightly' within the physical and social worlds that we inhabit and that our guests experience. Putting this into practice, this management plan provides Song Saa with the framework for weaving sustainability into all aspects of the resort's development and operations.

A Green Globe member since 2010, the entire Song Saa team is working to ensure that the resort meets as many of the Green Globe criteria and indicators as possible. Our goal is to surpass the threshold of indicators that we are required to meet in order to be officially certified as 'sustainable' by Green Globe. The preparation and implementation of this sustainability management plan is a crucial part in this effort.

In the end, however, achieving Green Globe certification is only part of Song Saa's commitment to sustainability. The on-going work of our marine and terrestrial biologists, the community work in progress on Prek Svay, and the national level initiatives underway to promote partnerships and research take us beyond the expectations of Green Globe.

Collectively, the result is that Song Saa's triple bottom-line vision and mission are taking resort development in Southeast Asia in a new, exciting and sustainable direction.

