

Siloso Beach Resort Sustainability Report 2012:

Blending Life and Leisure with Nature



Siloso Beach
resort



Singapore
Environmental
Achievement Award
(Top Achiever 2010)



Singapore Sustainability
Award
(Top Honor 2011)



Singapore CSR
Award (Special
Mention 2010)



TUV Rheinland
certified
Eco Hotel

This report follows the latest **ISO 26000** guidelines on Social Responsibility as well as the **GRI 3.1**



Statement GRI Application Level Check

GRI hereby states that **Siloso Beach Resort, Sentosa** has presented its report "Siloso Beach Resort Sustainability Report 2012" to GRI's Report Services which have concluded that the report fulfills the requirement of Application Level A.

GRI Application Levels communicate the extent to which the content of the G3.1 Guidelines has been used in the submitted sustainability reporting. The Check confirms that the required set and number of disclosures for that Application Level have been addressed in the reporting and that the GRI Content Index demonstrates a valid representation of the required disclosures, as described in the GRI G3.1 Guidelines.

Application Levels do not provide an opinion on the sustainability performance of the reporter nor the quality of the information in the report.

Amsterdam, 22 October 2012

A handwritten signature in blue ink, appearing to read "Nelmara Arbex".

Nelmara Arbex
Deputy Chief Executive
Global Reporting Initiative



The Global Reporting Initiative (GRI) is a network-based organization that has pioneered the development of the world's most widely used sustainability reporting framework and is committed to its continuous improvement and application worldwide. The GRI Guidelines set out the principles and indicators that organizations can use to measure and report their economic, environmental, and social performance. www.globalreporting.org

Disclaimer: Where the relevant sustainability reporting includes external links, including to audio visual material, this statement only concerns material submitted to GRI at the time of the Check on 28 July 2012. GRI explicitly excludes the statement being applied to any later changes to such material.

Siloso Beach Resort Sustainability Report 2012

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- Beatrice Ho and Isey Jeselin, internship students from Singapore Polytechnic
- All SBR Sustainability Committee Members
- SBR staff and stakeholders



Review:

Internal Review:

Approved by Sustainability Committee
28th June 2012

**“Expires”
25 October
2013**

This report is also available in electronic form, and can be downloaded at the following link:

<http://db.tt/qW2WGGK2>

Please consider the environment before printing.



Meet your guides


If you have been to our resort, you have probably already met us. We are the **Eco Ambassadors** of Siloso Beach Resort and we will assist you in navigating through this sustainability report!



In 2011, SBR introduced its new mascots concept in order to further improve its environmental outreach both within and outside of the resort. These two characters are present throughout the resort displaying, in a fun manner, key environmental messages and sustainability concepts. Squirrels and monitor lizards can be seen throughout the resort, it was therefore appropriate to choose these two characters as our mascots/Eco Ambassadors.

Content Highlight

We are transparent in reporting:
We report on the great, the good, the bad...and hopefully we do not think we have any ugly

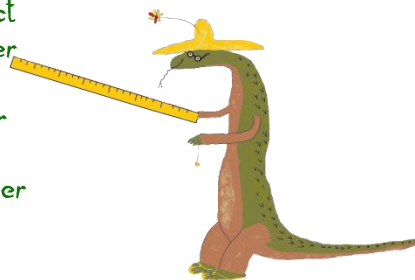


Squirzy: "Prof Monitor, this report is soooooo looong ZZZ Why we didn't produce a shorter report for impatient readers like me??"

This is **NOT** a "conventional" sustainability report. At SBR we do nothing in an ordinary way. Our business model is most unusual...

This report is however **a story of SBR** which **includes** a **full sustainability reporting** according to the **GRI 3.1 guidelines**

Prof Monitor: "Yes, Squirzy that is a very good point. Actually a shorter report is always better. The decision to extend the report relies on the fact that this is not only a sustainability report but rather a statement of the story of **SBR** since its conception which includes a detailed analysis of our strong sustainability commitments. The length of the report does not reflect a lack of planning but rather that we have a lot to share with our stakeholders into one single report"



Siloso Beach Resort Sustainability Report 2012

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SBR's United Nations Global Compact Commitment



Global Compact 10 Principles

UN Global Compact

As per **1st February 2012**, SBR is proud to be a new member of the United Nation Global Compact.

About the United Nations Global Compact

The United Nations Global Compact is a call to companies everywhere to voluntarily align their operations and strategies with ten universally accepted principles in the areas of human rights, labour, environment and anti-corruption, and to take actions in support of UN goals, including the Millennium Development Goals. Endorsed by chief executives, the UN Global Compact is a leadership platform for the development, implementation, and disclosure of responsible corporate policies and practices. Launched in 2000, it is the largest corporate responsibility initiative in the world – with over 8,000 signatories based in more than 135 countries.

For more information: www.unglobalcompact.org.

The UN Global Compact asks companies to embrace, support and enact, within their sphere of influence, a set of core values in the areas of human rights, labour standards, the environment and anti-corruption.

Engaging in the Global Compact and implementing the principles will help SBR to:

- *improve organizational integration of environmental, social and governance issues. address the company's expanded business opportunities and risks;*
- *improve operational efficiencies;*
- *access the experiences and good practices of peers;*
- *acquire practical know-how;*
- *attract, motivate and retain employees;*
- *increase trust in the company and renew its license to operate;*
- *improve corporate reputation and brand image;*
- *engage in a proactive and constructive dialogue with civil society and other stakeholders;*
- *strengthen stakeholder relations, both globally and locally;*
- *establish better links with the United Nations;*
- *take a leadership role on critical issues & network with other organizations;.*
- *respond to financial market expectations and improve access to capital.*

| Categories | Global compact 10 principles |
|-----------------|---|
| Human rights | <ul style="list-style-type: none"> • Principle 1: Businesses should support and respect the protection of internationally proclaimed human rights; and • Principle 2: make sure that they are not complicit in human rights abuses |
| Labour | <ul style="list-style-type: none"> • Principle 3: Businesses should uphold the freedom of association and the effective recognition of the right to collective bargaining; • Principle 4: the elimination of all forms of forced and compulsory labour; • Principle 5: the effective abolition of child labour; and • Principle 6: the elimination of discrimination in respect of employment and occupation. |
| Environment | <ul style="list-style-type: none"> • Principle 7: Businesses should support a precautionary approach to environmental challenges; • Principle 8: undertake initiatives to promote greater environmental responsibility; and • Principle 9: encourage the development and diffusion of environmentally friendly technologies |
| Anti-corruption | <ul style="list-style-type: none"> • Principle 10: Businesses should work against corruption in all its forms, including extortion and bribery |

SBR fully supports and follows the 10 principles of the UN Global Compact

This story book is also a:

GRI A level Report



In order to make this report we have **integrated the GRI 3.1 Guidelines** within our overall report plan. We report on all GRI indicators.

This report was primarily developed to showcase in one document the extent of the very unique sustainability focused Initiatives which have taken place at SBR since its creation. **GRI reporting** is an important part of this report **but not the only scope**





Welcome to our Eco-Resort!



This is my home, an oasis of greenery and fresh air. I will tell you all about it!

Siloso Beach Resort is an **Eco Resort** on the island of Sentosa in Singapore



At SBR the structures **blend** with the surrounding vegetation



Introduction

Our journey towards sustainability

At Siloso Beach Resort (SBR), we like to see ourselves as a very special hotel when it comes to sustainability and environmental values and I would like to highlight what I mean by this:

Our vision of a sustainable business

Even before SBR was conceived more than 9 years ago, it was decided that it would become an eco-hotel. This hotel would not only adopt unique sustainable features in its design, but also act as a showcase of best sustainable practices to all our stakeholders.

Coming from a construction background, I have noticed first hand over the years the level of very significant impacts that this sector has on our environment. It was our vision that perhaps the construction of a hotel, which showcases how things can be done differently while still remaining a viable business model, could play a significant role in progressing towards a less impactful industry sector.

Since this vision was first conceptualized, we have gone a long way and are still growing strong into what has become our journey towards sustainability.

The construction phase

This journey did not start without major obstacles. At the time of construction, our vision of a sustainable hotel was seen very unusual by many of our contractors and stakeholders and it took determination and passion to proceed in making it a reality, the way we wanted it to be.

Perhaps one of our strongest and most unusual determinations was **to preserve all the existing trees** on site. The location on a forested part of Sentosa and on a hill side was not proven so easy. In order to preserve these trees we had to apply **most unusual construction techniques**. These measures have allowed us to construct a 200 room hotel while **preserving over 200 fully grown trees and planting another 450 trees** post construction. At SBR the trees are literally integrated within the buildings structures.



At SBR we have an holistic, progressive and continuous approach to sustainability



Siloso Beach Resort

Blending Life and Leisure with Nature

Going beyond preserving the vegetal coverage and its inhabiting biodiversity, the buildings were constructed in a way that:

- *Maximise natural lighting through an open concept;*
- *Maximize natural cooling through efficient design as well as the implementation of unique features such as what remains (to the best of our knowledge) the longest self-maintained roof top garden in Singapore;*
- *Making use of a very significant amount of re-used materials in the built structure;*
- *Making use of the natural shape of the terrain (for instance our landscape swimming pool has been placed on top of an existing maintenance road).*
- *Rainwater harvesting and purification passive features;*

At SBR we believe that real sustainability can only come from **good initial design** to minimize environmental impacts and maximise energy efficiency through passive means. This is what we are actively trying to promote.

Post-construction

Following the success of the construction phase, it quickly became apparent that much more could be achieved than just growing the business without further consideration for the environment. On the contrary we had to take advantage of this unique position to continue on our path of sustainability through retrofitting and Cleantech investments.

As such, numerous initiatives and investments have gone into further reducing the environmental impacts post-construction. To site a few:

Water minimization through numerous water saving features including an elaborate water treatment system. This system makes use of an underground **natural spring reservoir** which was discovered during construction (all the water for gardening and other applications such as the pool is not making use of any precious tap water but instead uses a natural resource that we have the chance of having on site);

Energy use minimization through smart appliances (best in class energy efficient lighting solution) but most notably through the early investment in a third generation heat exchange...



..system which was one of the first to be installed in Singapore;

•**Waste management:** through various practices but also through investments such as our food waste decomposer (one of the first to be tested in Singapore) as well as through our active recycling program.

Management and outreach

The next logical step in our journey towards becoming a more sustainable business model was to relook into our management to **incorporate sustainable practices at all level of operations**. This was already implemented since the beginning but we went into a great deal of effort to revamp our policies, staff training and outreach policies to push the concept of sustainability even further and making sure that it is well integrated and communicated throughout the organization, not just as guidelines, but more like **a corporate culture**.

CSR

CSR was the most visible change in our outreach initiative. The level of commitment to outreach on sustainable initiatives through our CSR programs is truly an achievement. SBR has since been running very successful outreach programs.

Some of our most visible outreach platforms to date include the **Biodiversity Portal of Singapore** (www.biodiversity.sg) as well as our very successful **Eco Tours** which we use to communicate our practices to various stakeholders (to date more than 3000 people from sectors as diverse as schools, universities, corporations, government agencies...have undertaken our eco tours).

We regularly outreach on global environmental issues through our contribution to www.eco-business.com (one of Asia pacific largest environmental business communities). We are regularly featured in press releases as well as articles and blogs on sustainability best practices not just in Singapore but increasingly on an international level.

Donations

We regularly donate to various environment or social related causes should it be in the form of sponsorship of events,

direct donations or providing facilities.

One of our most recent donation was for an amount of **half a million dollars** to the National University of Singapore for the purpose of raising funds to bring real dinosaurs to Singapore.

Special projects and R&D

SBR has embarked on a range of very special projects that many may see as very unusual in a hotel environment. Some of these projects include:

-Roof top gardening: where **we produce our own vegetables organically** using an experimental worm composting system that we manage on site. Part of the production goes back to our F&B department.

-The display of **real dinosaur bones on site** in order to promote the upcoming Singapore Natural History Museum and outreach on conservation issues.

-**Numerous** environmental outreach messages onsite through various means such as mascots, display panels, in house environmental TV channels and more, which we use to promote awareness on the most pressing global and local environmental issues such as Global Climate Change, pollution, biodiversity losses, water conservation...

Our credentials as a small business promoting sustainability practices:

SBR is the winner/recipient of the:

- Singapore Environment Achievement Awards (Top achiever 2010);*
- The Singapore Sustainability Award (Top honour 2011);*
- Singapore CSR Award (special mention 2010);*
- The first hotel in South East Asia to be certified as an Eco Hotel from TUV Rheinland (international certification body);*
- The first hotel in Singapore to be certified under the Singapore Environment Council Eco hotel certification Scheme (we served as the model to develop this scheme);*
- One of the first hotels in Singapore to join The UN Global Compact;*
- And numerous very unique environmental related programs,*





Introduction

Our journey towards sustainability

Commitment

In early 2012 SBR joined the UN Global Compact, and is committed to continually supporting the initiative and its ten principles on human rights, labour, environment, and anti-corruption.

At SBR we are convinced that **corporate sustainability is the only way forward** and we will continue on our journey towards continuous improvement in this direction. We believe that a single small business like ourselves can play a role by not just adopting such practices to our own business but, in our opinion even more importantly, to remain active in sharing these practices by **outreaching to society** and possibly inspiring many others to adopt a similar development path.

Perhaps our most driving conviction behind all of this is that as a hotel environment we are indeed in a position to influence and possibly educate people from all kinds of origins, nationalities, business sectors and interests, on a range of pressing environmental issues. The feeling that we are actually doing this is one of our greatest achievements.

I hope that the above very brief highlight gives you an overview of what we are trying to do for the environment and sustainability in general even though we are just a small business and that the following report could inspire many other businesses to embark on this journey of sustainability with us.

Sincerely,

Mr Kelvin Ng,

Owner/Executive Director, Siloso Beach Resort



SBR's waterfall

*“At Siloso Beach Resort, Sustainability is not just a practice, it is a **core component** of our management which drives every decision that we make”*



SBR's Central Court & pool by night

Vision: The Resort aims to set the environmental benchmark to allow our guests and the community to experience a quality eco friendly environment that will encourage them to adopt environmental initiatives

Mission: The Resort will continuously strive to reduce its ecological impact by adopting best practices and applying appropriate new technologies

Values: At the resort we believe that:

- Our commitment to the environment begins with our employees, stakeholders, customers and community. It requires both enormous dedication and real ingenuity and is a long term process;

- Each one of us needs to change our critical behaviors and be environmentally conscious on a daily basis;

- Community and customers are essential to our long term success and we need their involvement and support to build a successful and sustainable environment program;

- We need a complete and holistic approach in tackling environmental challenges;

- Our plans, strategies, people and processes must be built on the foundations of continuous improvement.

- Providing quality services and accommodation to our customers

The story of Siloso Beach Resort



Siloso Beach Resort
Blending Life and Leisure with Nature

This sustainability report, **the first** of a coming annual series, is set to mark a new era at Siloso Beach Resort. Siloso Beach Resort (SBR) is a **very unique hotel in many ways** and this report intends to highlight the reasons why.

Following the implementation of numerous sustainable initiatives, best practices and policies, it became apparent that the next step for SBR to embark-on would be to produce a sustainability report that would provide **a highlight of the journey into a single document.**

SBR is proud to be one of the very few hotels which was **purposely built, from its conception, to be an Eco Hotel** and to apply best sustainable practices throughout all its operations. The commitment of SBR to be a reference in the sustainability field is strongly present in daily operations.

This report tells the Story behind the mind-set that has led to what SBR is today, the different stages of development and the unprecedented commitment of its management to set the benchmark of a new era of sustainable business models in the leisure industry and to continually pursue in this direction.

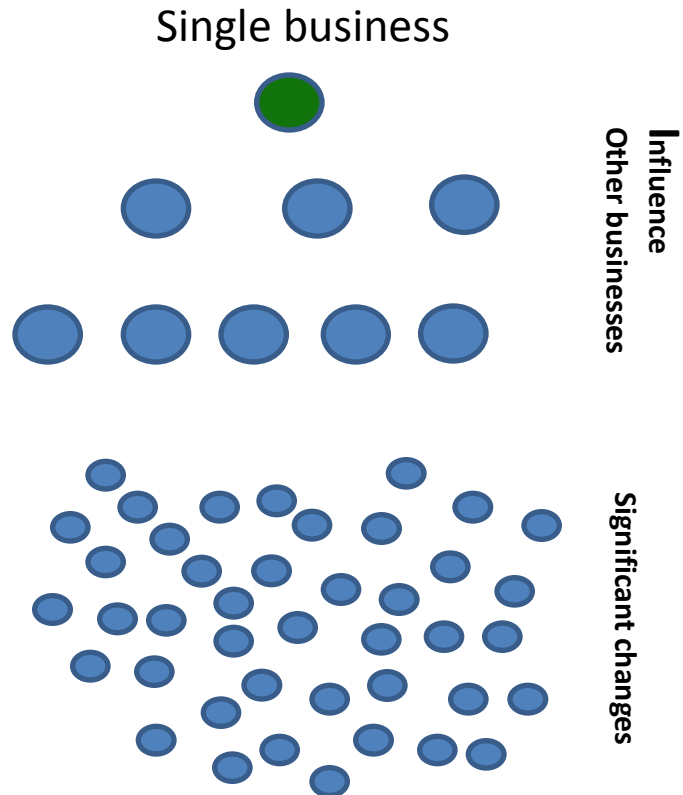
Realisation of a rapidly changing world

One of the main drivers behind SBR adopting a sustainable business model is the realisation and acceptance by its management that we live in a fast changing world in which environmental issues are high on the agenda and in which businesses have an important role to play to help limit these impacts. Global concerns such as climate change, pollution, biodiversity losses, fresh water depletion and more, are of great concern to current and future generations and something needs to be done.

SBR believes that it can play its part by reducing environmental impacts on its premises through the adoption of sustainable practices at all levels of operations but also by sharing its opinions and initiatives with society through its CSR programs. It is apparent that while one single organisation can only make small and often insignificant differences on a national or even global scale through its daily operations, it can have very significant impacts on a larger scale by influencing various stakeholders and society at large.

It is precisely this potential to make a real change by **influencing the numerous guests** who transit through the facilities that has pushed SBR in this direction. The hotel industry is one that has the most potential to influence many people, yet it is also one of the sectors that has made little progress in this field.

One single business adopting and showcasing sustainable practices can influence many others to adopt a similar development path:



Constructing an eco-resort from the very start

SBR's view is that in this type of business (built environment/hospitality) integrating sustainable practices from the very beginning (and in particular the construction phase) is key as there is only so much that can be achieved in reducing environmental impacts post-construction. If a developer is in a position to implement sustainable thoughts from the very beginning, then it should be done at this stage.



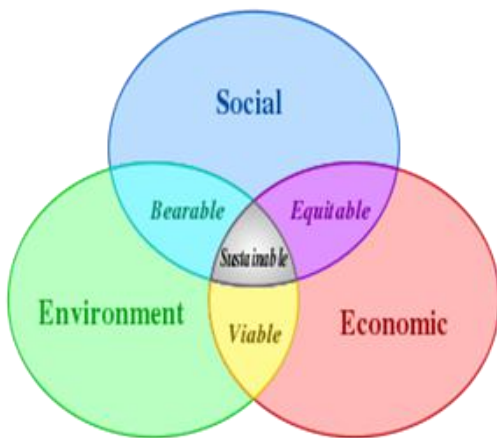


At Siloso Beach Resort (SBR) the concept of sustainability is not new, in fact even before the hotel was built more than seven years ago, it was decided that SBR would adopt a sustainable business model. At this stage three key decisions were made which were considered highly unusual at the time:

Our 3 guiding principles:

- 1) *The natural terrain would be preserved;*
- 2) *The trees would be preserved;*
- 3) *The resort would have minimum covered area.*

Since then the concept of sustainability has been well established and remains a core component of the business model with strong initiatives at all levels of operations:



Unique Environmental attributes: with features such as truly innovative environmentally friendly construction techniques; the longest self-sustained rooftop garden in Singapore; the only 100% spring water landscape swimming pool in Singapore; and numerous other unique environmental practices and initiatives in a hotel environment.

Socially responsible: with features such as SBR Eco Tours; regular sponsorship of numerous sustainability events; and its latest CSR program: The Biodiversity Portal of Singapore, SBR continuously gives back to society and actively promotes the concept of sustainability.



Economically viable: with average high hotel occupancy, SBR is not only a sustainable hotel but an economically viable business as well that will continue to use its facilities as a showcase of sustainable practices and a test-bed of environmentally friendly technologies.

Siloso Beach Resort, Sentosa, is a **recognised and certified eco-hotel** from TUV-Rheinland and the Singapore Environment Council (certified from 2010/2011). Additionally SBR is the winner of the Singapore Environment Achievement Award (2010/2011), the winner of the Singapore Sustainability Award (2011/2012) and the recipient of a special mention award from Singapore Compact for CSR.

Our philosophy

“Making money? Our life, besides making money, is also about happiness, enjoyment, health, and continuity. This is our company philosophy..”

..How can businesses continue into the future if they cannot anticipate the world environmental problems?

It is for the simple fact that consumer awareness will lead to less profitability in the long run for those who do not practice sustainability.”

Mr Ng Swee Hwa
Chairman/Owner of Siloso Beach Resort



Case study :

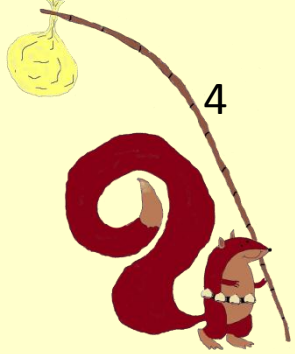
SBR's Pendulum of Sustainability™



Siloso Beach Resort

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1 Squirzy: "Prof Monitor, I drew this pendulum and it made me think of what you told me about sustainability. That it is all about balance and timing. Can you explain me in simple terms again using my pendulum, pleaaaaase?"



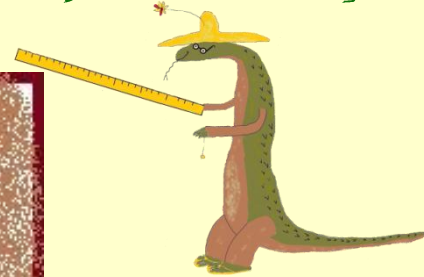
Squirzy: "Indeed, and when the pendulum oscillates from one end to another all three positions are given the same attention. But what happens if it is stuck in one of these positions???"

5

S Prof Monitor: "if the pendulum would be stuck on the social position, the environment and finance would not be given any consideration. The mechanisms is out of balance. It is without saying that the clock will stop: the business will collapse and very fast"

F Squirzy: "and let me finish, I think I know this one Prof Monitor: if the pendulum is just stuck in the finance position (which is the easiest position for it to be without movement/effort and probably the reason why most companies adopt this lazy model) then the business will do well in the short term but like with the other positions and without a movement driven by equilibrium the clock is doomed to stop, the business is unsustainable and will eventually collapse!"

2 Prof Monitor: "You just had a great idea Squirzy. Yes indeed, sustainability is actually a simple concept yet it is largely misunderstood. You are right to associate a pendulum with the concept because indeed it is all about balance and timing. Balance in a sense that in order to be sustainable an organisation has to find an equilibrium between environmental, financial and social aspects. And timing in a sense that it requires long term planning but also to highlight that we are running out of time in so many ways!"



3

Prof Monitor: "imagine for a second that the pendulum represents the universe of sustainability symbolized by three positions: finance, Environment and social. Each representing an extreme of momentum. If the pendulum would be stuck on any of these, the clock would not work! Indeed, without a balancing momentum the charging mechanisms would not work and the clock would eventually stop in a short while. Well the clock symbolizes the business. Unsustainable practices cannot be sustained in time"

6

E Prof Monitor: "If the pendulum would be stuck on Environment, the finance and social aspects would not be given any consideration. The mechanisms is out of balance. It is without saying that the clock would also stop"



Deck near reception

SBR environmental statement:

*“SBR is committed to provide a memorable leisure experience while adopting and showcasing environmental and sustainability best practices. Our model is to **first protect nature, then to reduce, reuse and recycle**”*

SBR's open air concept is reflected in its design throughout the resort...only 28% is actually covered area

SBR's Waterfall



Siloso Beach Resort

Blending Life and Leisure with Nature

In addition to being an enjoyment for our guests, our waterfall is also part of an innovative swimming pool treatment system

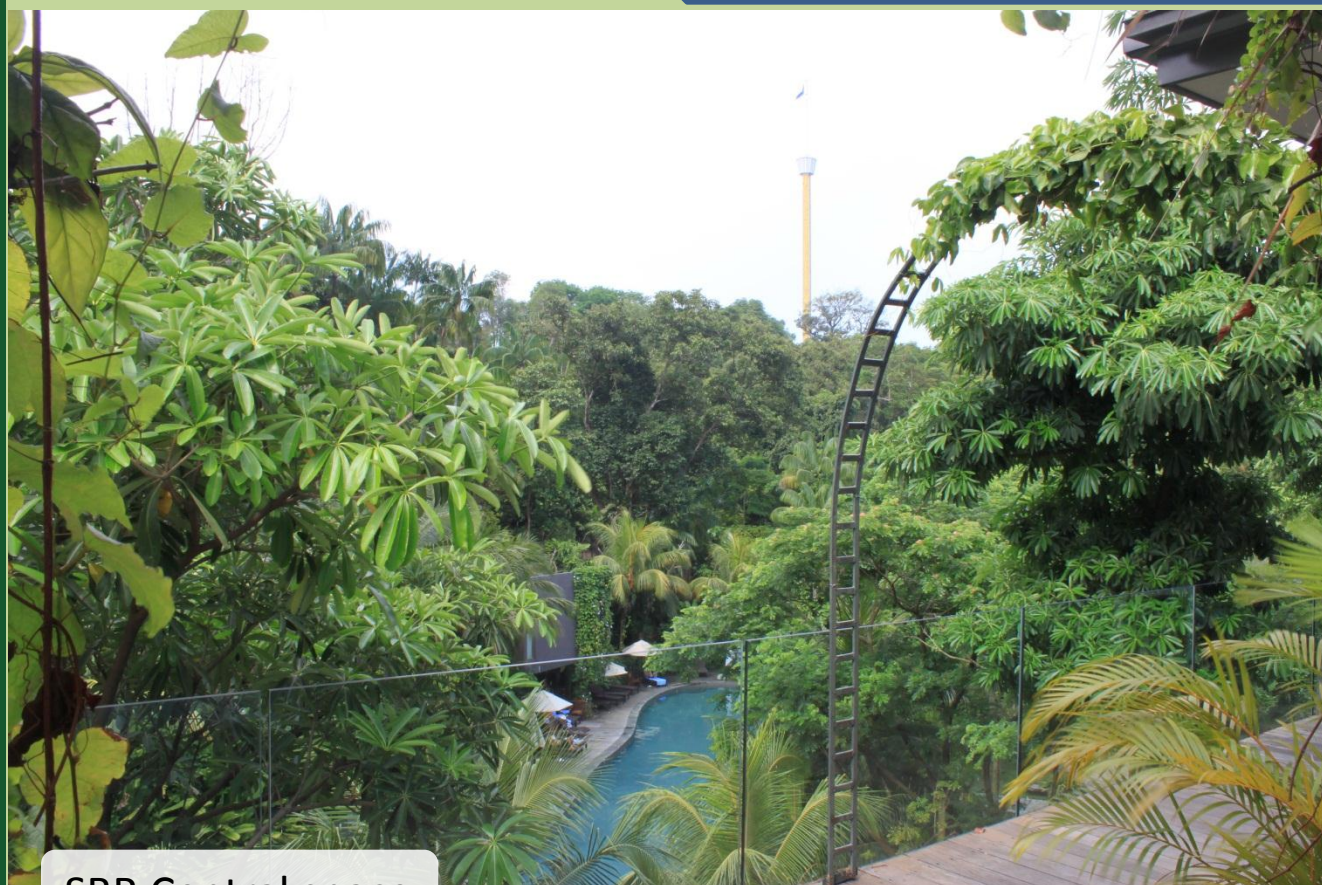


A jungle resort



Siloso Beach Resort

Blending Life and Leisure with Nature



SBR Central space



At SBR, the vegetal coverage is so dense that most of our buildings & structures appear **hidden** in the vegetation



1.2 Description of key impacts, risks, and opportunities

As an hotel business, Siloso Beach Resort acknowledges the fact that its operations have impacts on the surrounding environment and sustainability in general.

Key **environmental impacts** are of various sort, the below points highlights the major ones:

SBR key impacts

- **Use of natural resources:** Concrete products (sand, limestone...), steel and other metals, wood products, living resources (F&B)...
- **Atmospheric Emissions:** Mostly from energy consumption which in Singapore originates from the combustion of natural gas. Other emissions are from activities such as transports, gardening and other maintenance activities.
- **Land disturbance:** Construction activities have required to disturb the original landscape (despite that tremendous and unique efforts that have been made to limit the impacts).
- **Noise disturbance:** During construction and hotel operations
- **Water consumption:** Consumption of tap water from the network
- **Water contamination:** Rejects of contaminated water from operations to drains
- **Wastes :** Various wastes (organic, & non-organic)
- **Biodiversity:** As a forested terrain, SBR activities have an impact on biodiversity (despite tremendous and unique efforts made to reduce the impacts).



Many of these impacts (not all) are regulated under Singapore law (e.g. noise, water contamination...). SBR is proud to meet **and in most instances exceed these legal requirements.**

Main processes in place to address performance and/or relevant changes

In order to address performance, SBR has a **sustainability committee** in place. The committee meets at least twice a year to assess the progress made and benchmark against standards and targets. Under the guidance of the committee, annual targets are set to address key sustainability issues. **Key performance indicators** are also put into place by the committee to monitor and **track changes and progress over time.**

During these meetings, issues regarding performance and potential required changes are addressed which often leads to strategic planning and setting up targets and objectives.



SBR sustainability committee regularly addresses performances and applies changes as needed

Approach to prioritizing these challenges and opportunities

SBR considers all the above impacts to be important but it also acknowledges that some have higher impacts than others and therefore should be given different reduction priorities.

SBR acknowledges the fact that its activities, as a business, have impacts on the surrounding environment and that it can work towards reducing these impacts

Demystifying the concept of sustainable construction



(This article was first published in ecobusiness.com as part of SBR sustainability outreach program)

There is a widespread misperception within the construction sector of what it really means to reduce the environmental load of buildings. While efforts to save energy are intensifying, other aspects are often forgotten. This article presents what sustainable construction should be in a seven step process.

The construction sector has enormous environmental impact. From a climate perspective alone, buildings' greenhouse gas emissions are significant and growing fast. Furthermore, construction materials are responsible for tremendous damage through mining, deforestation and other impacts resulting from their production and supply. Without major changes in practices, at some point this century we will simply run out of some of the key resources (e.g. certain metals) required to keep up with the explosive growth in building demand. We are simply exploiting resources at a much greater rate than the planet can sustain.

While most current efforts in sustainable construction projects are put into energy efficiency, sustainability is not limited to this aspect. Another apparent trend is that still too often thoughts on how to make new buildings "green" are only addressed in the final stages of construction (retrofitting). While this practice is relevant to existing buildings, it is the wrong approach for new buildings. The vast majority of successful sustainability elements in a construction project goes into the initial design.

1. Preserving the terrain/vegetal coverage: Most construction project managers still choose the easiest and most destructive option of clearing all vegetation from a construction site. We must understand that any trees (especially grown ones) are valuable in terms of biodiversity and ecosystem services, and take a long time to regrow. It makes more sense to preserve them on site and to adapt the construction design in consequence. There are few examples of constructions which have successfully managed to preserve trees and built around them, or even incorporated them within the structure.

Any sustainable construction project should take this point into consideration and at most displace the trees and re-plant them rather than cutting them down. This point becomes increasingly important in locations that are rich in biodiversity or un-touched forested terrains. Furthermore, building projects should then work towards replanting numerous new trees and plants on site (preferably local species). Other important elements that any modern sustainable construction projects should adopt involve extensive use of the now well proven technologies of rooftop gardens and vertical green walls, which significantly increase the vegetal coverage and provide a range of other benefits.

2. Maximising natural cooling/heating: In warm climates, it is very important during the design stage to plan for maximising the use of natural air flow and cooling. This can be achieved in a range of ways, starting from buildings dispositions and how they are conceived to amplify and capture air breezes. There are also a number of passive ways to capture wind and create air flows within buildings through a chimney effect. Simply using well-chosen materials can help maximise natural cooling as well. Any passive cooling effect will contribute to significantly reducing the energy load of the buildings. Excessive use of air conditioning (which is a major source of energy usage in warm countries) is the less desirable alternative and often due to poor cooling efficiency design. In cooler and temperate climates, the same principle and efforts should be applied in designing well insulated projects that retain and circulate the heat with minimal energy input.

3. Maximising natural lighting: Another very important aspect to consider at the design stage is the maximum use of natural lighting. The best way to achieve this is once again through good design that takes into account aspects such as building orientation, open concept and the type of material used. Whatever can be done to naturally brighten indoor spaces will reduce the need for artificial lights at a later stage. The vast majority of buildings use artificial lighting during daytime simply because nobody considered lighting during the design process.

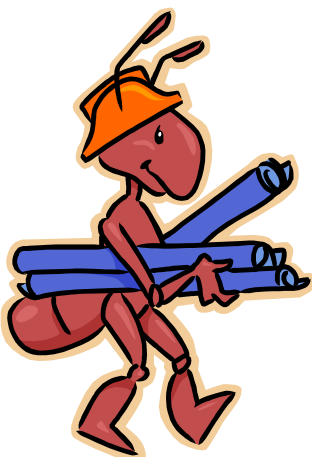
4. Choosing core sustainable construction materials: Most buildings today use unsustainable materials such a conventional concrete for their core construction. There are now a number of alternatives, including modified cement that contains a high percentage of recycled material (e.g. fly ash), materials from more sustainable sources (e.g. bamboo, pine trees from well managed plantations) or raw materials from natural sources such as clay (e.g. mud bricks). Moreover, certain construction techniques can significantly reduce the use of structural steel (e.g. Ferro-cement) and the amount of material used (e.g. geodesic designs, partial underground structures).

This article was published to highlight our views on sustainable constructions

But probably one of the simplest alternatives is to start to integrate a much greater proportion of reused materials in new construction projects; even today the vast majority of materials at demolition sites is being wasted. In addition to these measures, much more research is required to develop more sustainable materials.

5. Retrofitting's: Once a building's design and core construction is complete, numerous factors such as appliances and materials still need to be considered. As a general rule any appliances going into such a project should have fewer environmental impacts than similar products on the market. Certain organisations identify and certify such products using eco-labels, energy and water efficiency labels, etc., and a wide range of certified products are now available for developers to choose from. In addition to the environmental impacts of products throughout their life cycle, aspects such as indoor air quality (some products pollute the indoor air with chemical emissions such as formaldehyde) should also be considered. A number of new technologies can be installed in buildings to allow developers to further conserve resources.

6. Energy and resources independence: Most locations still rely on fossil fuel based electricity. It makes little sense for a sustainable building to source its energy from such supplies, which are putting a heavy load on our environment. There are now options to build construction projects that are completely off-grid and rely on a combination of renewable energy sources such as solar, wind and geothermal. With a good design, it is easy to produce more energy than a building actually needs. The same independence concept applies to other resources. In fact any so-called sustainable building should now seriously look at ways of closing resource loops through projects now proven as feasible and profitable through initiatives such as:



Guest Ant: "We ants, we practice very sustainable construction methods. So why don't you humans learn from our practices and do the same??"



- Collecting and filtering rainwater and re-distributing the excess to the grid
- Producing electricity from renewable sources and redistributing the excess to the grid
- Collecting waste and valuing it by reusing certain types in a closed-loop model or reselling or distributing unwanted items, which in many cases can be seen as valuable resources for other businesses

Pushing the concept further, some buildings are starting to explore the idea of producing part of their food supplies on site or nearby the structures. Vertical farming and eliminating the reliance on external sources is key for the buildings of the future.

7. Management: Last but not least, even if a building is well designed and retrofitted with environmentally friendly features, the human factor still plays an important role in how resources are used. It is therefore important that any sustainable building is managed in an environmentally friendly way and operates according to clear environment management guidelines.

For the reasons given above, green buildings will only really take off once much more attention is given to training the people involved in the development of buildings, including architects, developers and designers, and providing them the tools to design and construct more sustainably. Government support through stricter legislations and incentives will drive the movement forward.

The real concept of a sustainable building is that of a 'living building', by which I mean buildings that give more back to the environment than they take. We must shift from the current environmentally destructive construction projects to some that provide long term benefits both to the environment and society. A combination of good design and smart, efficient technology is the formula to adopt; and designing buildings with sustainability in mind from the beginning should be compulsory.

On a last note, we must understand that sustainable buildings don't only make sense in terms of reducing the environmental impact, but they also increasingly make good business sense for the security and savings that can be achieved.

Article by Sylvain Richer de Forges

Environmental Impacts

•**Use of natural resources: (high priority)** As a hotel environment the usage of natural resources is high. There are however a multitude of ways in which these impacts can be reduced.

•**Atmospheric Emissions: (high priority)** SBR acknowledges the seriousness of climate change and believes that it can play its role by significantly reducing its emissions and showcasing these efforts.

•**Land disturbance: (high priority)** Because SBR has been built on a pristine forested environment, preserving the terrain has always been of high importance.

•**Noise: (low priority)** SBR operates at below legal noise level. Noise has never been an issue within the hotel facilities. SBR however closely monitors its noise levels to ensure no disturbance to its guests or wildlife is made.

•**Water consumption: (high priority)** SBR continuously pushes to reduce its tap water usage. However, due to the unique location of the resort above a natural water source and numerous water saving measures in place, tap water consumption is already very low for a hotel of its size.

•**Wastes: (high priority)** SBR already has many programs in place to reduce its wastes, often by reusing whatever waste can be utilised in other ways. SBR actively practices the 3R's.

•**Biodiversity: (high priority)** Because SBR has been built on a pristine forested terrain, preserving the biodiversity on site has always been of high importance.

•**Energy use: (high priority)** SBR is continuously trying new ways to reduce its energy usage through the adoption of new practices and technologies.



Siloso Beach Resort

Blending Life and Leisure with Nature

Key conclusions about progress in addressing these topics and related performance in the reporting period

•**Use of natural resources:** Numerous progress have been made to reduce the usage of natural resources of all sorts. Current achievements are judged satisfactory and SBR will continue to pursue its natural resources minimization strategy with targets for continuous improvements.

•**Atmospheric Emissions:** Numerous initiatives have been taken to reduce energy consumption. There is still a lot that can be achieved at SBR in terms of reducing emissions. SBR has identified this aspect as one of its priorities for the coming years.

•**Land disturbance:** Tremendous efforts have been put since the very beginning of construction work. Land disturbance reduction efforts have been very successful. SBR will continue to push for limited impacts in this field.

•**Noise:** Noise levels have never been an issue within the premises. SBR will continue to push for limited impacts in this field.

•**Water consumption:** Initiatives undertaken at SBR since its conception have resulted in a very low water consumption. Water saving has been very present. SBR will continue to push for limited impacts in this field.

•**Water contamination:** SBR does not have rejects of hazardous substances in significant amounts. Water contamination at SBR is judged to date insignificant.

•**Wastes:** Since its conception, SBR has implemented numerous programs to reduce its wastes. Initiatives have resulted in very minimal waste being generated including from the F&B department. SBR will continue to push for limited impacts in this field.

•**Biodiversity:** Since its construction phase, SBR has taken extreme measures to preserve the biodiversity on site. This aspect has been very successful and exemplary. SBR will continue to push for limited impacts in this field.

•**Energy use:** Great achievements have already taken place at SBR to reduce energy usage and the hotel will continue to push for improvements.

For a complete list of departments individual targets please refer to annex

Our villa's wing



SBR Villa Wing



A truly unique retreat surrounded by nature...

Case study :

The “War Room”: our arguments for sustainability



2

Prof Monitor: “It’s ok Squirzy, we can play a role game if you want in which you would pretend to be the opposition, that is a company or individual that does not believe in sustainability, and I could be the one defending SBR’s point of view. Sounds fun, alright lets get started.”



3 Argument 1 “I heard this one so many times: Business is just about money, why do you even bother wasting your money on environment or social initiatives?”

4 Argument 1 “We believe that a business only focusing on finance cannot sustain in the long term. In other words we believe that we have greater chances to still be around in 20 years while your may well be out of business because of unsustainable practices”

5 Argument 2 “social or environment enterprises are things that our government is taking care of. Are you trying to play the role of the government?”



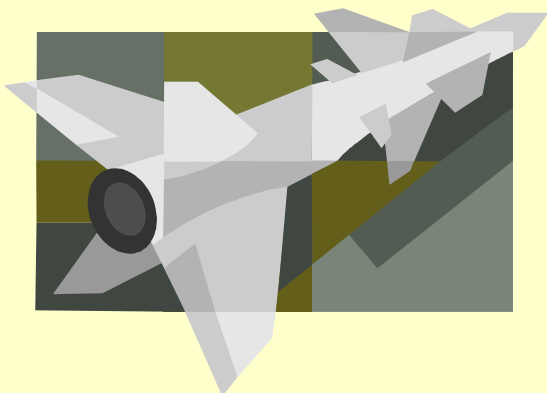
7 Argument 3 “ It is too expensive to adopt sustainability practices, I rather spend money on other things like expanding the business”

6 Argument 2 “no, not at all. We simply believe that Businesses can play a significant role as a responsible Corporate citizen in doing their part to support society and limit impacts on the environment. Governments are doing their part but a lot more is required. Furthermore, businesses can be very influential in inspiring many other businesses and individual to do similar things which in time may well influence governments in their policies”

8 Argument 3 “we don’t think so. There is of course an initial cost to adopt good sustainability but in the medium to long term the efforts will pay back in some way, either in financial returns through a healthy business and improved corporate image or simply in very significant savings achieved through investments in new technologies which are more energy/water/waste efficient. Keep in mind that it is foreseen that there can only be more and more taxes going against companies which do not practice sustainability. If you don’t pay the price now, believe me you will pay back some day anyway in one form or another”

9 Argument 4 “No one cares about what you are doing except you. Businesses are just focused on their own activities and that’s all”

10 Argument 4 “ We believe on the contrary that businesses are becoming more and more aware of the sustainability trend and that it is becoming very present in how businesses like to operate including world leading companies. More and more companies are interested to know what their stakeholders including potential business partners are doing with regards to sustainability. More and more companies close their doors to other companies which do not share nor report on what they do as a responsible and sustainable business. The growing trend of sustainability reporting is a clear sign that businesses mindset is about to change”



In summary: Be sustainable...or else..!!!

Assessing Materiality

Elements of primary importance :

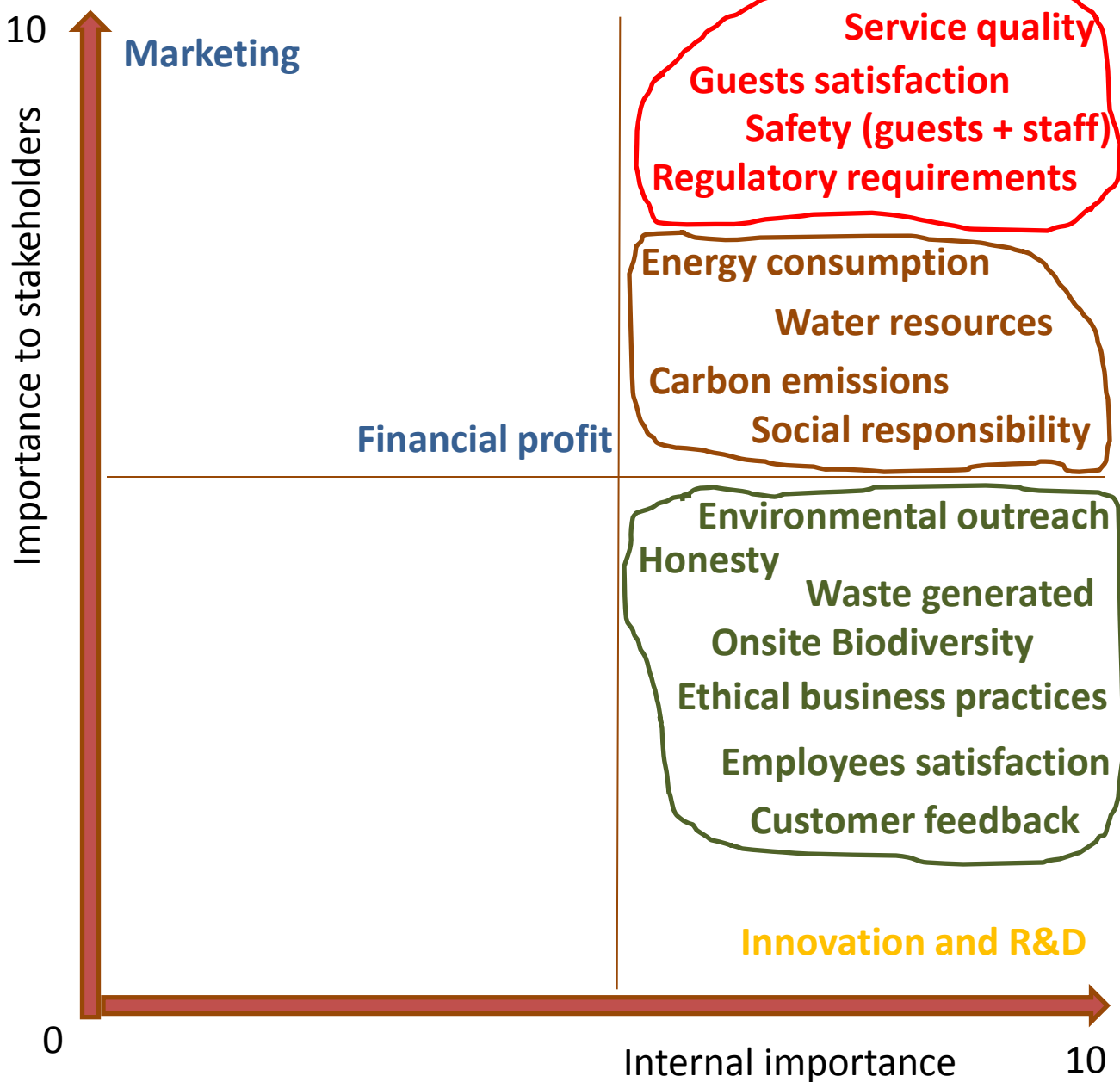


Of course as a business, our priorities are **not only** towards the environment. The below highlights a bigger picture of our priorities:

•Through various surveys and internal discussions the below profile of materiality for the organization comes out. While **all aspects listed below are important to SBR and its stakeholders**, we can within this shortlist assign areas of importance based on the compilation of both SBR's as well as stakeholders preferences.

•First it is not surprising that as a hotel, **guest satisfaction** and **safety** rank high.

•It is probably surprising to most people that SBR does not see marketing or financial profit **as its top priority**.
 Marketing: SBR always had a soft marketing policy and relies mostly on a mouth to mouth approach to marketing rather than actively promoting its services. Financial profit: SBR as always been more of a social enterprise rather than a for profit business. It is important for SBR that its business is self-sustained and from a financial point of view the hotel has been doing reasonably well since its creation which can be seen as a good example that a business applying most unusual sustainability practices can also do well financially.





Description of the most important risks and opportunities for the organization arising from sustainability trends;

SBR is conscious that many sustainability trends both local and international are a risk to the business but SBR tends to see them as opportunities. The below points highlight what SBR has identified as major risks to its operations both in the short and long term and the opportunities that they create.

| Risks | Opportunities |
|--|---|
| <p>Climate change related risks:</p> <ul style="list-style-type: none"> -Sea level rise (as a beach resort, SBR is very concerned about this trend) . -Increase of occurrence of vector borne diseases (e.g. Dengue). As SBR’s facilities are on a densely vegetated terrain, increase of mosquito occurrence is a concern. -Rise in ambient temperatures (and therefore rise in energy needs) . -Implementation of more severe government tax on aspects such as emissions, water consumption in response to mounting environmental pressures. | <ul style="list-style-type: none"> -Opportunity for Investment in Cleantech in anticipation of rising energy costs. -Opportunity for partnerships with various stakeholders in raising awareness on these topics. |
| <p>Global financial instabilities:</p> <p>World financial instability. As a business significantly dependant on foreign tourists, financial crises have a direct impact on SBR’s operations.</p> | <ul style="list-style-type: none"> -Opportunities to secure business sustainability by diversifying the business -Opportunities to invest in cleaner technologies and anticipate for future pollution taxes |
| <p>Local pollution</p> | |



Prioritization of key sustainability topics as risks and opportunities;

SBR addresses sustainability topics in a very holistic way. Its approach is not just focused on local issues but also on international sustainability aspects.

SBR has identified the following aspects as priorities:

- Global Climate Change;*
- Global Biodiversity Loss;*
- Global depletion of fresh water resources;*
- Operations Financial growth.*

SBR believes that it can play its role in all of the above to various extents (mostly by raising awareness on the issues), however it also believes it can be more effective by focusing on particular aspects. For this reason, **biodiversity issues** have been chosen as SBR’s primary focus point.

Tables summarizing: Targets, performance against targets, and lessons learned for the current reporting period;

SBR is very target oriented. The following sections highlight these targets

Prof Monitor “At SBR we set up regular targets because we believe that it is important to have a focus point to aim for in both the short and long term. By setting up yearly targets we are able to achieve greater results than if we were to try to do everything at the same time (a bit like what Squirzy does!). On the other hand by also setting up longer term targets we can track where we are going in the future and adjust our yearly targets accordingly”



Targets



SBR is very target oriented, every year old targets are reviewed and new ones are set. SBR has in fact been setting itself targets since its conception and has an excellent track record of meeting the targets that it fixes itself.

Below is a list of previous targets which have been set over the years. Most of these targets have been achieved.

A list of targets set for years prior to the reporting period are available in annex

2012 Targets for next reporting period:

| Component | Target | Comment |
|-------------------------|--|--|
| Marketing | To develop new interactive components on the main website which includes a virtual map of the entire resort | In progress |
| Financial profit | To continue a positive financial growth compared to previous financial year | Continuous financial growth is an indicator of a healthy and sustainable business |
| Guests satisfaction | <ul style="list-style-type: none"> To improve guest satisfaction by renovating main wing rooms and suites Change all corridor carpets with 100% recycled rubber mats (numerous positive feedbacks have been received from this change) | SBR has started a major renovation of its rooms which amongst others include changing all the floors from current carpets to wood as well as significant design and appliances changes |
| Service quality | <ul style="list-style-type: none"> Review of various quality control policies and implementation of new SOP's in accordance to six sigma guidelines | In progress |
| Safety | <ul style="list-style-type: none"> Comply with bizSAFE level 3 standards Implement various safety information messages Renovate the outdoor stairs | |
| Regulatory requirements | Continue to comply and exceed with all regulations | Continuous monitoring |
| Energy Consumption | Assessment of resort individual appliances energy consumption | In view of better understanding of the hotel carbon footprint |
| Water resources | <ul style="list-style-type: none"> Retrofit all urinals with waterless technologies and continue to educate staff and guests on water saving initiatives Apply for Singapore Water mark Award | In progress |
| Carbon emissions | <ul style="list-style-type: none"> Monitoring phase: continue to gain a clearer assessment of individual appliances energy consumption | In progress |

Targets



2012 Targets for next reporting period (continue):

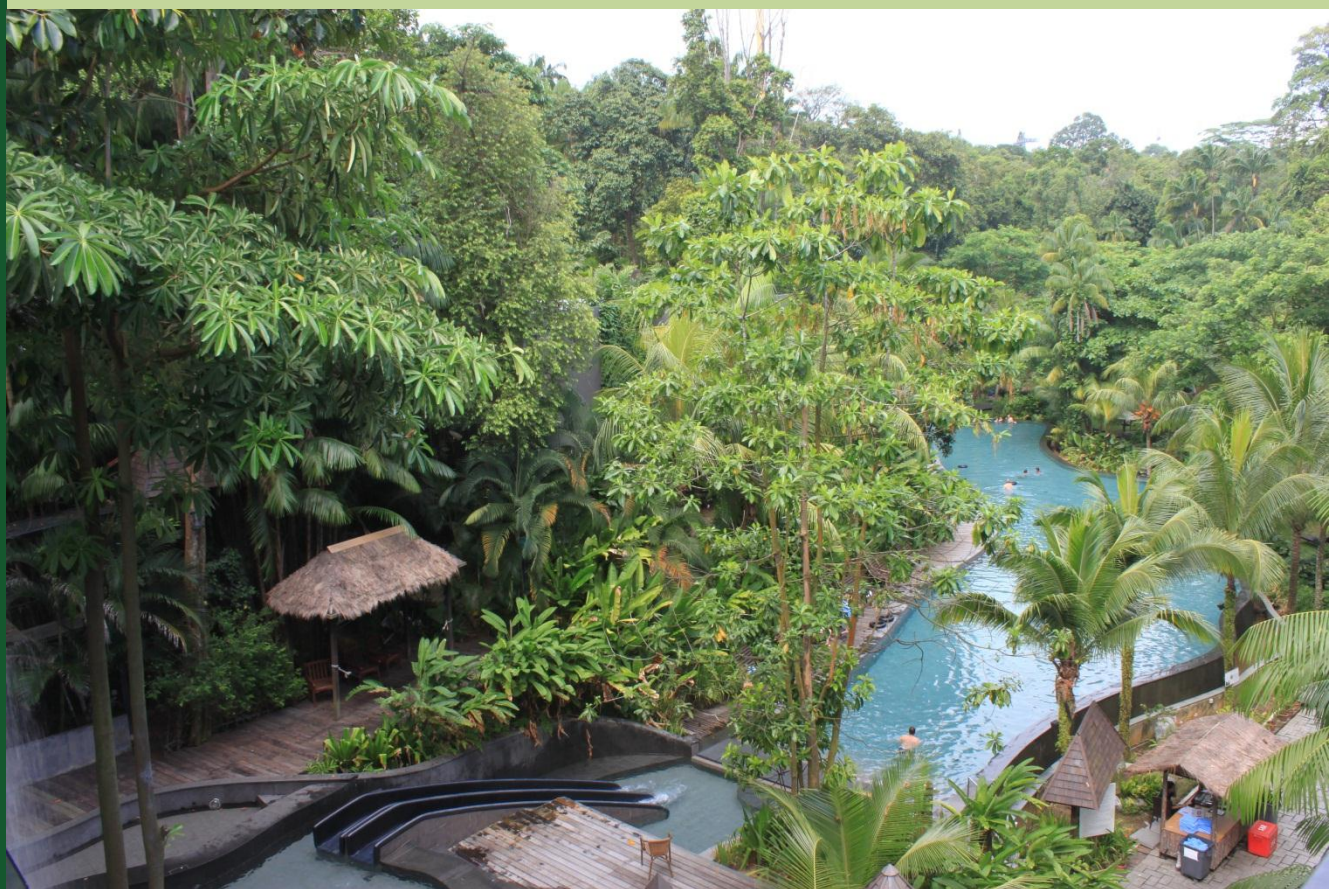
| Component | Target | Comment |
|----------------------------|--|---|
| Employees satisfaction | Revision of various staff salary and implementation of new bonus systems | In progress. In March 2012 SBR has hired a new staff to look specifically into staff satisfaction |
| Customer feedback | Implement various new means for guests to provide feedback through interactive questionnaires, on site surveys and other means | In progress |
| Innovation and R&D | To further develop the worm composting and rooftop gardening facilities. To collect valuable data on the matter | SBR's unique worm composting system has worked very well since its implementation and numerous valuable findings have been made |
| Social responsibility | <ul style="list-style-type: none"> • Sponsorship of various CSR related events. • Continue to expend and develop the eco tour program | SBR plans to sponsor various events this year |
| Environmental outreach | <ul style="list-style-type: none"> • Implementation of new outreach materials throughout the resort. Especially the development of the SBR mascot concept to outreach on key environmental issues • Publications of various articles on environmental outreach on eco-business.com | In progress |
| Honesty | Continue to be transparent and honest in the way SBR operates its business | Continuous effort |
| Waste generated | <ul style="list-style-type: none"> • Continue to segregate various types of wastes • Print new concept for recycling posters around the resort • Improve waste collection by 3% compared to previous year | In progress |
| Onsite biodiversity | <ul style="list-style-type: none"> • Continue to trial an alternative mosquito control treatment using bacteria • Implement 3 new self maintained ponds throughout the resort • Expand roof garden facilities by 20% | In progress |
| Ethical business practices | <ul style="list-style-type: none"> • Continue to practice business in the most ethical way • Attend various seminars and events on ethical business practices | Continuous effort |

Our swimming pool is one of a kind



Siloso Beach Resort

Blending Life and Leisure with Nature



Our swimming pool is **the heart** of our resort

Why at SBR we consider climate change as a risk?

(This article was first published in ecobusiness.com as part of SBR sustainability outreach program)

Climate forcing and the threats of feedback mechanisms

While we tend to plan for the future based on current climate inputs and observations, we should also look ahead and take into consideration the dramatic turn of events that could result from positive feedback mechanisms.

A brief overview of feedback mechanisms

Feedback mechanisms are processes which are the direct consequences of other events. Basically, there are two types of feedbacks: positive feedbacks which amplify the ongoing trends and negative feedbacks which soften them. As an illustration, two examples of simple feedback mechanisms are given below:

Positive feedback: The warmer the climate (e.g. heat waves), the more energy we consume (e.g. air conditioning), the more GHGs are emitted and therefore the warmer the climate will get. We tend to forget that human behaviour in response to a changing world is in fact a powerful feedback mechanism.

Negative feedback: The warmer the climate; the more water vapour in the atmosphere at any given time; the more clouds which have white surfaces reflective of incoming solar radiations; the cooler the temperatures. Note however that water vapour is also a strong greenhouse gas and therefore also has a positive feedback effect.

Natural equilibrium versus destabilisation

Over billions of years of Earth history, the planet has been subject to a series of dramatic events. In between such events, systems on Earth have reached equilibriums which are governed by closed loop systems and a balance between positive and negative feedback mechanisms.

The current trend however is for human activities to modify some of these natural equilibriums by increasing disorder in the Earth systems.



Many signs of upcoming changes from positive feedbacks are already highly noticeable and measurable (e.g. release of methane gas from the melting permafrost; sea ice melt exposing darker ocean surfaces in the Arctic...). All seem to indicate that positive feedback mechanisms are on the rise and will intensify throughout the century, largely overtaking negative feedback effects which would normally act as a buffer in the systems.

The uncertainty

Most climate models (which shape policy decisions) are based on predictions which account for a range of inputs such as emissions scenarios (global amount of GHGs emitted); however few if any seriously consider how systems will evolve when feedback mechanisms are added into the equation.

The main reason is that systems are incredibly complex. Modelling some of these impacts is proving very difficult, especially certain aspects such as atmospheric water vapour that have both positive and negative feedback effects.

However, reasoning on logical deductions and how systems are likely to react should lead the way to anticipation and a more cautious approach. Some of these positive feedbacks really have the potential to shift the situation from currently alarming to dramatic and irreversible in a short time.

Citing David Suzuki: *"We are playing Russian roulette with features of the planet's atmosphere that will profoundly impact generations to come. How long are we willing to gamble?"*

An unwanted but possibly unavoidable solution

If positive feedbacks become a factor as predicted by many climate scientists, our only option may end up being deliberate human negative feedback on a massive scale. We may be forced to attempt to counter warming trends through technological inputs, the most extreme of these actions being Earth Engineering.

Earth Engineering, which is the process of humans voluntarily modifying natural systems on a global scale, is however not without serious consequences and is often considered a last resort.

It may seem like science-fiction but ideas such as injecting sulphur compounds into the upper atmosphere; producing artificial fine clouds on a large scale; fertilising oceans to absorb carbon dioxide; deploying a reflective membrane in the Arctic or even sending millions of small mirrors into space to divert the sun rays are ideas which have been proposed and seriously considered to cool down the Earth.

The business case

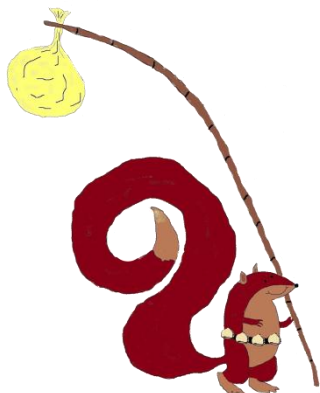
However, in addition of being extremely risky, all of these engineering measures are also astronomically expensive and far more costly than mitigation measures such as cutting down current GHG emissions and shifting to a low carbon economy.

It is clear from an economical point of view that the cost of dealing with the consequences of climate change will far exceed the cost of mitigating it. This argument has been given over and over again by some leading economists (e.g. The Stern report).

Furthermore we should act fast because we are running out of time. Indeed, because GHGs remain in the atmosphere for extended periods of time, they have been accumulating. We are reaching the point of no return after which the current focus on reducing GHG emissions will no longer make much difference on the outcome (i.e. even the smallest effects will already be dramatic). Once this point is passed, the next step will probably be to try to remove certain GHGs from the atmosphere on a large scale (which may simply take too long) followed by the final option of earth engineering.

The more we wait, the more extreme and outlandishly expensive the solutions become. We are truly racing against time and need to intensify our efforts of cutting down GHG emissions through the deployment of renewable energy; shifting away from fossil fuels and intensifying research to come up with new technological and society solutions. These actions are the ingredients we need to fuel a new economic revolution based on a low carbon economy. The threat of positive feedbacks should be seen as yet another argument to renew our efforts.

Article by Sylvain Richer de Forges



1
Squirzy: "Prof Monitor, I'm very concerned that climate change will also affect the availability of nuts. You know how I love to collect nuts! This is very very drastic!!"



2

Prof Monitor: "Well Squirzy, I understand your concern but there are aspects of climate change which are much more concerning than this. For instance a small island like Singapore where SBR is will within the century experience drastic changes as a direct result of climate change ranging from land erosion, flooding of strategic areas, contamination of fresh water supplies, more cases of infectious diseases such as dengue, more extreme flush rains and so on....of course this will not happen over-night but progressively the changes will come and this is going to cause a lot of problems that are going to affect not just nuts but all of us..."



Targets for the next reporting period and mid-term objectives and goals (i.e., 3-5 years) related to key risks and opportunities.

| Category | Targets |
|-----------------------|--|
| Natural resources | Reduce the use of natural resources by another 3% (relative to previous reporting period) |
| Atmospheric emissions | Reduce carbon emissions by 3% (relative to previous reporting period) |
| Land disturbance | Continue to increase vegetal coverage by 3% through roof top gardening and use of other existing surfaces |
| Noise | Keep noise levels at current |
| Water consumption | Reduce tap water consumption by 3% (relative to previous reporting period) |
| Water contamination | Further improve the treatment of waste water from the resort before being discharged (e.g. further improve grease trap treatments) |
| Wastes | Reduce waste by another 3% (relative to previous reporting period) |
| Biodiversity | Continue to increase biodiversity by providing new habitats for species |
| Energy use | Further improve energy efficiency through Cleantech. Reduce by 3% |

Mid term objectives and goals

Global Climate Change:

•**Objective:** SBR takes the risks posed by climate change very seriously and will continue to develop by integrating elements which will both reduce its carbon emissions and provide adaptive advantages to a changing environment.

•**Goal:** In the medium term SBR intends to become a carbon neutral hotel by offsetting its emissions.



Global Biodiversity Loss:

•**Objective:** Preservation of biodiversity remains a key aspect of how SBR operates. SBR is committed to preserve a rich biodiversity on its premises and to actively promote global biodiversity conservation through outreach programs.

•**Goal:** SBR will continue in its efforts to preserve and increase habitats on its premises in order to host a variety of species. This includes the preservation of existing trees and ponds and their associated species.



Operations financial growth:

•**Objective:** SBR takes the concept of sustainability in an holistic way which encompasses not only environmental and social issues but also financial sustainability and economic growth. SBR intends to continue its business in an environmentally and socially sustainable way while remaining financially viable.

•**Goal:** SBR intends to continue to grow the business and achieve long term financial growth.

Depletion of fresh water resources:

•**Objective:** At SBR the water management is already very good and tap water consumption very low for an hotel of its size. SBR will however continue to intensify efforts to even push the water saving initiatives further by both improving on water efficiency and by maintaining the health of its spring water reservoir.

•**Goal:** Invest in Cleantech to better control water consumption in guest rooms (where most of the current tap water consumption occurs).

Reducing by 3% may not seem much but because our waste, water and energy usage is already very low it is actually a challenge





Governance mechanisms in place to specifically manage these risks and opportunities, and identification of other related risks and opportunities.

Governance mechanisms:

SBR believes that the approach is to integrate ways to manage these risks within the long term plan of the organisation rather than to ignore them. **A long and slow adaptation is a better path than a sudden and unplanned change.**

The risks identified as significant are taken into consideration during sustainability committee meetings and minimisation targets are set to address these risks.

Previously set **targets and goals** are then reassessed during the next meetings and a new set of targets and management decisions are taken to best address these risks.

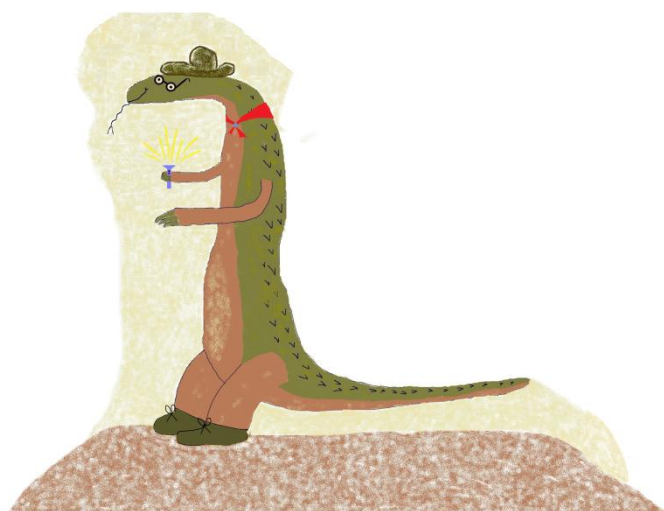
Other related risks and opportunities

In addition to the primary risks and opportunities identified, SBR has also highlighted other elements



| Risk | Opportunities |
|---|---|
| Safety at work (HSE) | To take appropriate measures to ensure a first class safety environment for its staff |
| Guests safety | To ensure that the place is safe for the guests |
| Development of new hotels in Singapore | To make the business even more competitive especially by focusing on our eco concept |
| New government rules on foreign hires | To put more emphasis in developing a local work force |
| Increase guests expectations | To put further emphasis in improving quality of services and facilities |
| Humidity related issues in hotel facilities | To redesign aspects of the resort in order to cope better with such issues |
| Potential Burglary issues | To further improve safety onsite through greater surveillance and monitoring |

Prof Monitor: "At SBR risk management is a constant process which is governed by the Sustainability committee. Constant adjustments and reviews allow a sustained growth"





Our open concept corridors

SBR's Open Concept

Many places at SBR adopt an open concept, should it be for the corridors, the café area, the gym and other public spaces. This concept allows amongst other benefits to have a feeling of being surrounded by greenery



REPORT PROFILE

2.1 Name of the organization

Siloso Beach Resort Pte Ltd.

The name of the resort simply reflects the location name: Indeed, SBR is adjacent to Siloso Beach on Sentosa Island.

2.2 Primary brands, products, and/or services.

Siloso Beach Resort services are in the leisure industry which include:

- Providing hotel rooms for stay; Facilities: e.g. swimming pool, waterfall, water slides, children playground, in-house TV channels, exhibits of various type on site (mostly biodiversity)
- Food and beverage: SBR has a single restaurant café in which breakfast and daily meals are served.

Company logo:



SBR brands its services under Siloso Beach Resort

SBR is directly involved in providing these services and does not outsource for aspects directly related to main business stream. As a family owned and operated business, unlike most other hotels, SBR does not outsource the management.

Contractors are involved from time to time for aspects such as:

- Consultancy
- Architecture
- Legal affairs

Hotel services information:

It is a love and passion for the environment and nature that will act as an impetus for us to begin to care unconditionally for the waning ozone layer, depleting forests and out-of-control pollutants.

Using less plastic, energy-saving light bulbs and a smart heat-exchange system can only do so much, so, throughout the Resort, we assimilate nature with comfort, greenery with cutting-edge technology in a bid to have our guests come to appreciate nature's infinite value.

At Siloso Beach Resort, the only Eco resort residing on the beautiful island of Sentosa, guests can enjoy the only natural spring water landscape pool in Singapore, complete with a waterfall feature, while relaxing amongst the balmy shades of flora to the soothing sounds of cascading waters. There are rooftop garden suites complete with rooftop bath, one of a kind in Singapore.

Sitting at the heart of Singapore's hippest beach - Siloso Beach in Sentosa, the resort's strategic location and lush foliage within its surroundings, guests find themselves faced with a strewn of choices. Bay-windows looking out to white sandy beach rooms, a walk away to the beach, various entertainment outlets and activity booths located along the beach's stretch, offers both scenic and convenient leisure.

The resort provides an experience of an ideal getaway, for honeymooners and lovers in the mood for a romantic getaway or holidaymakers in search of tranquility on an island beachfront.



Nestled within its lush foliage surrounding, Siloso Beach Resort hosts a range of rooms to fit the needs of the various guests, from romantic getaways for couples to retreats for holidaymakers.

With the main foyer of rooms facing beachfronts, guest rooms are provided a natural backdrop of the sea landscape while decking the inner courtyard sprawls a 95m long natural spring water landscape pool with a waterfall feature, providing a relaxing atmosphere.

Every room is fitted with amenities to ensure that your stay is both enjoyable and comfortable.



Central roof top , along suite wing

SBR's extensive roof top space

One of the main roof top at SBR is used for a variety of purposes going from a plant nursery to a roof top vegetable farm to open air Jacuzzis to a flexible event space used for special occasions.



Rooms and villas

Featuring 196 rooms with 6 types to choose from, superior, deluxe, family, roof garden suites, all with bay windows looking over to the beach, a glass loft and including 12 villas residing among the lush foliage within the resort's tranquil backdrop. Each with their own characteristics to provide a comforting stay. All the beds even come with comfortable Sealy Posturepedic mattresses.

All rooms are non-smoking, as the rooms do not have a balcony; guests who smoke are advised to smoke outside their rooms.

Superior rooms



Our superior rooms are located at level 2 and 3. Equipped with IDD telephone, internet access, cable channels, safe and tea/coffee making facilities, attached bathroom with standing shower, there are superior twins and superior queens to select from. Room size: 22 sqm. Connecting rooms are available upon requests, subject to availability. All rooms are NON-SMOKING.



Family rooms



The family rooms are located at level 2 to 3, each unit comes completely as a whole room with no partitions that accommodates up to 4 people per room, with a common standing shower cubicle and a common WC cubicle with no-lock doors* within the room. Equipped with IDD telephone, internet access, rattan couch, cable channels, safe and tea/coffee making facilities. Our family rooms come with either a queen bed with 2 single beds per room or 4 singles per room. Room size: 45 sqm. Connecting rooms are available upon requests, subject to availability. All rooms are NON-SMOKING.

*To accommodate children usage.

Roof garden suites



Located along the top floor of the resort with room views facing the sea our roof garden suites have been a favourite getaway choice for couples and honeymooners.

Each suite features a private stairway leading to an open air private roof top garden including bathtub with a Jacuzzi where you can rejuvenate and enjoy the magnificent view of the sea and the tropics. At its roof terrace it has 2 deck chairs for sun tanning and an open air outdoor bathtub with Jacuzzi. Room Size: double storey in total of 50 sqm. Our Roof Garden Suites are suitable for couples and honeymooners. Due to the unique room design, additional beds are not available for the suites. All rooms are NON-SMOKING

SBR offers comfortable rooms with a rustic eco conscious touch



Glass loft



The Glass Loft (**Tree House**) faces the pool and forest and is the one and only exclusive suite of its kind with ceiling to floor picture glass windows that overlooks the poolside and lush foliage of the resort. When overlooking from its patio, less than 50m away, guests can experience and bathe in their sight the **largest tree in Singapore**. It features a separate bedroom, living room and capacious balcony. Located on level 7, the intimate suite is equipped with IDD telephone, internet access, safe, two LCD televisions, cable channels and an attached bathroom with standing shower. Due to its exclusivity, reservation of the glass loft is subject to availability and is required to be addressed by email, which we will be glad to assist. Room Size: 37 sqm.

Villas



Along a length of walkways that leads to the tranquil fauna environment, you will pass rows of mini forests and enter a shelter lined with pale, rough sea rocks collected specially from the ocean. Deeper into the green shrubbery, passing some lili pad ponds you will arrive across an expansive balcony to the threshold of your very own luxurious villa siphoned away from the bustling crowd.

Within the villa a large four-poster bed shrouded by a beige cotton canopy welcomes you. Each villa is designed differently in accordance to the natural terrains and nature's inlaid trees and comes with their own living area.

Ambling through the villa you will find under those sturdy rustic bamboo poles, your own Jacuzzi lined with stunning and unique mosaic tiles, when lit at night those tiny lights that complement with the mosaic work.

Squirzy: "The mattresses provided in all guests rooms are really comfortable! Believe me, even I who is always over-excited can manage to fall into a deep sleep on these!"

The villas carry one of best representations of the green practices. Trees come through the floors, bedrooms, bathrooms, living area, through carefully constructed glass walls within the villas that hold original trees of the terrains since construction, encased and protected, making the villas one of a kind. Small wild garden patches along the pathways mark the grounds, playing home to plants and sprouting seedlings of fruit trees around, papayas, coconuts and durians– resonating greenery.

Ideal for quixotic romantic getaways or private functions to celebrate an occasion, we are more than happy to assist in making these special occasions a memorable experience.

1 bedroom villa



The 1 bedroom villa comes with a large four poster bed and its own living room quarters. Complete with your own mini bar, open air Jacuzzi and surrounded with views of the natural fauna, relax as you enjoy the tranquillity.

Each villa is completely air conditioned, accommodates 2 staying guests and caters up to 7 people in total for events and functions. An ideal private getaway for any special private occasions.

2 bedroom villa



The 2 bedroom villa comes with a large four poster bed and its own living room quarters with room dividers between the living room and second bedroom, it can be swung open to conceal a queen-sized bed that folds easily into a crevice in the wall.



Luxury villas with a very special touch

While offering 12 luxury high end villas to its guests, the most unusual aspect of these villas is that most of them have several live trees passing straight through the living space. This feature was done as one of the extraordinary efforts to preserve the existing trees on site. It also provides a very special atmosphere to the rooms.

The divider then becomes an aesthetically-pleasing feature wall that doubles up as a backdrop to solemnisations, an intimate birthday party and dining or meeting tables.

Complete with your own mini bar, open air Jacuzzi and surrounded with views of the natural fauna, relax as you enjoy the tranquillity.

Each villa is completely air conditioned, accommodates 4 staying guests and caters up to 15 people in total for events and functions.

2 bedroom villa with pool



The 2 bedroom villa comes with its own pool besides the large four poster beds and its own living room quarters. There are room dividers between the living room and second bedroom, which can be swung open to conceal a queen-sized bed that folds easily into a crevice in the wall.

The divider then becomes an aesthetically-pleasing feature wall that doubles as a backdrop to solemnisations, an intimate birthday party and dining or meeting tables.

Complete with your own mini bar, open air Jacuzzi and surrounded with views of the natural fauna, relax as you enjoy the tranquillity.

Each villa is completely air conditioned, accommodates 4 staying guests and caters up to 50 people in total for events and functions.



Dining



Our dining experience caters to more than just an experience, care is taken in minimising carbon footprint while guests enjoy their meals.

Dishes are prepared with **homegrown herbs** within the resort's own garden, from mints to basil and many more spices of a variety. Savour some of our all-time favourites such as fish and chips or try out the grilled fish platter for healthier choices.

Our green conscious café

Every ingredients used in the menu are ensured with care to minimise carbon foot print, this includes purchasing ingredient primarily from local sources first and when unavailable purchases will then be made from the next nearest source possible including countries such as Vietnam and Malaysia.

Event decors are prepared fully using home grown leaves and flowers as decor, this in turn leads to minimum or no usage of tablecloths. Through a food disposal system, use of garbage bags are also minimised.

While appreciating the nature around the vicinity, we hope to share the finer details to the dining experience with our valued diners. From embracing what nature has to offer around us and aspire to continuously bring that experience to the plate.

Events & weddings

Residing along the beachfront level is the grand ballroom Eugenia. Spreading across the resort selection of locations includes our Roof Terrace for a spectacular view overlooking the South China Sea, our spring water landscape pool surrounded by lush greenery and a waterfall or any of our villas.

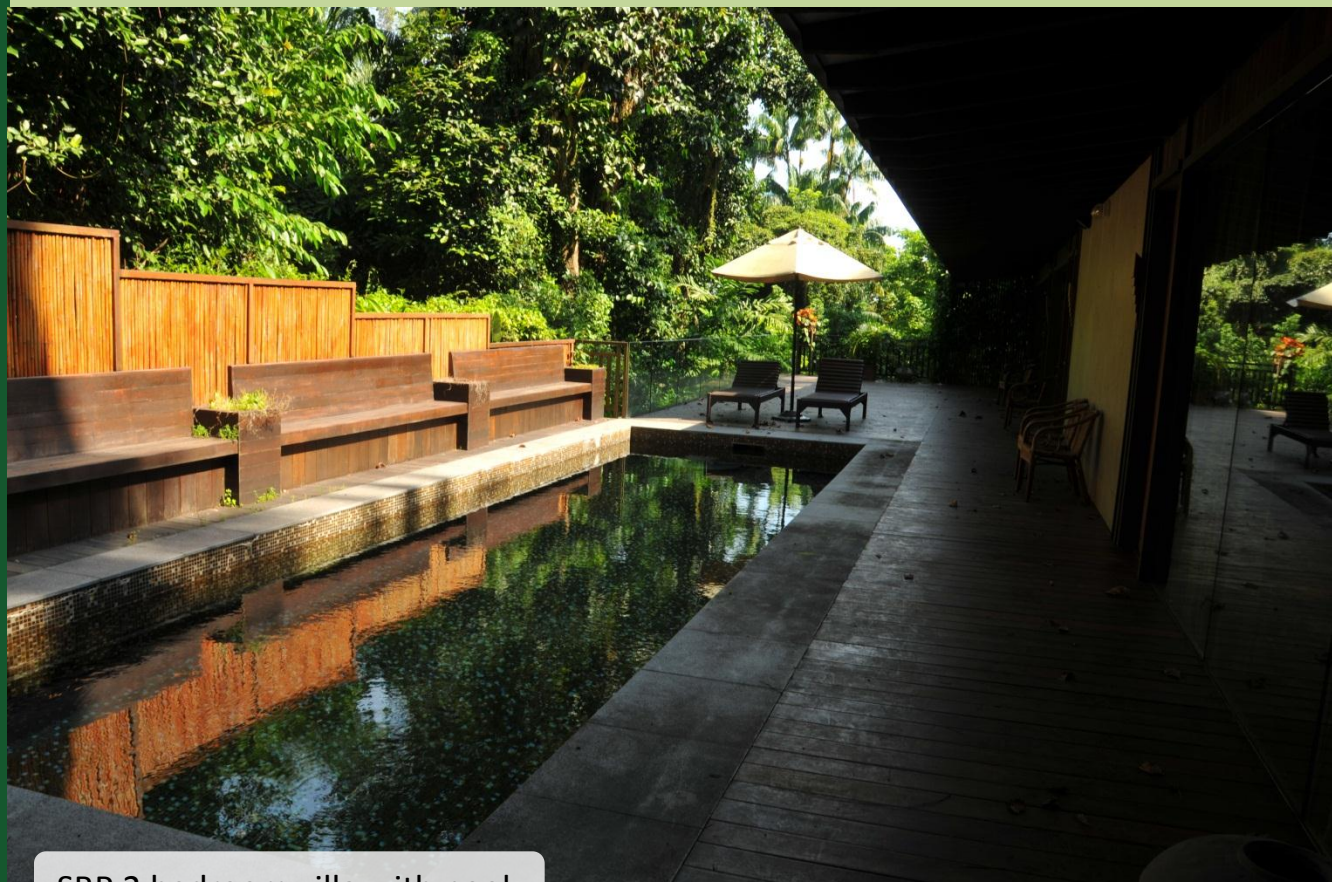
A variety of locations to accommodate events, whether for planning a business meeting, an event, a wedding or solemnisation, we have locations to suit all taste.

Our villas offer a unique retreat and peaceful atmosphere

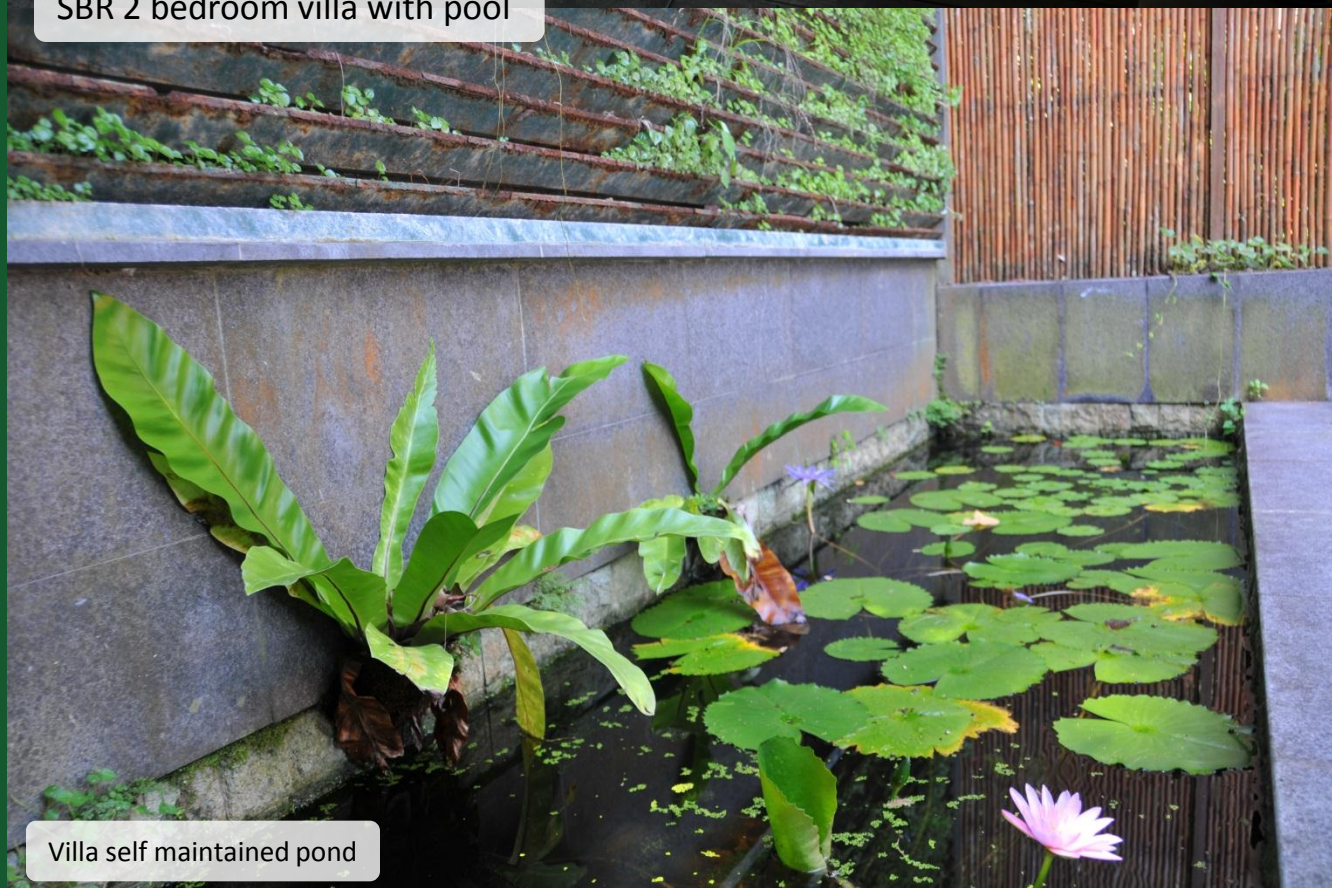


Siloso Beach Resort

Blending Life and Leisure with Nature



SBR 2 bedroom villa with pool



Villa self maintained pond



SBR's restaurant (like the rest of our resort) has put into place very special policies when it comes to sustainability issues:

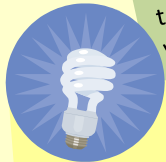


1 No Wastage policy

At SBR's café, 100% of the food waste is either reused or recycled.

Organic waste: 100% of the organic waste is reused and either goes to our food decomposer or to our worm composting facility.

Non organic waste: Whatever can be reused or recycled is. The staff is well trained to segregate various types of wastes (plastics, metals, glass, paper..).



4 Energy saving environment

•Our café is an open air concept. As such we make very significant savings on energy by maximizing natural cooling and the use of fans.

•In the kitchen we use a very energy efficient water heater system.

•We have strong energy saving management guidelines in place for the F&B department with measures such as the closing of the kitchen during night time to only provide heated meals.

•We have installed a balanced wave technology on various appliances such as fridges which significantly reduce heat loss and improve efficiency.

**Our Eco Café
Concept is unique**



2 Mostly purchase local food

For our café we mostly purchase products within the South East Asia region. The reason for doing this is mostly to reduce the carbon footprint resulting from the transports of goods.

3 Use the café area to display strong environmental messages



Our café displays numerous messages related to environmental issues. These include:

•Our biodiversity exhibit which displays pictures of wildlife taken throughout the resort and associated conservation messages.

•Our eco huts (5 in the café area): each hut displays extensive information on a specific topic: climate change, pollution, water, biodiversity, corporate sustainability.

5 Environmentally responsible menu

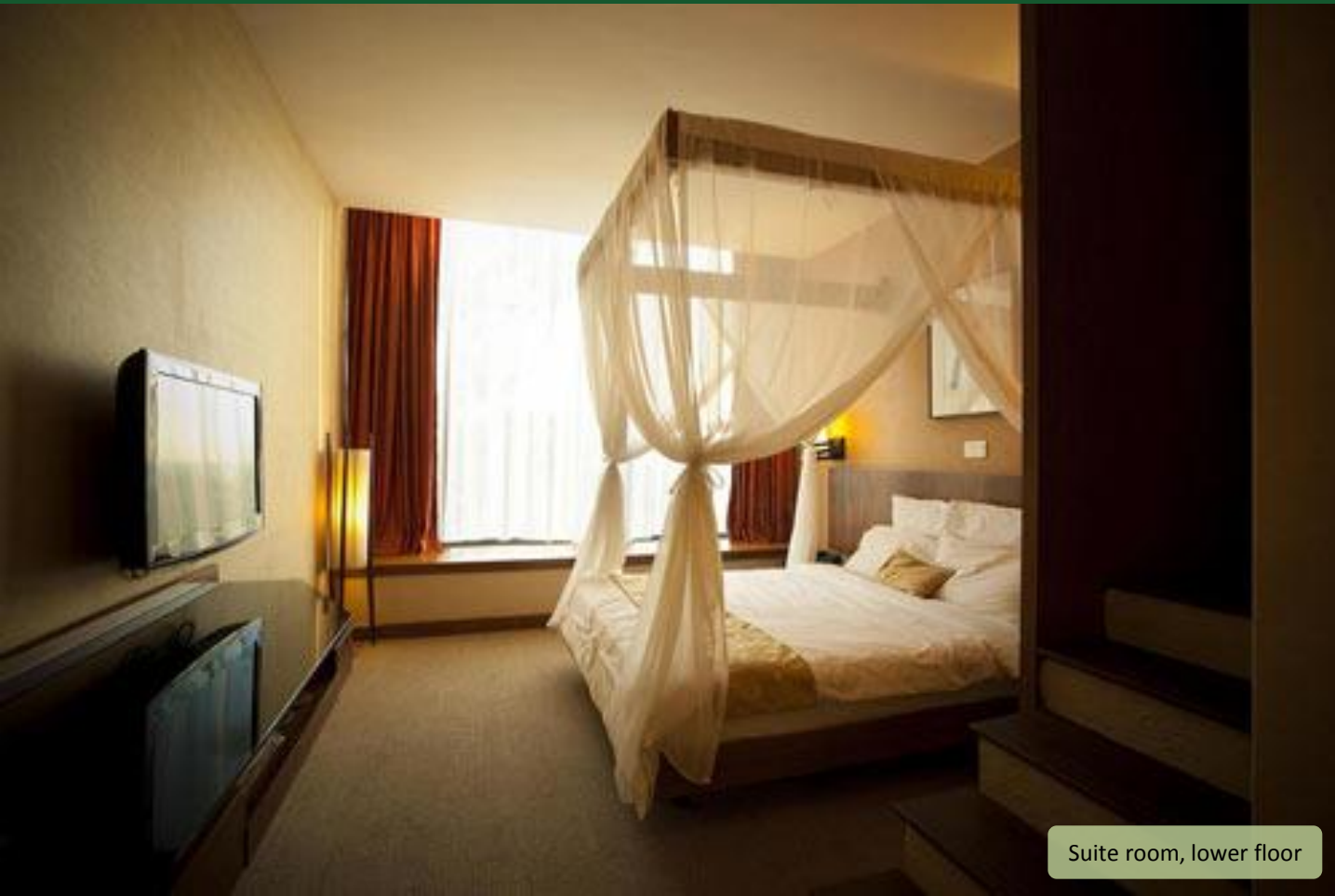


One of our most unusual practices is that we only offer sustainable choices of food on our menu

By this we mean that we follow the World Wide Fund for nature guidelines for sustainable seafood. As such you will not find items such as shark fins, blue fin tuna, tiger prawns on our menu...

We also look into other sources (meat) with a similar consciousness

Also most notable is that part of our food is actually produced/grown within our resort. Indeed we grow our own organic vegetables and spices on our rooftop. 100% of the spices used in the kitchen are from our site and about 20% of vegetables.



Comfortably Furnished Rooms

While being surrounded by a lush greenery, SBR offers a range of rooms and suites which provide a comfortable stay.

Our rooftop suites offer a unique concept of a double decker rooms with a private open air rooftop terrace with jacuzzi



Meeting & events



With a variety of backdrops to choose from, amidst a lush greenery or in the comfort of our grand ballroom, our event team will work with guests to plan their location and event needs.

We offers a versality of locations to cater to any event needs. Whether it's a corporate meeting, a getaway function or dinner parties, we have the venues of choice. Located along Sentosa's hippest beach, with several entertainment hubs right at our doorstep.

Event venues



Eugenia grand ballroom



Roof top terrace



1-2 bedroom villas



Landscape pool

Every aspects of the resort's service offerings provide elements of consideration for the environment, should it be the source of the flowers used to decorate events, the food served and many other aspects. Siloso Beach Resort is an excellent choice for eco conscious travelers looking for a comfortable retreat or venue

Weddings and solemnisation

Saying "I do" is one of life's most important and special moments. Treating the occasion's finest moments to a unique atmosphere and experience is ever so important.

Here at Siloso Beach Resort with various venues of themes to choose from, guests will find the selections uniquely their own.

Venues:



Eugenia grand ballroom



Roof top terrace



1-2 bedroom villas



By the pool





Sea View from central rooftop

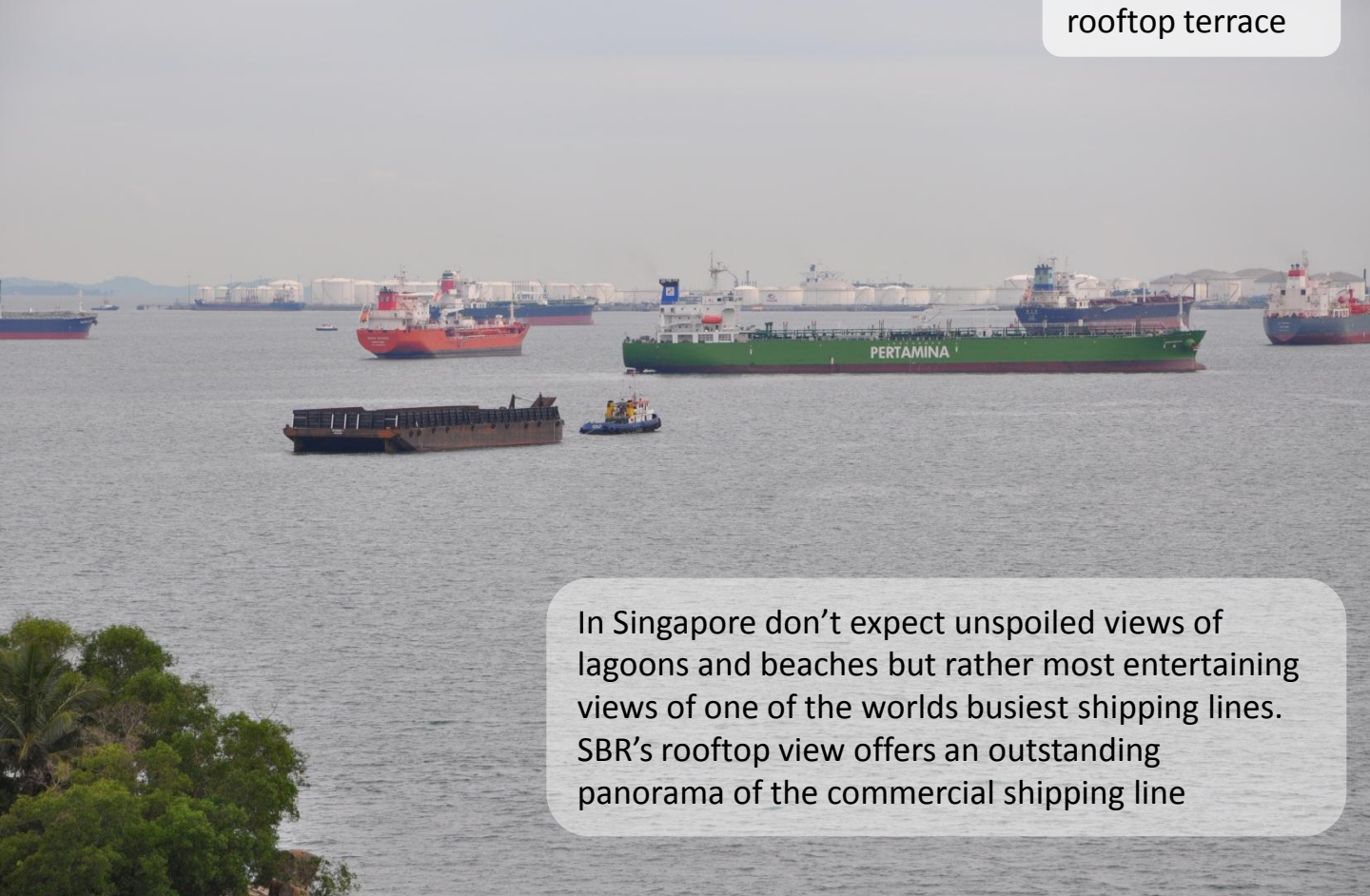
Unique sea view

SBR offers a unique view of the South China Sea. From its roof top one of the best views of this sea is available. Outstanding sunsets can often be seen.

SBR's rooftop terrace provides one of Singapore's most outstanding views of the South China Sea



Views from our rooftop terrace



In Singapore don't expect unspoiled views of lagoons and beaches but rather most entertaining views of one of the worlds busiest shipping lines. SBR's rooftop view offers an outstanding panorama of the commercial shipping line

2.3 Operational structure of the organization

Siloso Beach Resort is a **family owned hotel**. Its only site and operations are on Sentosa island. SBR does not have any other operating companies, subsidiaries or joint ventures. SBR has a unique yet simple corporate structure formed of a general management core and dependant departments.

| Main Divisions | Description |
|------------------|--|
| Front office | Takes care of first contact with guests (registration, check out...) and general inquiries |
| Housekeeping | Daily rooms and facilities cleaning |
| Maintenance | Electrical/mechanical maintenance |
| F&B | Food and beverages services |
| Security | Resort security and observation |
| Reservations | Handling of all reservation matters |
| Sustainability | Environment/society/financial sustainability |
| Accounts | Handling all accounting matters |
| Human Resources | Handling all employees related matters |
| Quality services | Quality of services monitoring and actions |
| Gardening | All gardening matters (gardening is an important department at SBR considering the extent of vegetal coverage) |

The corporate structure at SBR is unique because:

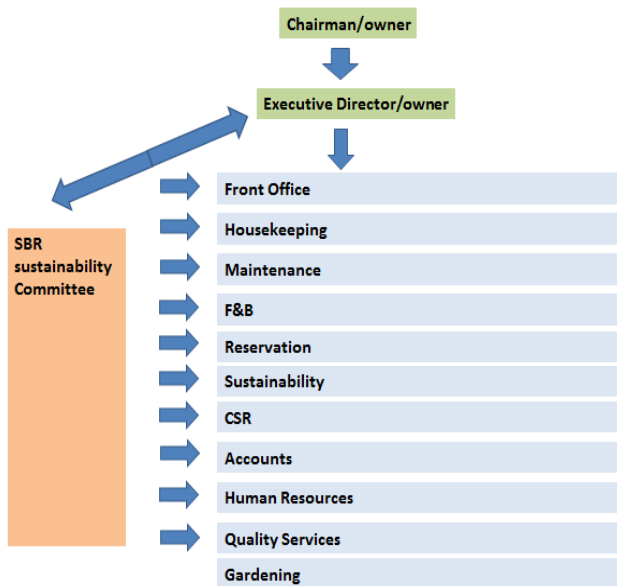
- It is a family owned and managed business;
- Corporate sustainability is an integral part of the overall management

“Prof Monitor, I was wondering: is it common for a hotel to give such an important role to a sustainability committee in the decision making process?”

“No, Squirzy. I actually think it is quite a unique concept. In my opinion it is necessary that such a committee filters all decisions that the management has to make to ensure that sustainability is always taken into consideration”



Company structural diagram:



As this diagram highlights, the **sustainability committee** plays a **very important role** at SBR as it serves as a filter to most decisions taken regarding the company’s operations. The presence of this structure ensures that **sustainability is** not just a practice but rather **an integral part of the business structure.**

2.4 Location of organization’s headquarters

Location: SBR operates from a single site in **Sentosa**. Sentosa is a small island off the southern coast of Singapore. It is considered part of Singapore and is easily accessible through various types of transportation.

Registered address: Singapore, 51 Imbiah Walk Sentosa Singapore 099538

2.5 Number of countries where the organization operates, and names of countries with either major operations or that are specifically relevant to the sustainability issues covered in the report.

Number of countries where the organization operates: just 1

Despite that SBR only operates in Singapore, the sustainability initiatives that it adopts are relevant in any country and due to the international nature of the guests staying at the facilities (from over 50 countries). SBR hopes to outreach on sustainability issues and the role that the hotel industry can play.

| Country | Reason of importance |
|----------------------------|--|
| Europe | Europe has taken a lead over many South East Asian countries on the sustainability agenda. SBR has great pride in sharing its initiatives with European guests as a lot can be gained in learning from best overseas practices within the European union |
| North America | Same as above |
| South East Asian countries | Being countries close to home, SBR believes that it can influence local SEA guests to apply similar changes within their own countries |
| All other countries | SBR believes that there is a win-win situation in interacting with guests from any countries both through learning foreign best sustainability practices and influencing foreigners to apply SBR practices in their own countries. |

One of the driving forces for adopting a sustainable business model lies in the fact that **as a hotel environment, numerous people from various countries and background transit** through the facilities. This also means that there is a great potential to **passively educate** the guests on a range of sustainable best practices while spending a good time at the resort. As a socially responsible corporate citizen, SBR believes it can play its part in educating the society at large.

SBR sees itself as **a local operation with an international outreach.**

2.6 Nature of ownership and legal form

Siloso Beach Resort is a privately owned and managed hotel.

Chairman/Owner: Mr Ng Swee Hwa

Executive Director/owner: Mr Kelvin Ng



Siloso Beach Resort

Blending Life and Leisure with Nature

People from all around the world transit through SBR which makes it a prime sustainability awareness hub



The fact that SBR is a privately owned and managed hotel plays an important role in the unique sustainable initiatives which have taken place at the resort since its creation.

Indeed, most hotels around the world are not managed by the owners themselves, which usually employ management companies to do so. However, because the management of an eco-hotel is very unique and requires passion and attention to details in order to achieve minimization of impacts at all levels, the owners at SBR have chosen to manage the hotel themselves.

Limitation factor: Additionally, many hotels are part of bigger chains and the management is often located overseas. Even if local managers have strong commitments to make a change by adopting a sustainable business model, decisions are often out of their hands which makes procedures much more complicated.



One of SBR's main concerns:

Can Global Sustainability Be Achieved Without Demographical Considerations?

(This article was first published in ecobusiness.com as part of SBR sustainability outreach program)

We are living at a point in time where environmental issues are increasing, severe and high on the agenda. They are reaching such a level that they will not only affect us all but also shape the future and directions of humanity. Since the industrial revolution human related activities have put such amounts of pressures on our environment that we are now entering an era of consequences.

Throughout the 21st Century, we will have to face not one but a range of environmental crises. Of all the environmental issues the four main global concerns of the century are *Global Climate Change*; *Global Biodiversity Losses*; *Global depletion of fresh water resources* and *Global pollution*. Many other major issues are related to these including poverty, food security, social stability and world peace. Experts have warned that unless significant actions and drastic changes are taken today, all the above will inevitably lead to global financial and social instabilities.

Since the industrial revolution, human activities have kept on adding tremendous pressures on Earth ecosystems. While Earth ecosystems have certain abilities to buffer these pressures (e.g. capacity of oceans to absorb carbon dioxide), these ecosystems have been slowly taking on the accumulating pressures and are now reaching saturation. When ecosystems are no longer able to take on the pressures, they become unstable and collapse. The consequences will be increasingly frequent and severe environmental catastrophes. Despite the fact that all these challenges differ in their impacts, they are all interrelated and all come from the same source. The main environmental challenges that humankind will have to face this century mostly arise (concurrently with globalisation and the industrial revolution) from human overpopulation, which is significantly increasing pressures on natural systems much beyond their adaptation capabilities.

In order to achieve our goals of sustainability **both** global demography control and reductions of environmental pressures through sustainable development will have to be achieved.



Overpopulation

The source of all problems and our greatest challenge is obvious: In 1950 there were 2.5 billion people on Earth. There are currently near 7 billion, and by 2050 experts predict that the world population will exceed 9 billion! While during the 20th century the high impacts resulting from the population and the industrial revolution were buffered by the environment, in a world of 10 billion people or so this will no longer be the case: most ecosystems and natural systems on the planet are reaching saturation and are already on the verge of collapse. Two important points must be taken into consideration:

First point: Unless we significantly shift our development models to a truly sustainable one and nations come to control population growth, environmental catastrophes will become increasingly frequent and dramatic

Second point: We only have one planet and the fact is that it simply cannot sustain a 10 billion person population without major sacrifices to our current environment and way of life.

Population growth is a major step-back in terms of making any significant progress in reducing global environmental impacts. While most nations agree that something needs to be done, most models do not seem to include the human growth factor in the picture. Let's say that average world environmental footprint (energy use, waste generation, food consumption...) reduces by 30% (very ambitious) by 2050 through advances in technology innovations. By that time the world population would have grown by at least 2 billion. The environmental pressures and energy demand as a direct result of this 2 billion person increase will most likely far exceed the impacts saved through this improvement. At the end of the day despite significant improvement in reducing our current impacts (based on current population), and unless some nations set targets for controlling population growth, the overall human footprint will continue increasing very significantly as a sole consequence of global population growth.

We must not forget that while the global world population is rapidly increasing, globalisation is also taking its toll. With growing middle classes and millions of people coming out of poverty (which is a good thing from a social point of view) the demand for resources and energy is growing exponentially. However, concurrently the supplies are dwindling. Furthermore to complicate things, global overpopulation is not a uniform problem. While some countries (mostly developed nations) are facing population decrease, others (mostly developing nations) are overwhelmed by overpopulation. It is also a fact that most overpopulation occurs in countries that are least able to cope with managing such pressures and which will be most

vulnerable to social risks. Overall, the world population is rapidly increasing to alarming numbers. The United Nations is becoming increasingly concerned about this trend and world security issues that it implies. It is a fact we cannot ignore that a global rise in world population throughout the century will significantly worsen the already high pressures put on our environment.

In order to be sustained, we have no choice but to change our practices and development models. The only way to peacefully control global population growth is through more effective international and nation-wide family planning. However, it also appears most nations would rather avoid demography issues, which are considered taboo because the solution has become another inconvenient truth.

Sustainable development, still a long way to go

The concept of sustainable development was first suggested during the Brundtland Commission. This concept is largely misunderstood and wrongly used around the world. What it states is that any development activity should take equally into consideration environmental, social and economic attributes and that current development should not deprive future generations. However, in most instances, the environmental aspects of such development model are neglected. Sadly but true, current development is economically driven and is sometimes also equitable, but is rarely sustainable.

We still have a long way to go for development models to become truly sustainable. However, we tend to forget that any development model that does not include significant environmental considerations is not sustainable. Still too often the concept of sustainable development is used without really understanding its meaning and implications.

For instance a lot of efforts have been made in the construction sector to try to reduce the environmental load within this sector. However, when we analyse the situation, most of the emphasis has been put on reducing buildings' energy use (post construction) while the construction materials and the overall impacts of buildings throughout their life cycles, including the resources required to make them, are most



often taken out of the picture or very softly considered. In the end most construction projects going on today still have a very significant impact on the environment not only through the resources used in the construction process and retrofitting, but also in the very long term through the daily operations of the buildings (electricity, water, waste...).

A new wave of buildings referred to as "living buildings" have only just started to surface. The concept is to produce buildings that give more back to the environment in terms of ecosystem services than they actually take (e.g. buildings that clean and filter rainwater, produce more energy than they need...and redistribute these services to the grid). These are really development models that are getting closer to the real concept of sustainability and that we should implement and spread on a large scale now in working towards a more sustainable society.

The role of businesses in reducing environmental pressures

There are many steps that corporations must adopt to achieve a sustainable business model:

Educate their staff on environmental issues: The culture of achieving environmental change within a business entity cannot be confined to the head management level. On the contrary, it must become part of the corporate culture and sustainable practices be implemented at all levels of operations.

Outreach to society through CSR environmental initiatives: Corporates have a responsibility towards society. Significant changes can be achieved by driving best environmental practices outside of the corporate circle and supporting initiatives which intend to reduce environmental impacts or educate on these issues.

Provide sustainable products and services: In a changing economy, the future will rely on sustainable products and services. Companies who ignore this shift will end up being left behind.

Support, invest or donate in environmental projects and initiatives: Even if a corporation does not provide sustainable products and services yet, they can still play a significant role by supporting other organisations that are doing so. A good example is the Census of Marine Life which for the past 10 years has been monitoring life in the oceans in order to improve our knowledge. This initiative of global proportion was entirely privately funded.

The planet already host 7 billion people, the thought of reaching at least 9 billion by half century is concerning...

Reduce their environmental footprint (Energy/water/waste management): Being an environmentally responsible and sustainable company does not simply mean to reduce energy consumption, but to look at how environmental impacts can be reduced at all levels of operations and across all sectors.

Corporations must keep in mind that there is a business case of adopting sustainable practices. Not only will this help to reduce our global environmental footprint but it makes increasingly good business sense to go this way in terms of savings that can be achieved (energy, water, emissions...). It appears clear that the only way governments will be able to have some element of control on corporate impacts and to meet their national targets will be to increasingly control and monitor these impacts through a taxation system. Businesses that start to adapt now will benefit and put themselves in a leading position in the years to come.

A case for thought

While we are increasingly faced with these four main environmental concerns (Climate change, biodiversity losses, depletion of fresh water resources and pollution), perhaps we should take a look back in time and learn from the experience. In the 1970's human kind was already faced with a major environmental issue of global proportion: The depletion of the ozone layer. However, through international collaboration we have managed to identify and slow down the trend to acceptable levels by regulating and banning the use of certain chemicals. We must learn from this experience and apply the same principle to the new threats before it is too late.

However we must not omit demography issues from the picture. Otherwise in the end our efforts in developing a more sustainable society will not result in overall environmental pressures reduction.



"Prof Monitor, there are about 10 squirrels like me at SBR and I already find that we are competing for food especially when it comes to begging food from breakfast guest! The thought that there are already so many people on this planet is concerning not just for humans but also for us as species depending on them in many ways?"



Siloso Beach Resort

Blending Life and Leisure with Nature

At the end of the day we must not forget that preserving the environment is not about saving the Earth but is all about saving ourselves. The planet will still be there for a very long time, and its environment will recover (to some extent) in our absence over time. It is all about not wanting ourselves and our children to live in an unhealthy and unpleasant environment that has greatly suffered from the impacts of our presence.

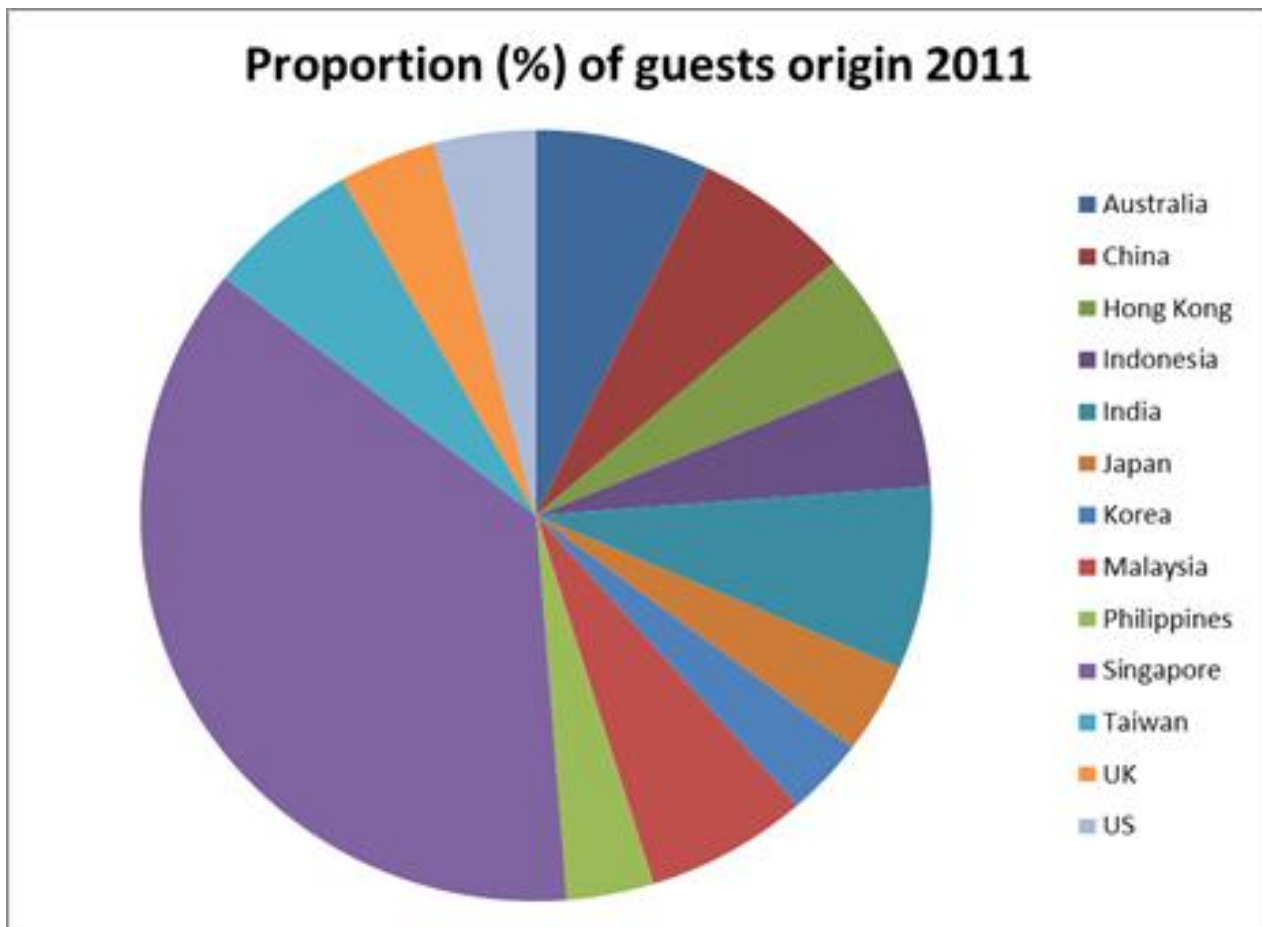
Article by Sylvain Richer de Forges



"Indeed, Squirzy. You are right, the thought that human population is growing so rapidly is very very concerning. The reasons are clearly explained in this article and SBR hopes that the message will spread. When it comes to us and in fact all other species on the planet, our future is uncertain. One thing is however for sure: the more humans there will be the more pressures we will have to endure from aspects such as massive loss of habitats, pollution and not to forget that we will struggle to adapt to a rapidly changing climate. Many of us will simply not be able to cope with the changes..."



2.7 Markets served (including geographic breakdown, sectors served, and types of customers/ beneficiaries)



SBR accommodates guests from **all around the world**.

As a hotel business, anyone willing to stay at SBR is welcomed to do so and SBR does not apply any discrimination of any kind on the origin of its guests.

Sector served: SBR serves clients from all types of sectors (no discriminations)

Types of customers: SBR serves all types of customers (no discriminations)

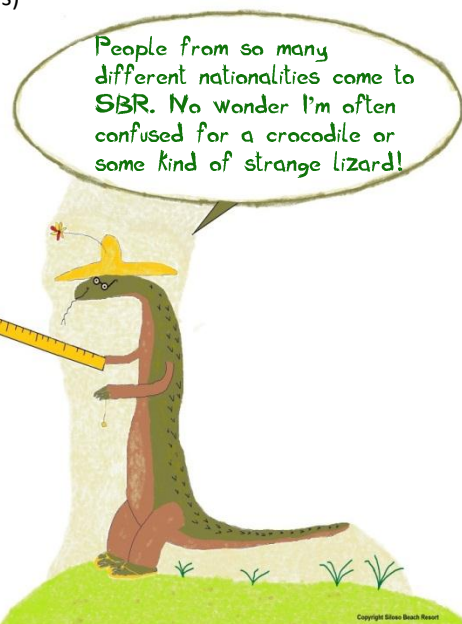
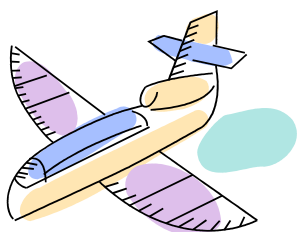
Business and markets:

SBR categorises its market into 3 categories:

National: Singapore

Local: South East Asia

International: the rest of the world

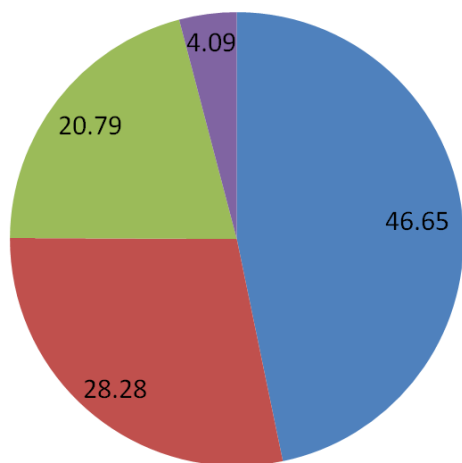




Reservation modes

At SBR, the guests bookings originate from four main forms:

Proportion of Reservation type (%) for 2011



- Direct reservation
- via online travel agent
- via travel agent
- via corporate companies



SBR has had to date **a soft marketing campaign policy**. Indeed, marketing outreach has never been very aggressive at SBR in a sense that the hotel has relied a lot on **mouth to mouth awareness** of its facilities and services rather than active promotion through brochures and other means.



Mouth to mouth awareness is a preferred marketing mean at SBR

For a long time, SBR has remained a “hidden secret”. Many locals who have come to the resort have been surprised that they did not hear about the place before through advertising.

One of the reasons behind this lies in the philosophical concepts behind SBR that **self awareness** is always favored over active and often excessive marketing. It appears to SBR that letting the guests judge for themselves and communicating on what they have experienced to others is a more sincere way of spreading the word on the resort.

It is only in recent years that awareness on the resort has spread including through its unique environmental and sustainability initiatives which have attracted a lot of visibility and public interest both in Singapore and beyond.

SBR has a soft marketing policy because we believe that awareness of our resort through word of mouth is a more sincere approach...

2.8 Scale of the reporting organization

2010: audited
2011: unaudited

Number of employees: SBR is a reasonably scaled hotel with **a staff of 50-100.**

Number of operations: **1 single operation** on Sentosa

Net sales:

•**2010:** 11,009,265.00
 •**2011:** 13,005,658.00

Total capitalization:

•**2010:** 7,892,356.00
 •**2011:** 10,795,185.00

Quantity of services provided:

3 main services:
 Room accommodation, meetings/events facilities, and food and beverage.

Sub-categories:
 Breakfast, Café, laundry, room charges, room services, romantic packages, tel/fax, internet access, Shuttle services, pool bar.



Total assets:

•**2010:** 35,480,305.00
 •**2011:** 33,655,520.00

Beneficial ownership:

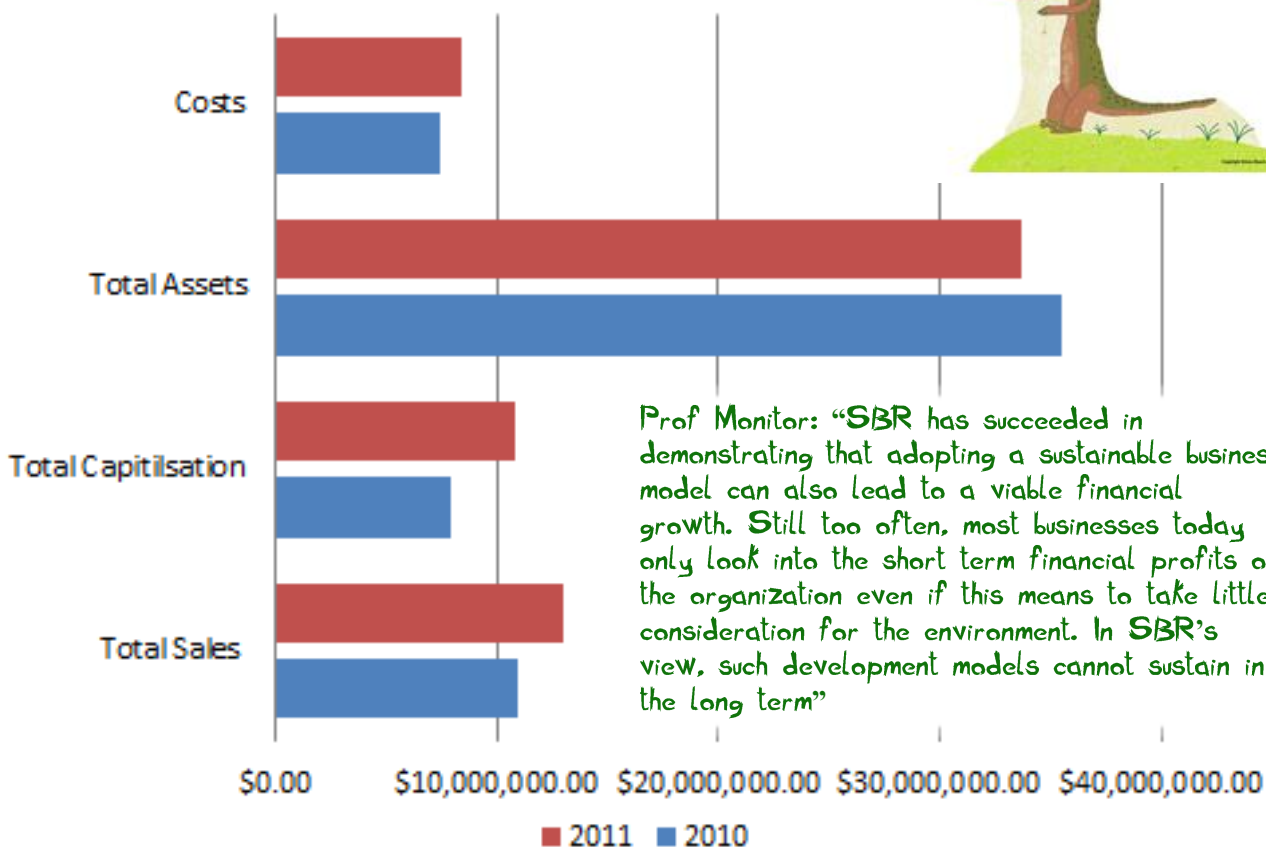
•Ng Swee Hua
 •Ng Yu Teck

Sales/revenues by region: 100% from Sentosa site in Singapore

Costs: (Cost is exclusive of depreciation)

•**2010:** 7,444,218.00 (depression 2010: 661,465.00)
 •**2011:** 8,387,625.00 (depression 2011: 8,387,625.00)

Financial End Figures



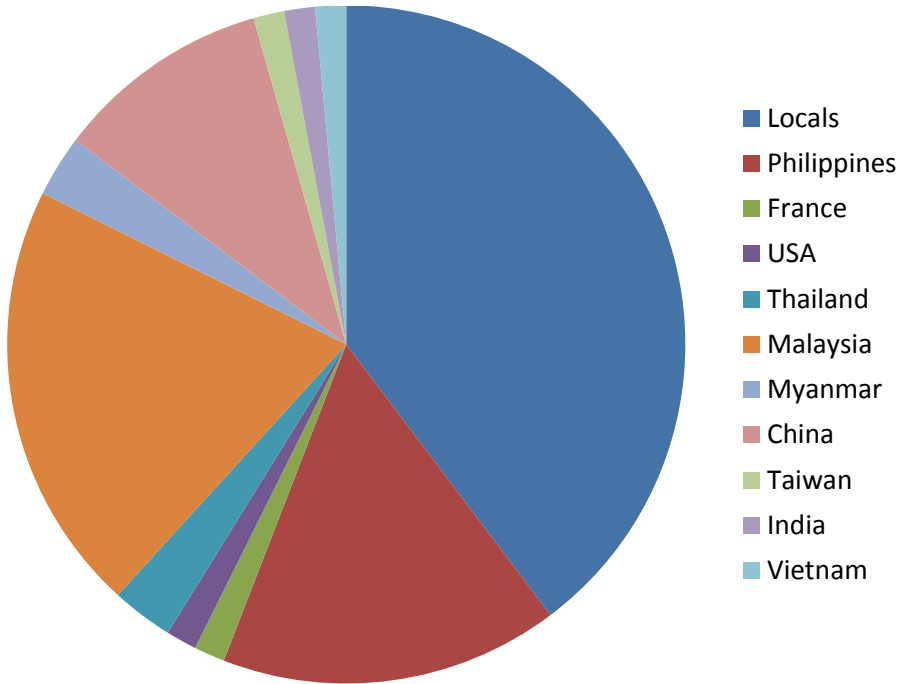
Prof Monitor: "SBR has succeeded in demonstrating that adopting a sustainable business model can also lead to a viable financial growth. Still too often, most businesses today only look into the short term financial profits of the organization even if this means to take little consideration for the environment. In SBR's view, such development models cannot sustain in the long term"



Employees breakdown

Cultural diversity and origin is one of the **strengths** of SBR. This is reflected in the staff which comprises a multitude of nationalities.

Breakdown of employees by country of origin



Squirzy: "They have forgotten to include Prof monitor and myself in the breakdown!! We are locals of course but long time migrants. My roots actually originate in the Americas whereas Prof Monitors' species can be found throughout South East Asia."

SBR takes a lot of pride in diversifying it's workforce. A diversification of the origin of its workforce means diversity in cultures and languages, but also brings an international atmosphere to the resort.



2.9 Significant changes during the reporting period regarding size, structure, or ownership

There have not been any changes in the capital structure since the start of operations.

Development phases: There have been two main phases of development of the facilities:

- *Principal hotel wing (standard rooms, deluxe rooms and roof top suites)*
- *Villas wing*

Renovation work:

Main guest rooms: SBR is currently in a renovation phase which involves all the guest rooms. Renovation involves new room design and upgrade.

Villa wing: SBR is currently modifying its villas to accommodate more family oriented guests.

General works: Small upgrades (e.g. new staircases/corridors, new floor mats...) are taking place throughout the resort.

Major renovation is under way!!



Siloso Beach Resort

Blending Life and Leisure with Nature

2.10 Awards received in the reporting period

Siloso Beach Resort is the **recipient of various prestigious awards and certifications** which it has received in recognition of efforts to reduce its impact on the environment, foster a company-wide culture of environmental awareness, and give back to society and nature through educational tours and CSR projects.



These awards and certifications are an important way to communicate to the stakeholders the sincerity of the commitment to preserving the environment. Through these achievements, we hope to set the environmental benchmark higher for the tourism industry in Singapore and South East Asia.

Below is a summary of SBR's latest awards:



- **Singapore Environment Achievement Awards (top achiever 2010)**

The Singapore Environment Achievement Award (SEAA) has been developed to inspire Singapore-based organisations to become more committed to environmental and social responsibilities. As the only local award that addresses overall environmental initiatives and awareness within an organisation, the SEAA is one of the most prestigious environmental award in Singapore.

The criterion for the SEAA focus on assessing the leadership displayed by the company, the real environmental improvement made as well as the ability of an organisation to establish procedures, train staff and innovate in order to achieve breakthroughs in environmental performance.

Siloso Beach Resort achieved recognition for its commitment to sustainability and ecological preservation and was awarded the SEAA Top Achiever Award for 2010. **Since the SEAA was started in 1997, this is the first time that the award has been given to a hotel.**

•Singapore Sustainability Award (top achiever 2011)



“The Singapore Sustainability Awards recognises and showcases the most innovative and impactful sustainable business practices and green solutions amongst Corporates in Singapore. The awards aim to promote sustainability excellence and sharing of best practices amongst our Singapore organizations across businesses and companies, government agencies and academic institutions so that more organizations will be inspired to adopt similar practices or develop their own”

www.sustainabilityawards.sg

In 2011, a total of 68 companies submitted for the awards, with 9 winners chosen among the various categories, with **SBR being the only Top Honour Winner in its category.**

Although SBR has achieved other awards, this one is the first to take all 3 aspects of sustainability into equal consideration: economic, social, and environmental.

•First Eco-certified hotel in South East Asia from TUV Rheinland



TUV Rheinland performed a certification audit at Siloso Beach Resort with the objective to determine, whether the implemented environmental management system meets the requirements for obtaining the TUV Rheinland’s “Eco-Hotel” certification program. The certification requirements also encompassed ISO 14000 criteria for an environmental management system.

The audit was based on the following:
 Audit self-assessment checklist
 Documentation of the Environmental management system
 Records read during the audit (e.g. water, energy consumption)
 Interviews with management and employees
 Observations done during the audit and recorded with photos

In the last 3 years only, SBR has been awarded 5 major awards & certifications for its sustainability efforts...



Siloso Beach Resort

Blending Life and Leisure with Nature

The scope of TUV Rheinland’s audit was comprehensive of all hotel operations including front office, reservations, housekeeping, food and beverage, sales and marketing, accounting, engineering and maintenance, human resources, safety and security, and others).

During the certification audit, the hotel provided evidence of having implemented an environmental management system meeting the requirements specified in the respective “Audit Checklist” that allow the awarding of the “Eco-Hotel” certification.

•First Eco-certified hotel in Singapore from the Singapore Environment Council



Working with the Singapore Environment Council, we were the **pilot hotel** for this Singapore-based Eco Hotel certification scheme. We hope that by having this certification in place, other hotels in Singapore will be encouraged to adopt more environmentally friendly practices.

Singapore Environment Council is an independently managed, non-profit, non-governmental organisation, and institution of public character that nurtures, facilitates and co-ordinates environmental causes in Singapore. SEC reaches out to the public through its educational community and industrial arms.

•Special mention from Singapore CSR Compact



At the 1st Singapore Compact CSR Awards, held during the international Singapore Compact CSR Summit, we received the Special mention Award for our strong commitment to the environment and corporate social responsibility. The award and summit are organized by the Singapore Compact for CSR, which “functions as a national society in furthering the CSR movement in Singapore, through on-going dialogues, training, collaboration and practical project implementation.

Report Parameters

REPORT PROFILE

3.1 Reporting period

This report covers information for the **period 2011-2012**.

However, many of the data collected covers a longer time period, often since the very conception of the hotel more than 9 years ago. It is important in order to capture the level of achievements at SBR that the report portrays not only some data for the last two years but also puts this into context of the greater picture since the construction days.

One can only appreciate the efforts and achievements in the pursuit of sustainability when gaining an understanding of the history of this sustainability journey at SBR.

It is a **journey** that SBR has embarked on, not punctual achievements. SBR prefers the term of journey as **becoming a more sustainable company is something that requires constant efforts and adjustments**.

3.2 Date of most recent previous report

This sustainability report is SBR's **first** which will mark the beginning of a series of such reports.

3.3 Reporting cycle

SBR sustainability reports will be **re-edited** to include up to date information **on a yearly basis**.

3.4 Contact point for questions regarding the report or its contents.

Primary contacts regarding this report:

Report lead and principal author:

Sylvain Richer de Forges, Sustainability Director
sylvain@silosobeachresort.com

Executive Director: Kelvin Ng
kelvin@silosobeachresort.com

Senior CSR Executive: Karl Fischer
csr@silosobeachresort.com

Additional contacts: This report was approved and voted by SBR sustainability committee.



SBR sustainability committee comprises executives and managers of various departments and meets at least two times a year to review achievements, assess progress and set new targets for continuous improvement in our sustainability journey.

SBR Environmental committee members:

Designation of sustainability committee members

Executive Director
 Sustainability Director
 Senior CSR Executive
 F&B Manager
 Housekeeping Supervisor
 Front Office Manager
 Sales & Reservations Manager
 Finance Executive
 HR executive
 Quality Service Supervisor
 Business Development Manager

REPORT SCOPE AND BOUNDARY

3.5 Process for defining report content

This report is written using the **GRI 3.1 guidelines**.

Materiality: This report covers all indicators highlighted in GRI 3.1 guidelines. SBR wishes through this report to be fully transparent in reporting the information which SBR is willing to publicly share in the hope that it may inspire other organisations in the hospitality field or others.

Focus area: As an eco-resort, the **environment** topic is important to us and therefore we have chosen to give it a particular attention. **The Story of SBR is unique** especially with regards to the initiatives which have been taken to preserve the environment on site and to spread awareness on environmental issues.

However, as we adopt an integrated sustainable business concept we also take into consideration economic and social aspects which are also reported.

Stakeholders: This report is **targeted at all our stakeholders**. A list of stakeholders is given in *section 4.14*

Our unique “jungle feel”



Siloso Beach Resort

Blending Life and Leisure with Nature



One of our villa wing paths

Many areas of our resort offer a **natural immersive environment**



3.6 Boundary of the report

As a single site operated business, boundaries of the report are clearly defined:

The Report covers **single operations of Siloso Beach Resort** in Sentosa Island.

3.7 Specific limitations on the scope or boundary of the report

This report intends to cover all areas of environment, social and economic aspects of the organisation and to report on all key indicators according to the guidelines of GRI 3.1. There are **no specific limitations**.

3.8 Basis for reporting on joint ventures, subsidiaries, leased facilities, outsourced operations, and other entities that can significantly affect comparability from period to period and/or between organizations.

SBR is **not involved** in joint ventures nor does it have any other subsidiaries.

Outsource operations are mentioned throughout the report and are considered part of our sustainability efforts (i.e. Siloso Beach Resort is selective with regards to its outsourced operation/contactors with a consideration for sustainability practices).

3.9 Data measurement techniques and the bases of calculations, including assumptions and techniques underlying estimations applied to the compilation of the Indicators and other information in the report.

The data is collected and reported according to the guidelines of the GRI indicator protocol

•**Collection:** Data for key reporting indicators are collected by various departments on a regular basis. Each department managers have been assign to supervise the data collection efforts according to strict guidelines given to them by the management and in line with GRI.

•**Compilation:** Most of the data is compiled monthly through department inputs and then summarized on an annual basis to observe annual trends.

3.10 Explanation of the effect of any re-statements of information provided in earlier reports, and the reasons for such re-statement

As this is SBR's **first** sustainability report, there are **no re-statements**.

3.11 Significant changes from previous reporting periods in the scope, boundary, or measurement methods applied in the report.

As this is the **first** sustainability report, there are **no changes** from previous reporting periods.

GRI CONTENT INDEX

3.12 Table identifying the location of the Standard Disclosures in the report

| Category/sections | Location |
|--|--|
| Strategy and Analysis 1.1-1.2 | P 10-34 |
| Organizational Profile 2.1-2.10 | P 37-57 |
| Report Parameters 3.1-3.13 | P 58-40 |
| Governance, commitments and engagements 4.1-4.17 | P 64-89 |
| Disclosure of Management Approach, per category | Refer to GRI Content Index P 176 – 181 |
| Core performance indicators | Refer to GRI Content Index P 176 – 181 |
| Any GRI Additional Indicators that were included | Refer to GRI Content Index P 176 – 181 |
| Any GRI supplement indicators included in the report | Refer to GRI Content Index P 176 – 181 |



ASSURANCE

3.13 Policy and current practice with regard to seeking external assurance for the report.

The validity of the information provided in this report is subject to stringent review both internally and externally.

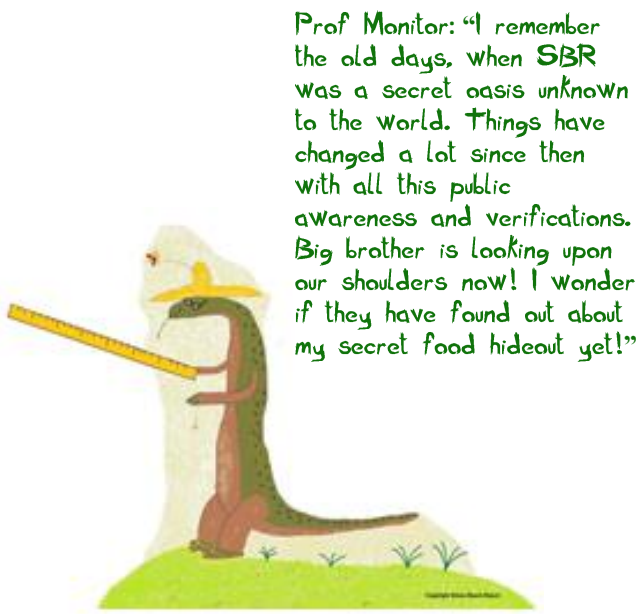
•**Internally:** This report has been reviewed by our sustainability committee. Data collection from various departments follows company guidelines and internal quality control procedures.

•**Externally:** SBR sustainability statements are publicly available and have been subjected to review by a number of stakeholders including awards and certifications provided by third party organisations: As part of the **process of obtaining our numerous awards and certifications** (e.g Singapore Environment Achievement Award, Singapore Sustainability Award, Singapore Compact Merit Award for CSR, Eco Hotel certifications from TUV Rheinland and the Singapore Environment Council), the **statements** provided in this report have been **extensively reviewed**, analyzed and verified by these parties in much more depth than just a simple third party verification assessment (e.g.: water/energy audits).

Through the detailed internal and external verifications, SBR has no doubts of the accuracy of the information hereby provided in this report

The below table provides a list of **some** third party verifications (there are many others):

| Verifying Third Party | Aspect verified | Documental evidence |
|-------------------------------|--|--|
| Singapore Environment Council | Environmental achievements | Certificate: Singapore Environment Achievement Awards (Top achiever) |
| Singapore Business Federation | Sustainability achievements (social, Environment and economical) | Certificate: Singapore Sustainability Award (Top honour) |
| TUV SUD | Risk assessment: "bizSAFE level 3 certified" | Certificate of Audit by TUV SUD |
| Government accredited auditor | Financial statements | Audit report |
| Singapore Environment Council | Green initiatives and operations | Certificate: SEC Eco Hotel certification (first to be certified in Singapore) |
| TUV Rheinland | Green initiatives and operations | Certified eco hotel (first to be certified in South East Asia) |



Prof Monitor: "I remember the old days, when SBR was a secret oasis unknown to the world. Things have changed a lot since then with all this public awareness and verifications. Big brother is looking upon our shoulders now! I wonder if they have found out about my secret food hideout yet!"

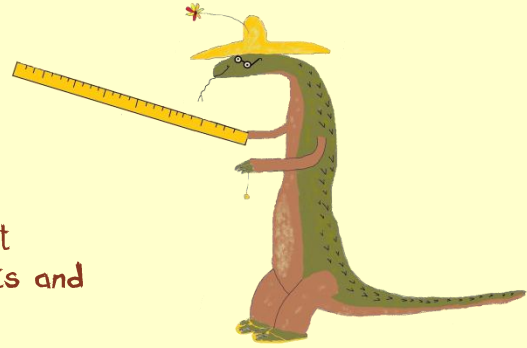


Case study : the fear of a sustainable path



2

Prof Monitor: "Yes, Squirzy, you are right. Many see sustainability as a very difficult path and would rather choose the easier way of continuing business as usual. I believe that this is not true for several reasons."



3

Squirzy: "Is it because it is expensive or simply because it requires too much extra efforts and allocation of resources?"

4

Prof Monitor: "It is definitely not a cost issue, many aspects of sustainability rather save money than cost anything. It is more a problem of a fear of change in practices, drifting away from business as usual and shifting the mindset of corporations."

1 Squirzy: "Prof Monitor, I have only been around the resort for a short while but there is something obvious that I noticed from many people, especially business owners: many are afraid to embark on a sustainable path because they see it as a difficult one. Is this true?"



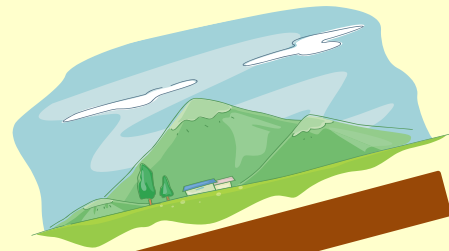
5

Prof Monitor: "My philosophy is quite simple. See sustainability as a climbing exercise. If you look at it for the first time and aim to become a sustainable company straight away it will seem like an unachievable goal such as climbing a very high mountain without any prior training or experience. But if you adopt a progressive approach and choose to start by climbing a hill then you will put yourself on the right path of achieving this goal overtime step by step."

Corporate sustainability is like...climbing!?

..It is easier to start by climbing a hill!

You do not climb to the top of a high mountain straight away..

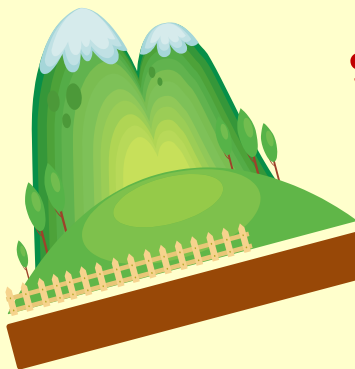


Sustainability is a JOURNEY not an achievement

..It is easier to adopt a progressive approach progressing step by step towards this goal.

You do not become a sustainable business straight away..

Climbing



Corporate sustainability



GOVERNANCE

4.1 Governance structure of the organization

Senior Management:

Siloso Beach Resort is a family owned and operated business. Senior management (responsible for executive decisions) comprises of **family members:**

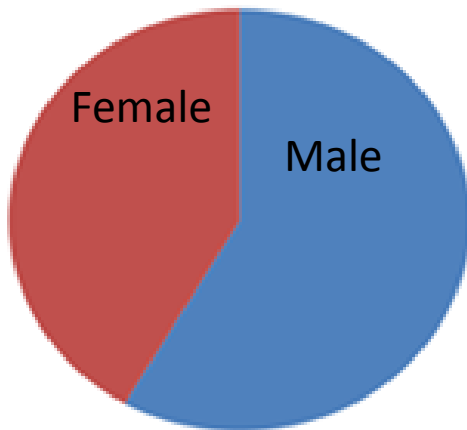
- Mr Ng Swee Hwa: Chairman/Owner
- Mr Kelvin Ng: Executive director /Owner
- Ms Felicia Ng: Sales and Reservations Manager

As a small family run organization, the number of company executives is limited and comprises of a majority of male representatives. Ratio 2:1

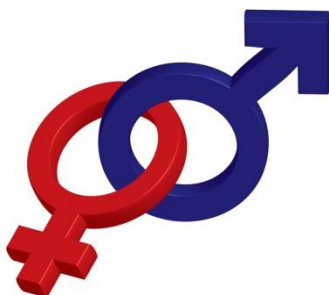
Senior advising group is comprised of a **sustainability committee**. Decisions of the committee have influence on family members decisions.

The sustainability committee, responsible for analysing key executive decisions in the organisation however has a breakdown of male/females. Below is the ratio.

The **sustainability committee** is comprised of 12 members of which 7 man and 5 women:



A detailed composition of the sustainability committee is given at **section 3.4**



4.2 Chair of the highest governance body

The chairman, Mr Ng Swee Hwa, is also an executive officer in the organisation.

Highest authority in the organisation is by the owner himself which is also an executive officer in the organisation.

The reason for this arrangement is that SBR was built from the very beginning with direct guidance from the owner to make SBR a very unique hotel with a strong commitment to sustainability and environmental preservation.

As outsourcing an environmentally conscious management is proven very difficult and rare to find, It was crucial in order to pursue in achieving this goal that the owner and family members remained actively involved in the management of SBR.

4.3 Unitary board structure

SBR is a family owned and managed resort hotel. **SBR does not have a unitary board structure.**

4.4 Mechanisms for shareholders and employees to provide recommendations or direction to the highest governance body

Shareholders engagement:

SBR has various mechanisms in place to collect feedbacks from its stakeholders which includes service providers, suppliers and hotel guests.

Hotel guests are able to provide feedback through various means which includes :

- pre established feedback forms** available in every room and which are then collected by the staff during room cleaning;
- by approaching one of the staff** directly who will then report to their department managers;
- through websites:** The resort's website provides various sections especially designed to collect feedbacks as well as through third party sites such as Tripadvisor which allows travelers to comment on their stay. SBR regularly scans these sites in order to collect feedback and take corrective action if necessary.



Employees feedbacks:

SBR has a well-established process for collecting feedbacks from its employees. In order to do this, regular meetings are organized at two levels:

Intra-department meetings: Managers of the different departments meet with their respective staffs to collect feedback. Feedback is then transmitted to the sustainability committee

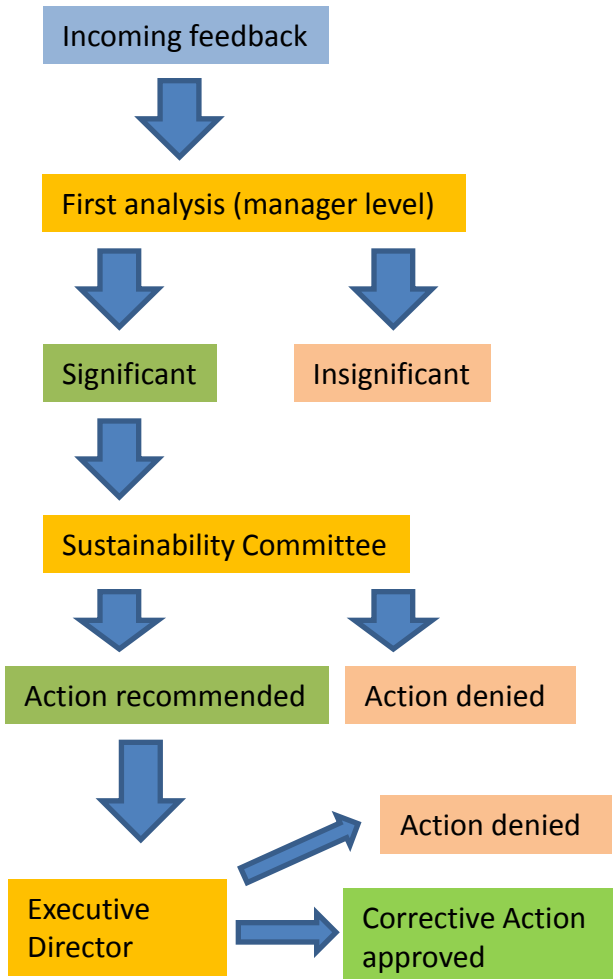
Inter-department meetings: These meetings involve departments managers with general management. Several committees have been established for this purpose:

- SBR sustainability committee
- SBR safety and risk management committee
- SBR Annual review committee



SBR has open policies with regards to collecting feedbacks from its employees

General feedback collection mechanism



SBR Feedback collection box

A **feedback collection box** is another mechanisms for employees to provide feedback anonymously should they not wish to interact with the management directly.

Every feedback is taken seriously and analyzed by the management which will then decide of an appropriate action

Prof Monitor: "Every feedback received at SBR is taken into consideration. Feedbacks which are judged significant and suggest corrective actions are analyzed carefully through an established mechanism. The sustainability committee ensures that decisions made are in the long term sustainability interest of the organization"





4.5 Linkage between compensation for members of the highest governance body, senior managers, and executives

Every employee of the company is subject to employees rules and regulations which include employees rights. These rules are highlighted in the employment contract and agreed between the employee and the employer at the time of employment.

These include (but are not limited to):

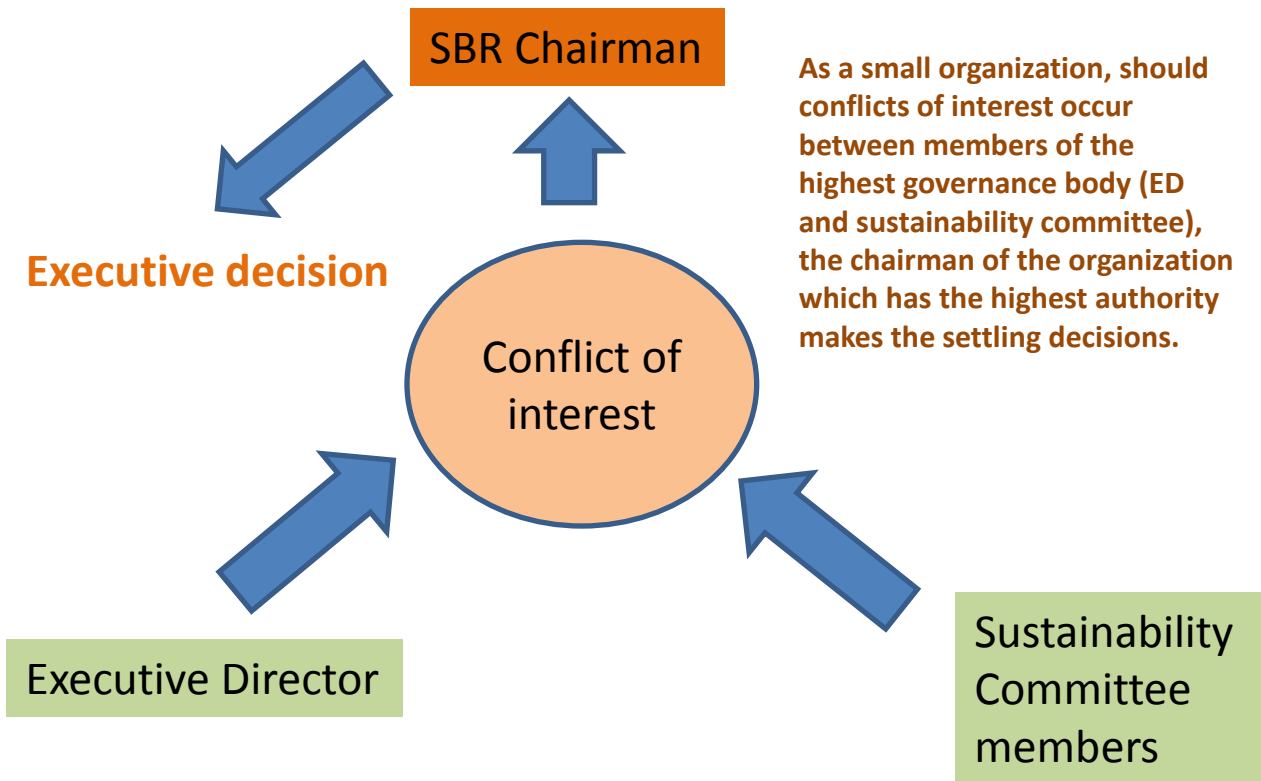
- Number of paid leave and holidays
- Fixed salary and bonuses options
- Compensation:** SBR has flexible compensation options for various levels of management which are customized based on experience and qualifications.
- Departure arrangements:** These are the same for all employees and are subject to one month notice. Other departure arrangements may occur and arrangements are made on a case to case basis.

4.6 Processes in place for the highest governance body to ensure conflicts of interest are avoided.

Linkage between compensations

| Level | Compensation |
|-----------------------------|---|
| Highest governance | Highest governance is the owner of the company. Compensation is not fixed but proportional to company profit as per shareholders stakes |
| Manager | - Higher base pay than executive and - More annual leave entitlement - Performance bonuses |
| Executive | - Monthly pay package - Annual two leaves entitled - Performance bonuses |
| Others Rank and File | - Monthly pay package - Allowance - Performance bonuses |
| Part timers | - Hourly rated - Allowance |

As part of our compensation all full time employees benefit from healthcare options

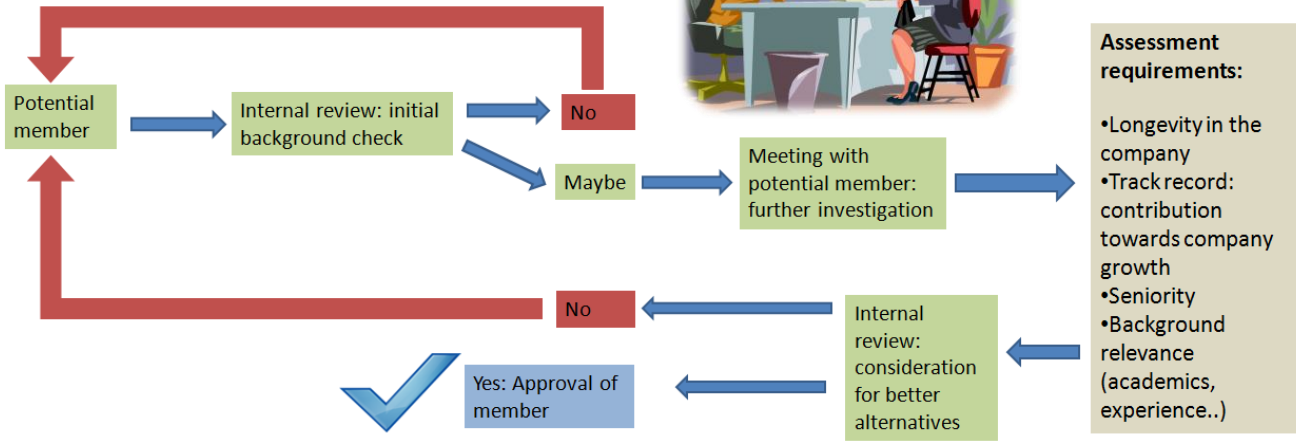




4.7 Process for determining the composition, qualifications, and expertise of the members of the highest governance body and its committees, including any consideration of gender and other indicators of diversity.

SBR has a process in place in order to assign members of its various governance boards: Governance boards are comprised of advisory committees of which:

- The sustainability committee
- The risk management committee
- The general review committee



New committee members are appointed for **a period of 2 years** after which their relevance on the board is reassessed.

Diversity: SBR does not conduct discrimination of gender when appointing new members. Efforts are made to aim towards an equilibrium between number of man and women in the committees.

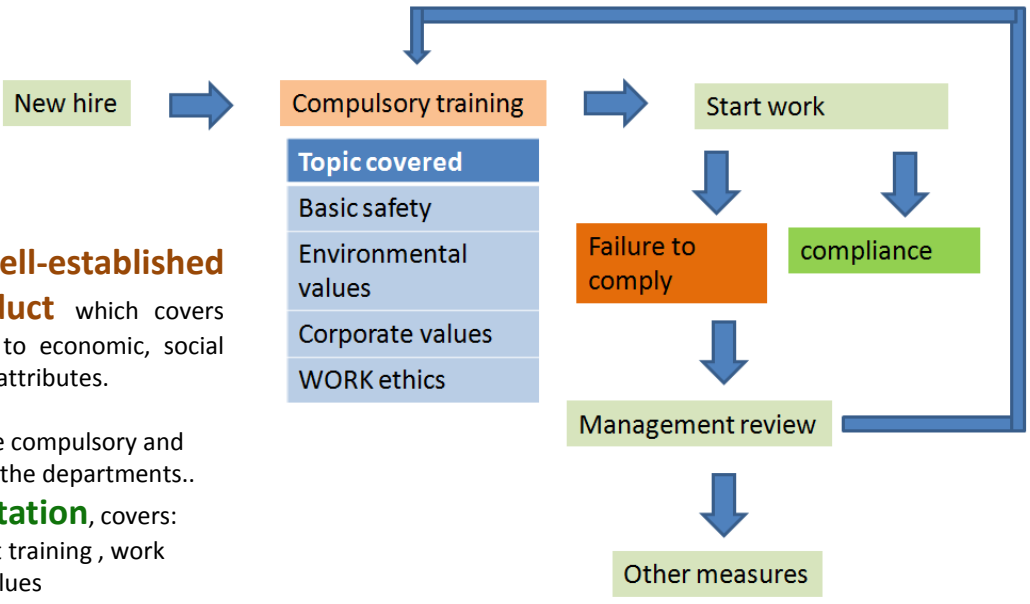
4.8 Internally developed statements of mission, values, codes of conduct, and principles relevant to economic, environmental, and social performance and the status of their implementation.



SBR has **a well-established code of conduct** which covers principles relevant to economic, social and environmental attributes.

These guidelines are compulsory and applied throughout the departments..

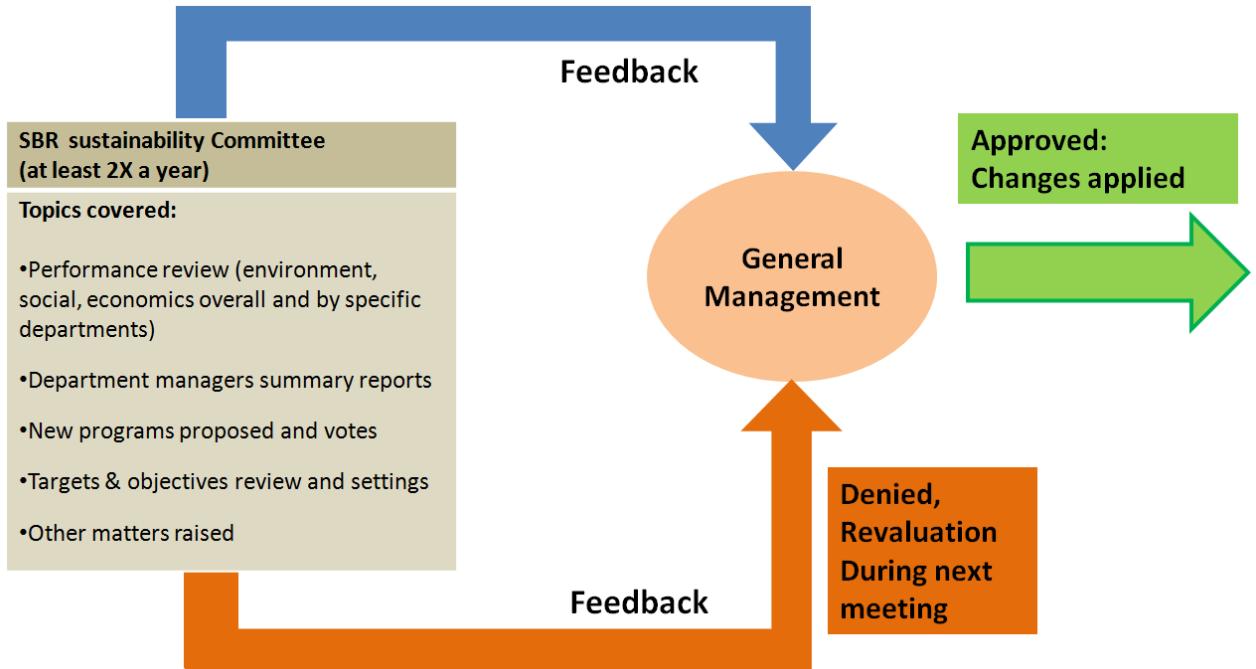
General orientation, covers: safety, environment training , work ethics, corporate values





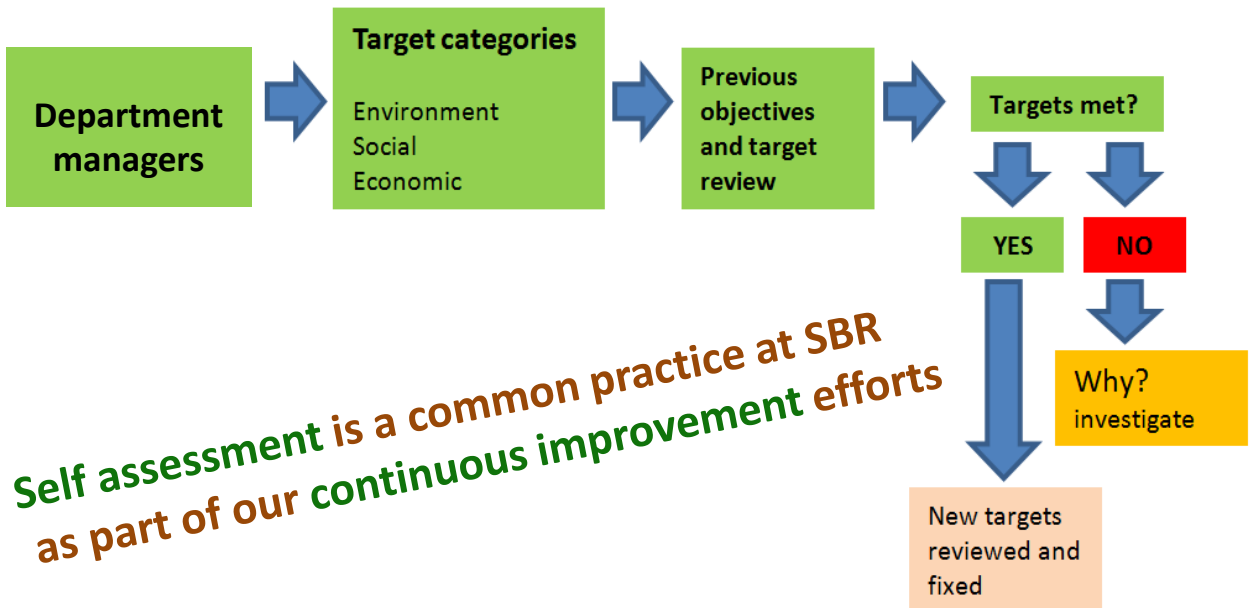
4.9 Procedures of the highest governance body for overseeing the organization’s identification and management of economic, environmental, and social performance, including relevant risks and opportunities, and adherence or compliance with internationally agreed standards, codes of conduct, and principles.

A number of indicators have been put in place in order to regularly assess the performance of the organisation with regards to economics, environment and social aspects.



4.10 Processes for evaluating the highest governance body’s own performance, particularly with respect to economic, environmental, and social performance.

During meetings, the **performance of existing targets and objectives are reviewed**. Each department managers will then give the results of the performance of previous fixed targets in the environment, social and economic fields. If targets have not been achieved, an investigation is launched to determine the reason and to fix a new target.



Self assessment is a common practice at SBR as part of our continuous improvement efforts



COMMITMENTS TO EXTERNAL INITIATIVES

4.11 Explanation of whether and how the precautionary approach or principle is addressed by the organization

SBR has put into place stringent codes of conduct when it comes to adopting a precautionary approach at all levels of its operations. The SBR sustainability committee plays a crucial role in the company **applying the precautionary principal at all levels of operations and systematically.**

The below diagram highlights the procedure:



Recently SBR has undergone a **risk management training** and application in which external auditors have conducted a risk assessment audit. Following recommendations from the auditors, numerous changes have been made to manage risks in a most effective and ethical way.

“Prof Monitor, Why is it so important for SBR to apply the Precautionary approach?”

“Well Squirzy, you see every action that SBR takes has elements of risks involved. Without a precautionary approach, some decisions made could have serious impacts on aspects as diverse as our surrounding environment or even the safety of our guests and staff. It is a kind of safety net to ensure a good and ethical decision making process.”





4.12 Externally developed economic, environmental, and social charters, principles, or other initiatives to which the organization subscribes or endorses.

SBR adheres to a range of externally developed charters and principles. While some of them are government regulations, many are voluntary initiatives by SBR to follow these standards and often even exceed them.

While SBR implements many of its own regulations and principles, it is important to base these principles and adhere to a range of internationally agreed standards.

Adopting a range of externally developed standards also reinforces SBR's management policies and insures that the company has a strong backbone and set of standard operation procedures (SOP's) in place.

Below are **some** of the guidelines:

| Standard | Where applied | Date of adoption | Stakeholders | Type |
|------------------------------------|---------------|--------------------|--------------------|-----------------|
| UN Global Compact | SBR | Feb 2012 | Multi-stakeholders | Binding |
| Risk management | SBR | Jan 2012 | Multi | bizSAFE level 3 |
| Fire safety | SBR | since 2006 | Multi | Legally binding |
| F&B/ food hygiene | SBR | since 2006 | NEA | Legally binding |
| Eco Hotel Guidelines/TUV Rheinland | SBR | Jan 2011 | Multi | Voluntary |
| Eco Hotel guidelines/SEC | SBR | Nov 2010 | Multi | voluntary |
| Singapore Construction codes | SBR | Since construction | Multi | Legally binding |



SBR is fully compliant with all government regulations

We also follow a range of voluntary standards and set some for ourselves

"Prof Monitor, SBR is a relaxed environment. I like it because it gives me a feeling of freedom and to do what ever I want!"

"Actually Squirzy, it is true that SBR values its lay back atmosphere and freedom. SBR wants its guests to enjoy their stay above all. However, as a public environment SBR does have a range of strict regulations which are put into place and enforced to ensure guests safety and comfort."



4.13 Memberships in associations

SBR is associated with **a range of stakeholder organizations**. While some are related to the hotel business many have been established through the **sustainability programs** and CSR outreach.

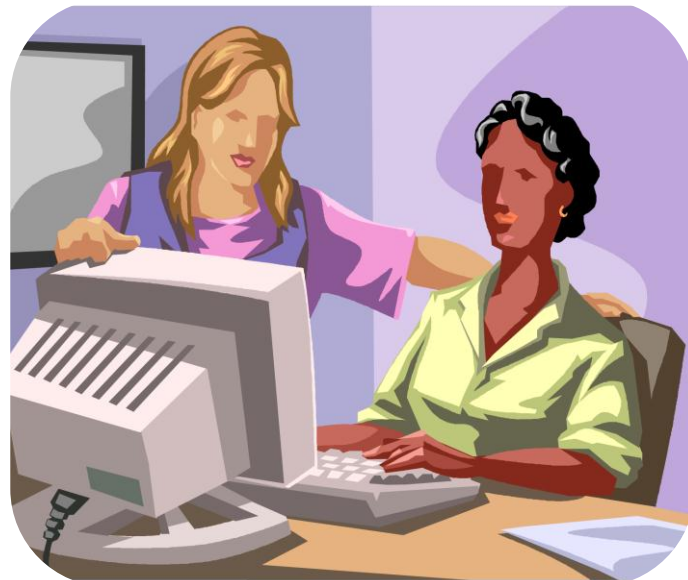
SBR believes that being a member of these associations extends its sphere of influence and in many instances allows it to **play its corporate citizen role**.

| Association | comment |
|---|---|
| Sembawang Shipyard, Greenwave initiatives | <p>The Greenwave is a major drive for sustainable innovations in Singapore. It provides an opportunity for students of all levels to showcase their best applied research projects and concepts that could drive a real change in making Singapore a more sustainable society. Selected projects gain endorsement and financial support to reach the market and be implemented into society.</p> <p>For more information about the Greenwave initiative:</p> <p>http://www.sembship.com/greenwave/about.asp</p> <p>Since 2010, SBR has a presence on the judging committee.</p> |
| Ministry of the Environment Youth Environmental Engagement | <p>SBR meets a few times a year with members of the ministry to network and share best sustainability practices and involvement of the youth community in Singapore.</p> |
| Sentosa Island Partner | <p>Sentosa Island regularly organises meetings between its island partners and often by inviting third party organisations to discuss about future and potential development plans of the island.</p> |
| Singapore Compact for CSR | <p>A primary point of contact for CSR related events and support in Singapore. As a member, SBR is regularly involved in seminars and meetings organized by this organization. SBR has also sponsored some of these events.</p> |

SBR has membership with various organizations



| Association | comment |
|--------------------------------------|--|
| UN Global Compact | <p>The United Nations global CSR initiative is the world's largest CSR initiative that aims to drive more sustainable practices in businesses throughout the world. Since 2012, SBR is a member.</p> |
| eco-business.com | <p>Asia-Pacific's largest environmental business community. As a member and an approved client, SBR submits regular environmental related articles to this platform.</p> |
| Singapore Environment Council | <p>SBR is actively supporting the work of SEC through sponsorships or direct involvements.</p> |
| TUV Rheinland | <p>SBR is the first hotel to become certified in SEA under TUV Rheinlands's eco hotel scheme. In addition SBR is very close to their activities by supporting their work and processes.</p> |
| Singapore Nature Society | <p>As a member SBR regularly attends events organized by this organization. It also has sponsored some of their initiatives.</p> |
| City Development Limited | <p>For young CSR Leaders awards competition as participating SME.</p> |
| National Environment Agency | <p>Learning Journey partner for PS21 Excel Convention 2010. SBR is the first learning journey partner from the private sector.</p> |
| St Andrew's Autism Centre | <p>SBR actively supports the integration of people in need through its partnership with the organization.</p> |



Through its various memberships, SBR significantly expands its **sphere of influence**



| Association | comment |
|---|---|
| Make a wish Foundation | SBR regularly donates to this foundation which aims to give children with life threatening illness an opportunity to realize a wish |
| National University of Singapore | Member, Raffles Museum. SBR financially supports many causes of the museum |
| Singapore Business Federation | Member as a corporate but also as a participant in their sustainability forums |
| MCYS (ministry of community and youth) | Member. Facilitating employment to the youths |
| Open Door Fun (recruiting disable and senior persons) | Member. Facilitating recruitment for the disabled and the senior persons |

SBR is active in engaging with Stakeholders through memberships and active contributions. While many partnerships are already established, SBR constantly seeks new engagements opportunities...interested?



and many others...

In the past 3 years alone, SBR has established numerous partnerships with various stakeholders in very different fields from environmental and social NGO's to government organization and the private sector. So far for SBR, joining an organization through membership has usually resulted in other means of collaboration **going beyond the simple membership** (e.g. organizing mutual events, sponsorship of events, working on mutual programs...)

SBR is very active in stakeholders engagement both through its mainstream business but also through CSR programs

SquirZy: "Through its various memberships, SBR significantly expands its sphere of influence. Prof Monitor often teaches me that a company with a heart is more important than one with deep pockets and that finding a right balance between being a financially successful business and a socially responsible one should be the aim of any business. Prof Monitor tells me that when I get older, I will come to understand this concept!"



It feels good to be a good corporate citizen!

STAKEHOLDER ENGAGEMENT

The following Disclosure Items refer to general stakeholder engagement conducted by the organization over the course of the reporting period

4.14 List of stakeholder groups engaged by the organization.

Our stakeholders include all the various partners with whom we work with on the various programs that we have.

Main programs supporting organizations

SBR has developed a number of high level outreach CSR programs. Some of these programs have gained a lot of support from leading organisations in their respective fields. Below is **a selection** of latest engagements with stakeholders.

| Organization | Program partner |
|--------------|-----------------|
|--------------|-----------------|



World Wildlife Fund: SBR Biodiversity Portal



Conservation international: SBR Biodiversity Portal



Tropical marine Science Institute: SBR Biodiversity Portal



Raffles Museum of Biodiversity Research : SBR Biodiversity Portal



Census of Marine Life: SBR Biodiversity Portal



The Singapore Institute of Biology : SBR Biodiversity Portal



Singapore Environment Council: SBR Biodiversity Portal



Science Centre Singapore: SBR Biodiversity Portal



National University of Singapore: SBR Biodiversity Portal



United Nations Environmental Programme: SBR biodiversity portal



| Organization | Program partner |
|--------------|-----------------|
|--------------|-----------------|



www.eco-business.com : SBR eco articles



Origin exterminators. Sustainable solution to mosquito control



Singapore compact for CSR. Various events



Singapore Polytechnic SBR Eco Tours/internships



University of Nevada Las Vegas. SBR Eco Tours

...And many others...

SBR is continuously seeking new partnerships with various stakeholders

Other stakeholders comprise the following

| Stakeholders | Comments |
|-----------------------------|---|
| Customers | Guest staying at the hotel as well as passing guests (e.g. F&B guests) |
| Civil Society | SBR is very active in reaching out to society through its numerous CSR programs |
| Employees and other workers | SBR puts a lot of attention on its employees and contract workers which play a very important role in the success of the business |
| Suppliers | As an hotel environment, SBR works with numerous suppliers many of which are active in the sustainability field |



Eco Tours



The eco tours have taken place **for the last 3 years**. The aim is to **showcase and share the sustainability** achievements at the hotel with various stakeholders in order to inspire others to embark on the same path. This program has been very successful and to date **more than 3000 people** from university students to fortune 100 companies top executives have attended the tours.

Purpose

We use **the resort** and its environmental aspects as **a case-study** for the environmentally sustainable business model. The aim is to create awareness of environmental issues and help to develop more compassion for the environment.

Duration

1.5 to 2+ hours, followed by 15 minutes for Q&A.

Who

The Eco Journey is mainly tailored towards company groups and tertiary students and above, however we offer the tour to anyone who is interested in environmental sustainability. This includes stakeholders like in-house guests, partners, and suppliers.

The Program

The Eco Journey has 7 major “stations” or areas of interest all around the resort.

-Introduction – Explains the purpose of the tour, the general eco-concept, and the guidelines for constructing the resort.

-Villa Wing – This area aims to showcase blending leisure with nature, with trees even incorporated into the design of buildings.

- Rooftop Terrace – A stunning view of the South China Sea, and below our 100m long self-maintenance rooftop garden.

- Green Sanctuary –This area is where our own gardening staff grow plants and herbs for use around the Resort.
- Landscape Pool – A unique swimming pool that is better for both people and the environment.
- Green Technology – Explains how the Resort uses technology to reduce energy and waste.
- Al Fresco Café – Learn about how we apply the 4Rs (Respect, Reduce, Reuse, and Recycle) in our Café.

Cost: The tour is **free as part of our Corporate Social Responsibility program**, in order to promote compassion for the environment and our sustainable business model. However, there is a small fee to gain entrance to Sentosa Island.

Events sponsorships

SBR regularly financially supports meaningful events.

Below is a list of **some** of the latest events SBR has financially supported:

- Singapore Compact for CSR 2012
- Singapore G1 event: The G1 is a major event organised by the Singapore Environment Council aiming to promote more sustainable means of transportation
- WWF seminar on Asian elephant conservation
- Singapore CSR Compact: “CSR learning journey- competitive advantages from responsible business strategies”
- Singapore Environment Council: “Sustainable Development: green from design to build to live in”
- Singapore Environment Council Earth Day Volunteers 2011
- Miss Earth Singapore 2010

And many other causes which we have financially supported



SBR Eco Tours, newly implemented logo

- SBR Eco Tours were implemented less than 4 years ago. In such a short time, the tours have grown in popularity and have become one of the main means for SBR to showcase and share its sustainability initiatives with various stakeholders.
- SBR intends over the next years to continue to grow and develop this program especially in providing more customized tours for various groups (e.g. universities, corporate, young children...)

SBR's Eco Tour program has been very successful in outreaching our sustainability efforts to over 3000 People so far..



Corporate Social Responsibility

To make our positive social and environmental impact bigger, a portion of our revenue goes towards our Corporate Social Responsibility program. A large part of this program is through our Eco-Tour, that so far has been attended by over 1300 people from schools, businesses, and organizations. The program also financially supports social causes, including promoting environmental awareness and sustainability.



Every tour that we conduct is synonymous with the success of sharing a cause which is close to our heart. We have many success stories to tell about this program and continuously receive feedbacks on people and groups which found that they have really learnt something useful. We are continuously adjusting this project to improve even further overtime..



www.biodiversity.sg

Recently, Siloso Beach Resort (SBR) has **developed** the Biodiversity Portal of Singapore, which it manages in collaboration with a range of institutions both in Singapore and internationally. The CSR project was developed during the International Year of Biodiversity in 2010 **to raise awareness** of the intensifying trend of the extinction of species on Earth.

The portal was conceptualized and developed **based on a book**: "The Biodiversity of Life on Earth: from Heritage to Extinction". More than merely a unique educational platform on biodiversity, the website was specifically designed to serve as a hub for individuals and organisations willing to learn and act on the subject both locally and internationally.

The website has 3 main parts:

Learn – For those looking to increase their knowledge about biodiversity, the book "The Biodiversity of Life on Earth: from Heritage to Extinction" provides a comprehensive overview of general knowledge and issues relevant to the loss of biodiversity. This book is created to be interesting (with lots of pictures!) and readable by just about anyone, no matter what your knowledge of biodiversity.

Discover – There are various ways that you can expand your interest in biodiversity, be it through photos, videos, additional informational resources, scientific work, or finding out the places where you can see rich biodiversity. All these resources are provided here for you to tap into and discover.

Act – Given the rapid loss of biodiversity hotspots around the world and the urgency of saving species from extinction, taking action is of utmost importance. We help link you to the conservation projects that matter most to you. Please note that none of these donations are made through our site, but rather we simply provide links to credible conservation groups and projects.



Donations

SBR regularly donates in order to support meaningful causes.

One of the latest was a single donation of **SGD 500,000** to the National University of Singapore in order to support the implementation of **a real dinosaur exhibit** within the upcoming new Natural History Museum in Singapore.

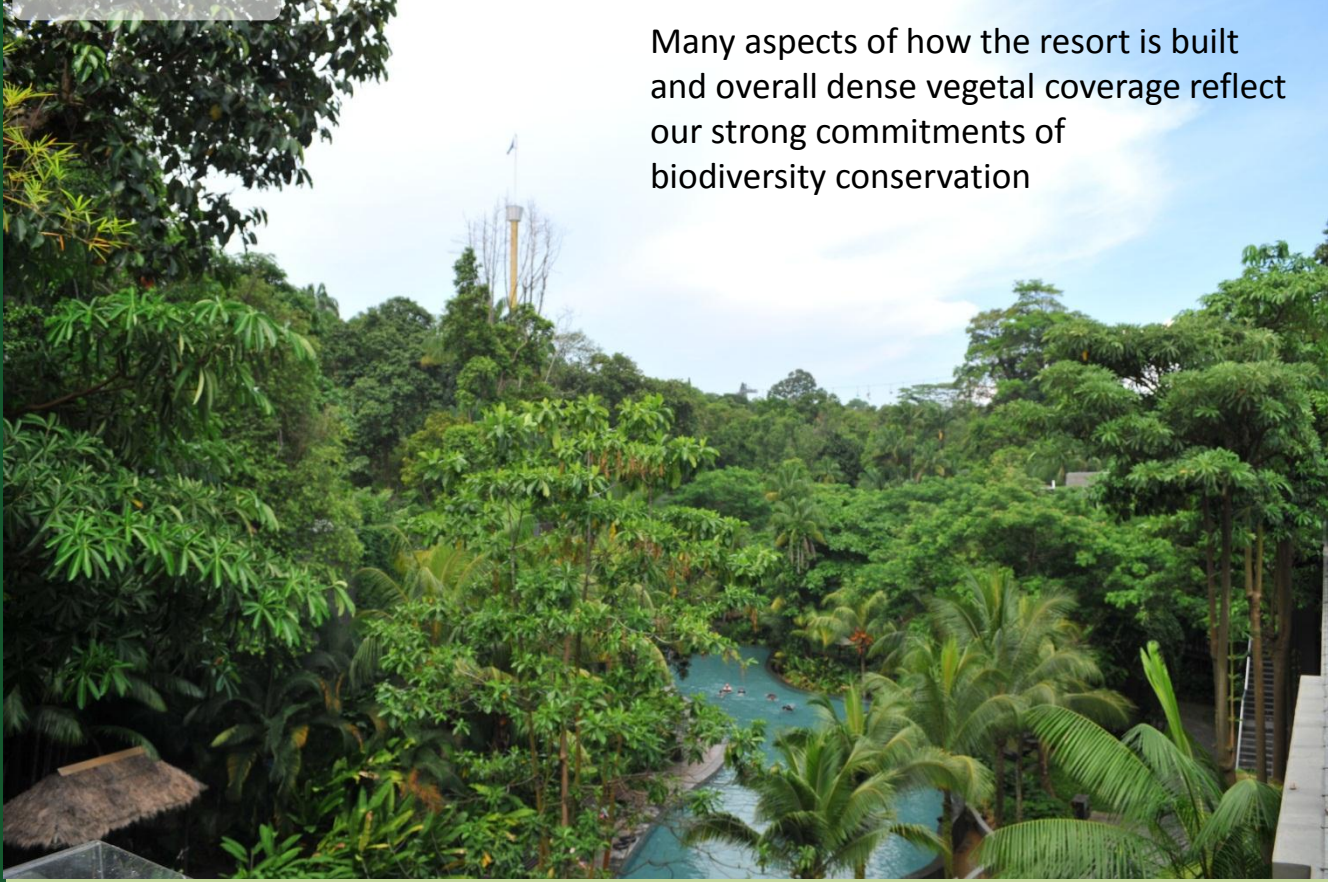
As more **"conventional"** donations, SBR **regularly donates** to sponsor causes such as seminars, social causes, events...

SBR is an active philanthropist organization with regular donations to various social and environmental causes which are close to our heart



SBR central court

Many aspects of how the resort is built and overall dense vegetal coverage reflect our strong commitments of biodiversity conservation





Siloso Beach Resort has introduced a **cartoon concept** to promote **key environmental messages** throughout its facilities.

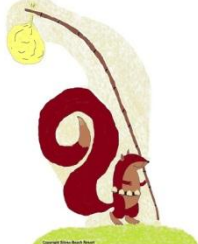
The idea is to make use of two created fictional characters (Prof Monitor and Squirzy) in order to outreach to our guests **in a fun and yet effective way.**

While, numerous environmental educational messages are already present throughout the resort (e.g. Eco huts, TV channels...), we feel that the cartoons will outreach more effectively to a wider public including **young children.**

Concept: Our aim is to passively provide environmental information and to use our resort as a showcase of sustainable best practices. We will always respect the choices of our guests to either ignore or take the time to appreciate the information that we make available. **Our concept is to provide our guests the possibility to learn something new about the environmental issues that we face and to reflect upon it, while having a good time at our resort.**

Characters role: The principle behind the characters is simple: Prof Monitor plays the role of the knowledgeable source which we use to convey accurate key messages. Squirzy (the squirrel), on the other hand, is a more funny character which serves the purpose of asking the right questions, but sometimes in a humoristic way.

Characters choice: We chose a monitor lizard and a squirrel to act as our eco ambassadors mascots for the simple reason that these two animals can be seen at our resort (mostly in the café area) and they also represent our commitment to the preservation of wildlife and biodiversity on our site.



"I told you we are famous! At SBR people can see us throughout the resort. I have a reputation of being a bit silly, but hopefully Prof Monitor is here to provide thoughtful answers to all my queries so that people can learn from my mistakes!"



SBR eco articles program



One of SBR's program is to actively participate and drive dialogues on key environmental issues. In order to do this, SBR regularly publishes articles on www.ecobusiness.com which is Asia Pacific's largest environmental business community. Through its contribution, SBR is an approved partner of eco business.

List of articles recently published:

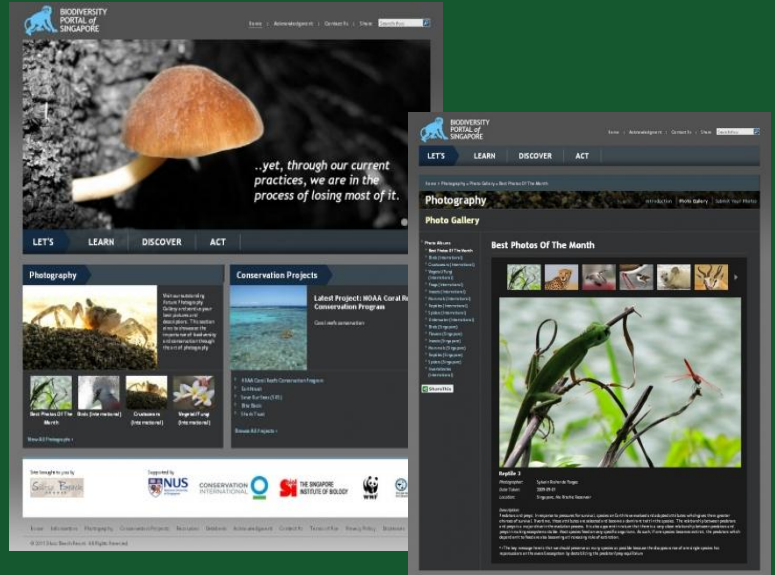
| Title | Content summary |
|--|---|
| The power of human and recovered energies | The potential to generate power by recovering wasted energies |
| Food security: asking the right questions | Thoughts on the real concerns of the availability of food on the planet and sustainable solutions |
| Ozone: the forgotten threats | The ozone crisis, the evolution of recovery efforts and potential new coming threats |
| The value of water: a lesson from arid areas | The state of water scarcity on the planet and sustainable solutions |
| Climate forcing and the threat of feedback mechanisms | The threat posed by feedback mechanisms and sustainable climate remediation solutions |
| Demystifying the concept of sustainable construction | How to build a sustainable construction project |
| Renewing renewables | A detailed analysis on energy supplies, trends and sustainable solutions |
| Driving an innovation revolution through biomimetic | The biodiversity crisis and how we could use biodiversity to our advantage |
| Can global sustainability be achieved without demographical considerations | An analysis of issues posed by demography and sustainable solutions |
| Putting CSR and sustainability at the heart of a business | The role of corporates in addressing environmental and social issues |

SBR Environment Outreach (Mass media)



Siloso Beach Resort
Blending Life and Leisure with Nature

Biodiversity Portal



SBR Eco-business.com articles



“Renewing Renewables”

“Biomimetics”

“Food security”

“The power of human energy”

“The global water crisis”

“Demography”



Press releases/blogs/student reports...



SBR is regularly featured in press releases as well as students and companies reports to highlight its sustainable initiatives

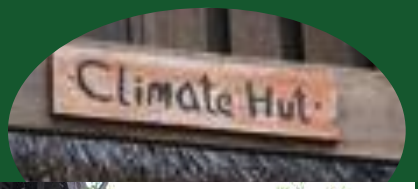
Eco Panels



Numerous: panels describing the resorts environmental initiatives are displayed throughout the hotel



Eco Huts



SBR Eco Huts: a total of 7 huts throughout the resort display extensive information messages each hut on one key environmental topic

Biodiversity picture exhibit



Our café biodiversity exhibit showcasing pictures of wildlife taken within the resort as well as general text on biodiversity

Sustainable farming



SBR produces its own compost using an innovative vermicomposting system. The compost is then used as an organic fertilizer to grow vegetables on our rooftop. Organic vegetables are then supplied to the F&B department.

The aim is to provide **chemical and pesticide free** leafy vegetables for some of our dishes. The benefits are that because they are grown on-site by our own staff, we can ensure they are free of harmful chemicals. We are also lowering our environmental footprint:

1. Carbon footprint is lower since there is no fuel involved in transporting the final product.

2. Water footprint is lower, since we use our own spring water source that does not compete with the public water supply.

3. Land footprint is lower, since it is located on our Resort, and using the concept of urban farming to make the most out of limited space.

4. Ecological footprint is lower, since there are no pesticides and no fertilizers running off into the environment.

5. Food waste is recycled, as we use vermicomposting (worm) to produce top-quality 100% natural fertilizer for our soil, using the food scraps from our F&B operations.

Eco leisure

•**Sentosa nature trails:** SBR actively promotes the use of nature walks and trails located behind its resort. While many parts of Sentosa island have been sacrificed for development purposes, large areas of forested terrain still remain in the central part of the island. Numerous nature trails have been put into place for nature lovers to enjoy.

•**Singapore natural parks:** SBR also promotes within its premises and marketing material **eco tourism activities** within Singapore which are largely unknown to travelers.



Siloso Beach Resort

Blending Life and Leisure with Nature

- **SBR ECO games:** SBR has developed its own environmentally oriented board games which it makes available to guests within public areas.

Eco huts

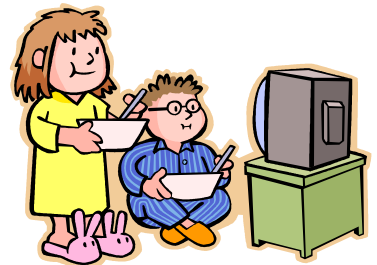


SBR has numerous huts on its site. Each hut has been utilised to convey key environmental messages on specific topics. **Each hut deals with a particular environmental concern.**

There are **7 eco huts:**

- The climate change hut
- The biodiversity hut
- The water hut
- The sustainable development hut
- The resources hut
- The population hut
- The pollution hut

Eco TV channels



SBR has dedicated **two in-house TV channels** to environmental awareness.

- One station showcases an environmental documentary
- Another station showcases a 1.5 hour presentation developed by SBR which explains the main environmental concerns of the century.

“By diversifying the type of media used to display the environmental information, SBR hopes to have a greater impact in reaching out to various groups and individuals”



Our unique roof-top organic farming



Squirzy: "Prof Monitor, this roof top gardening program is very unusual. My Squirrel friends all over town told me that they never seen this before. Is it really special?"

Prof Monitor: "Yes, indeed Squirzy,, it is very unique especially in a hotel environment. What is special is not so much about having organic cultures on a roof top, there are many other case studies. What is very special however is how we do it by having a fully integrated close loop system using food waste from our kitchen and processing the waste into fertilizer by using our Worm composting facilities. The efforts put into this process are truly remarkable and highly successful."

I spend a lot of time gardening our organic vegetables



And I get to cook them!





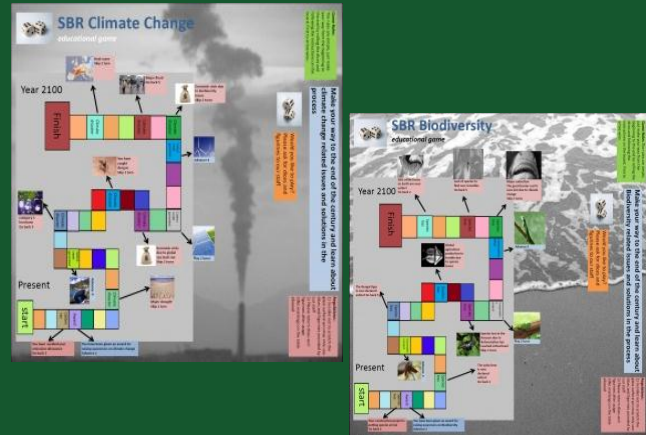
Actively Promoting Eco leisure activities

Promoting Sentosa Island Eco Trails at the resort as well as Eco tourisms activities in Singapore in General (nature reserves...) to our guests:



Eco trails in SBR's backyard campaign

SBR Eco Games



SBR has developed board games on the thematic on Climate Change and Biodiversity for its guests



Our website features a lot of information of our environmental initiatives as well as general environmental resources

SBR eco page:
<http://www.silosobeachresort.com/gi.asp>

SBR Environment Mascots

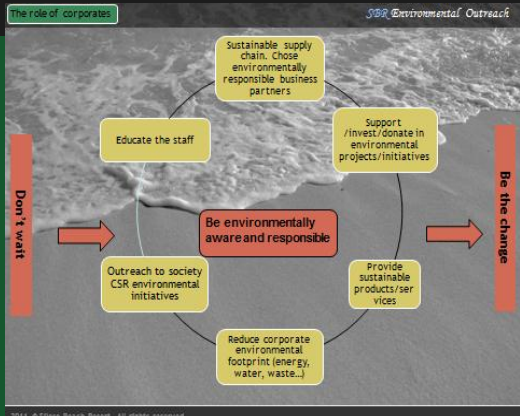
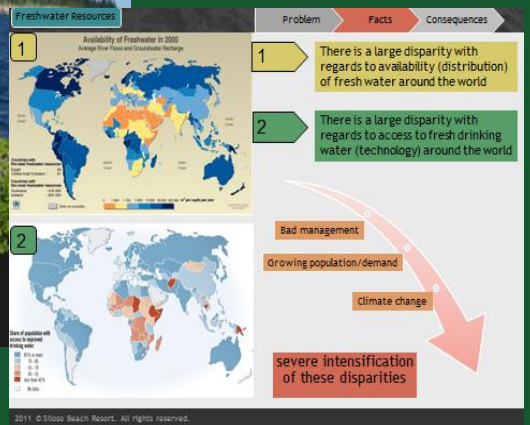
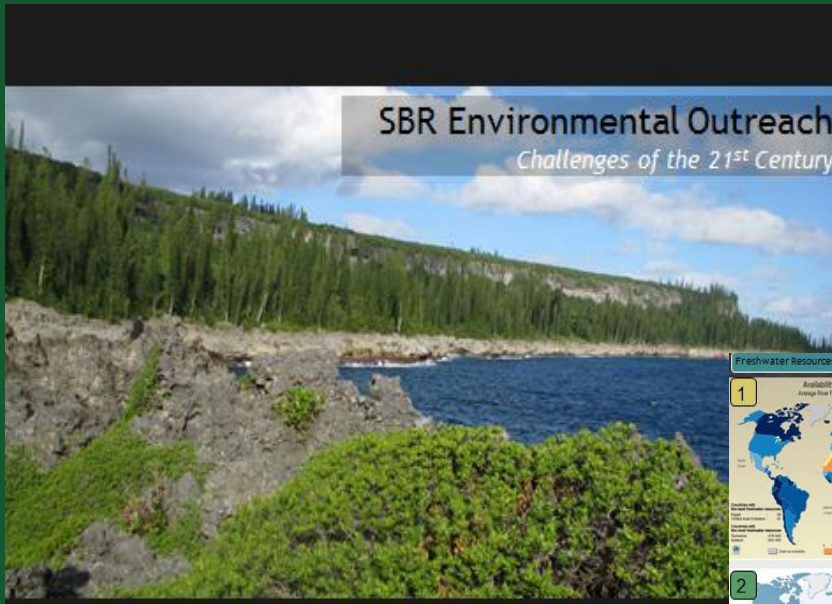


Siloso Beach Resort
Blending Life and Leisure with Nature



SBR mascots helps to convey key environmental messages throughout the resort in a fun way

SBR in house Eco TV Channels



SBR Eco Channels are available in all our 180+ guests rooms and are a very effective way to outreach on these issues to a broad audience transiting through the hotel

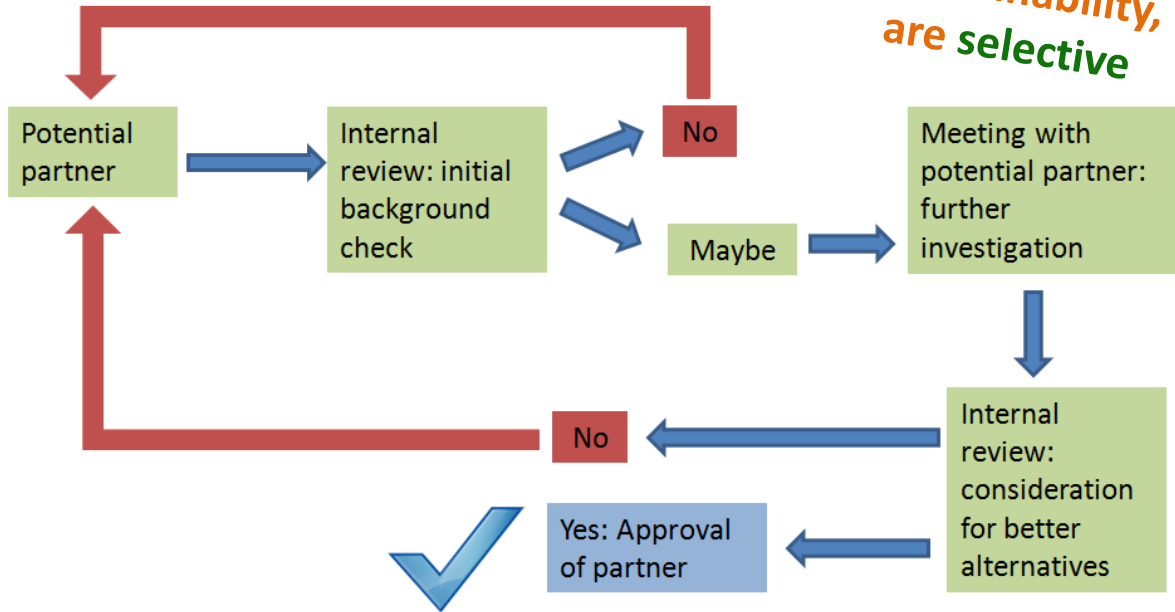


4.15 Basis for identification and selection of stakeholders with whom to engage.

As an eco-hotel, SBR takes particular care to select **stakeholders which share its vision of sustainability**. The below diagram highlights the systematic process by which SBR chooses its stakeholders:

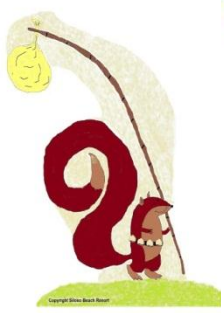
This selection is targeted at different levels with different levels of stringency:

When it comes to sustainability, We are selective



| Stakeholders | Comments |
|-----------------------------|--|
| Hotel Guest | SBR primary target is to attract eco conscious travellers . In order to achieve this, SBR primarily advertises its services in eco travel platforms. However, SBR remains open to accept any type of guests to its facilities. |
| Suppliers/service providers | SBR takes great care in assessing every purchased product to be sustainable . In order to do this, particular care is taken to assess every purchased item and to identify potential alternatives which are less impactful on the environment. |
| Program partners | As most of SBR programs are into sustainability, SBR is very selective on organisations with whom it partners |

“Prof Monitor, Why can't SBR just approve any stakeholder, wouldn't this be better for the business?”



“Well Squirzy, you are right. It would probably be more profitable to just do business with anyone. However, you see SBR is a responsible business and has strong commitments to select its business partners to be some which also share its sustainability values. By doing so SBR can extend its sustainable outreach beyond the boundaries of the organization. SBR is only interested to do business with like minded individuals and organizations. This philosophy is good for the long term prosperity of SBR”



4.16 Approaches to stakeholder engagement, including frequency of engagement by type and by stakeholder group

SBR has various approaches to **engage with stakeholders:**

Surveys

SBR is regularly approached by stakeholders who wish to undertake **surveys**. In recent years many of these surveys have been targeted at third parties gaining a better understanding of SBR sustainability initiatives.

Focus groups

SBR is open to collaboration and partnership with all stakeholder groups.

In the past years, SBR has gained strong stakeholder partnerships with groups as diverse as:

- **Government Organisation** (e.g. Ministry of the environment, National Environment Agency...), NGO's (e.g. Singapore Environment council, World Wildlife Fund for Nature, Conservation International, Singapore Compact for CSR...)
- **Private Sector:** SBR is regularly engaging with various private sector entities, from suppliers to manufacturers or service providers
- **Public Sector:** SBR engages with many public sector organizations such as universities, schools, community services...

Our **3** focus groups:

people **Public**
Private



Community panels

SBR sits on a number of community /discussion panels , of which **some** include:

- Sembawang Shipyard, Green Wave Competition
- Ministry of the Environment and Water Resources. Corporate and education institutions engagement
- Sentosa Island partners discussion group

Written communications

SBR engages with various stakeholders through written communications means.

- Reports on environmental initiatives
- Sustainability and CSR programs
- Articles/news
- Marketing material
- Audiovisual materials
- Eco tours

and many more...

Frequency of engagement

| Stakeholder group | Frequency |
|--------------------------|--|
| Hotel Guests | Constantly |
| Government organizations | Frequently. Mostly through attendance of events and events sponsorship |
| Private sector | Constantly through our supply chain and various programs (e.g. eco tours) |
| NGO's | Frequently. Mostly through our CSR programs (e.g. biodiversity portal) and events sponsorships |



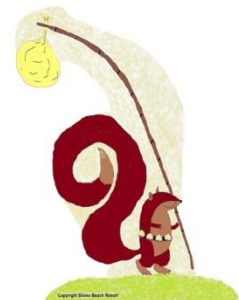
On site engagement

SBR has a range of programs aiming to engage stakeholders **on its site:**

| Stakeholder engagement | Description |
|-----------------------------|--|
| Environmental Channels | Two channels in the Resort are dedicated to providing environmental information, and are available in all guest rooms and in common areas. |
| Eco-Huts | Various huts (7 in total) around the resort contain environmental messages. It is a passive learning concept, where information is made available in a very relaxing environment. |
| SBR Mascots | In an effort to make their environmental messages more fun and appealing to kids, SBR has created two mascots. |
| Self-Guided Eco Journey | For those guests who wish to know more about the Resort, there are self-guided Eco Journey panels placed throughout the resort. These panels provide key facts and figures about the hotel environmental achievements which are elaborated in much more depth in the guided eco tour |
| Eco Corner | Located just outside SBR's reception, it is a starting point for guests to learn about the environmental activities of the Resort. Most importantly, the area hosts a large map of the resort, pointing out the environmental messages and highlights. |
| Guest Conservation Messages | Messages to guests about conservation of resources are present at SBR's Reception, and in the rooms which have "10 tips to have a greener stay" |
| Café Biodiversity Exhibit | SBR's Café features large pictures of biodiversity taken around the Resort. On the side of each picture information about the species, and a message about nature conservation are present. |
| Real Dinosaur Bones Display | In collaboration with NUS, SBR is displaying real diplodocus vertebrae bones. |
| Eco Leisure | A Climate change themed board game is available for guests to play. Through playing the game, they are made aware of some of the most important consequences of climate change. |

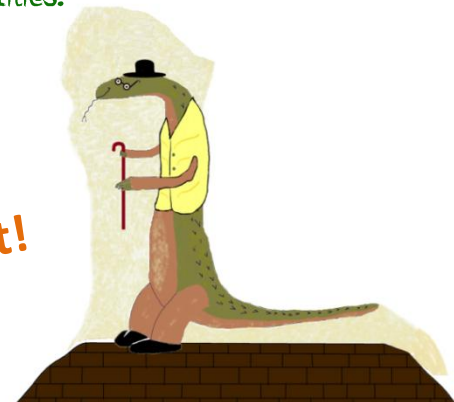
and many more...

"Prof Monitor, why is SBR trying to engage its stakeholders on its site in so many ways?"



We Engage People to care for & protect the environment!

"Well Squirzy, it is one of SBR's fundamental principles to actually use it's facilities as a test bed and a showcase of sustainability practices. SBR hopes by doing this to inspire many people who transit through its facilities."



4.17 Key topics and concerns that have been raised through stakeholder engagement, and how the organization has responded to those key topics and concerns

Guests: *misunderstanding of the concept to preserve much wildlife on site including monitor lizards and insects.*

SBR response: As an Eco Hotel, SBR has a strong commitment to preserve biodiversity on site. As such it made significant efforts to minimize the impacts through the built environment by preserving the initial terrain, trees and plants. It also takes great care in pest control and cleaning products to use less impactful products. As a result, one would expect to find more species at SBR than in a conventional hotel where these could be considered as pest. SBR is trying hard to communicate this message to its guests that biodiversity preservation is important and a primary goal of SBR in order to blend leisure and nature together and provide a memorable staying experience for nature lovers.

Guests: *misunderstandings on the concept not to provide amenities in the rooms (tooth brush, shampoo bottles...).* *It has come to our attention that there has been a few misunderstandings on the fact that SBR does not provide amenities kit in the rooms. The misunderstanding is on the fact that SBR is trying to reduce on cost by doing so.*

SBR response: SBR has been very clear that the reason for not systematically providing amenities in the guests rooms has nothing to do with cost saving but is purely an environmental initiative to reduce wastage within the resort and to promote good practices to our guests. We wish to highlight that any guest can request for such services and that amenities are indeed available on request by the guest should they need it.

We believe that too often amenities provided in hotels throughout the world result in tremendous wastage and resource usage. Serious studies also highlight that many guests would not make any use of such amenities and usually bring their own products with them (e.g. tooth brushes, shampoos...).



Prof Monitor: "While most of the guests staying at SBR appreciate the efforts done to preserve and raise awareness on environmental issues, there is always a small proportion that do not fully understand the concept. SBR is trying hard to convince these people and explain what SBR is trying to do"



Guests: *misunderstanding on open door concept throughout the resort (non air conditioned public spaces).*

SBR response: Indeed, at SBR only 28% of the terrain is covered area. The rest has been kept as open spaces as possible. One of the main reason for this was to preserve the existing trees on site (more than 200 initial trees have been preserved). The other reason is for energy efficiency. By having open public spaces, which are either using natural cooling (wind) or ventilators, SBR is able to significantly reduce its energy consumption. SBR believes that the excessive use of air conditioning in public spaces is not necessary to achieve a desired level of comfort.

Guests: *misunderstanding on the need to apply mosquito control treatment on site.*

SBR response: There has been some complains that SBR was using fogging methods to treat its mosquitoes. Some guest found it to be disturbing while they are enjoying the outdoor environment and that as an eco hotel SBR should not use chemicals.

As a resort which is located in an environment with very high vegetal coverage, SBR has no choice but to apply mosquito control procedures. This is actually not only SBR's choice but also a government regulation in Singapore as part of the fight against dengue fever potential cases.

However SBR has taken feedbacks into account and since over a year is trying a new pest control technique that makes use of alternative treatments using a bacterial based solution around the perimeter of the resort. This process is much less impactful on wildlife which is very important to SBR.

SBR would like to highlight that it is very mindful of guests comfort and wildlife welfare but it is also concerned about assuring a safe environment for its guests and staff.

Environment

Environmental MATERIALS

Since its conception, SBR has always made use of a **very significant amount of reused and recycled materials** within its facilities. The concept has overtime been implemented into operational standards and management guidelines.

The below highlights **some** of the elements:

- Many of the stairways at SBR have made use of unwanted old train tracks wood from Australia. SBR has a **permanent wood workshop** and all the wood coming into SBR is from reused or recycled sources.

- Extensive surfaces of indoor corridor floorings are made from recycled tires (rubber mats)

- 100% Reused children playground furniture

In addition to active implementation of recycled and reused elements, SBR is active at promoting and practicing the 3 R's (Reduce, reuse, recycled). In fact, SBR has come up with its own version by adding another R. Indeed, SBR's policy is **first to respect** the surrounding environment (especially natural features and its inhabiting biodiversity), and then reduce, reuse and recycle.

Efforts to reduce are very present throughout the resort with practices implemented in areas such as F&B and housekeeping.

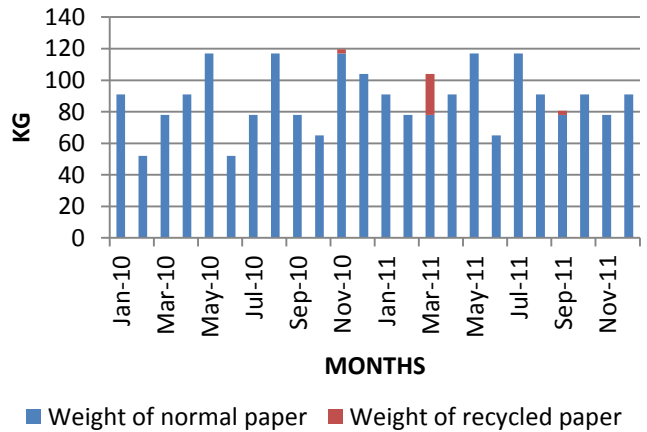
Squirzy: "Like the rest of the residents of SBR (staff), it took me some time to get used to the concept of segregating various types of wastes and to put them in the appropriate bins and emplacements. Thanks to the numerous messages on site, I finally managed to get it right!"



EN1 Materials used by weight or volume

Various materials have been used in the construction of the resort and its daily operations. Two of the most important materials are wood and paper inputs.

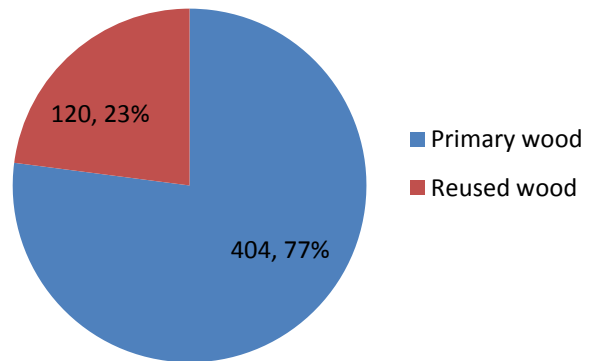
Total weight of paper used for 2010-2011



Total weight of paper used for 2010 : 1042.6 KG

Total weight of paper used for 2011 : 1094.6 KG

Total volume of wood used from 2005-2011 (by cubic meters)



Total volume of wood used from 2006 to 2011:

524 cubic meters

SBR makes use of a very significant amounts of either reused or recycled materials throughout its site

At SBR we have re-invented the 3R's by adding an element:



EN2 Percentage of materials used that are recycled input materials.

| Material | Comment | Weight/Volume | % of Total |
|-----------------------------|---|---------------------|------------|
| Wood | At SBR some of the outdoor staircases (numerous considering the hill type of terrain) are from reused source from dismantled train rails from Australia. SBR has its own wood workshop and full time carpenters on site which make use of waste wood items collected from demolition sites to make and repair items within the facilities. | 120 cubic meters | 23% |
| Outdoor children playground | The children playground has been collected from an unwanted source (second hand) | Not available | 100% |
| Corridor rubber mats | All SBR main corridors carpets have been changed to recycled rubber mats | Not available | 100% |
| Paper | We use recycled paper for select areas, such as printing of brochures, name cards, feedback forms for Eco Tours, various posters, and reports. We plan to increase our percentage of recycled paper usage in the following years. | 31.2 kg (2010/2011) | 1.5% |

Usage of input materials like paper and wood are a necessity to running our businesses, which unfortunately can contribute to deforestation, climate change, and loss of biodiversity. For this reason we apply the following guidelines:

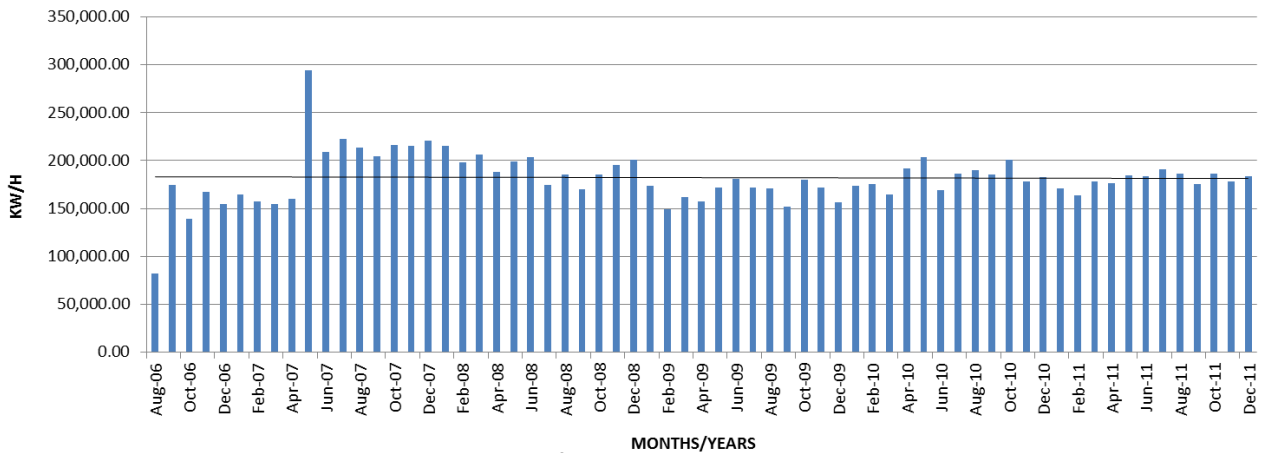
- Maximize use of reused wood
- For primary wood, incorporate sustainability (FSC certified) and durability (cheap wood will need to be replaced frequently)
- Use recycled paper for selected printing
- When normal paper is used, ensure it is not wasted and always used on both sides and then recycled.

We actually practice **our 4R's**: we believe that we should **first Respect** nature then **Reduce, Reuse** and last **Recycle**.



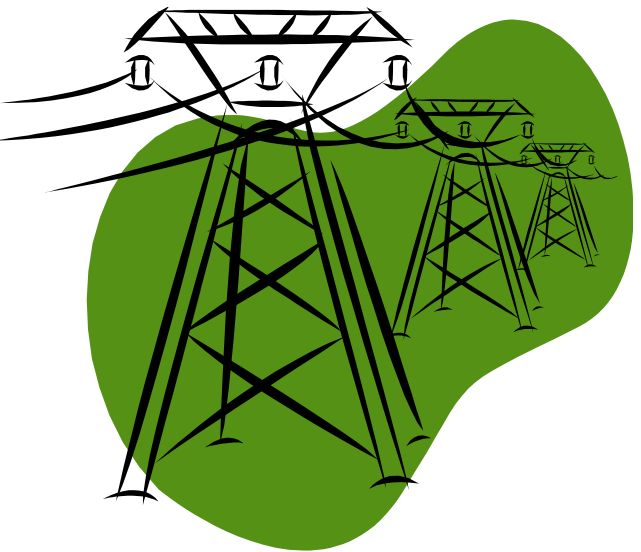
ENERGY

TOTAL ELECTRICITY USAGE 2006 TO 2011



At SBR, energy management is well taken care of. The uniqueness of our practices is however towards **good initial passive design** of the structures at the resort. Indeed, the hotel was **designed** from the very beginning **to be energy efficient**.

SBR's electricity consumption is **below average** for a hotel of this size. The most surprising aspects of the above graphic is that energy consumption has remained relatively stable over the past few years. This is not due to a lack of actions to reduce our energy consumption, but rather due to the fact that the hotel was designed from the beginning to be energy efficient (mostly through good structural design and energy efficient appliances).



At SBR Energy management has been progressive

Phase 1: Good structural design
The hotel's unique architecture allows passive and significant energy efficiency

Phase 4: Sharing
We are now at the stage of sharing what has been done in order to influence others to adopt energy efficient practices especially on aspects of passive design

Phase 2: Retrofitting
Once the hotel was built, numerous energy efficient technologies and appliances have been and continue to be implemented

Phase 3: Management
Numerous management guidelines were put into place



SBR central court, open corridors



Our open concept combined with high vegetative coverage and other features such as rooftop gardens already account for very high energy efficiency at SBR



EN5 Energy saved due to conservation and efficiency improvements.

| Technology | Energy saved |
|---|---|
| 3 rd generation modular heat exchange chiller system | 30% savings compared to more conventional chillers |
| Balanced wave systems | 10% saving on installed appliances |
| Efficient lighting throughout | 15% compared to incandescent lighting |
| Passive construction design | 30-40% or more than conventional buildings |
| Management guidelines | 5-10% of energy from lighting and appliances |
| Energy efficient water heater | 15% compared to conventional heater |

Our resort is very energy efficient

While it is difficult to evaluate with precision, SBR is confident in saying that through the combined efforts of the energy efficient technologies, good energy passive design and good management practices, SBR facilities are **at least 30-40% more energy efficient** than a conventional building would be.

What about all the trees?

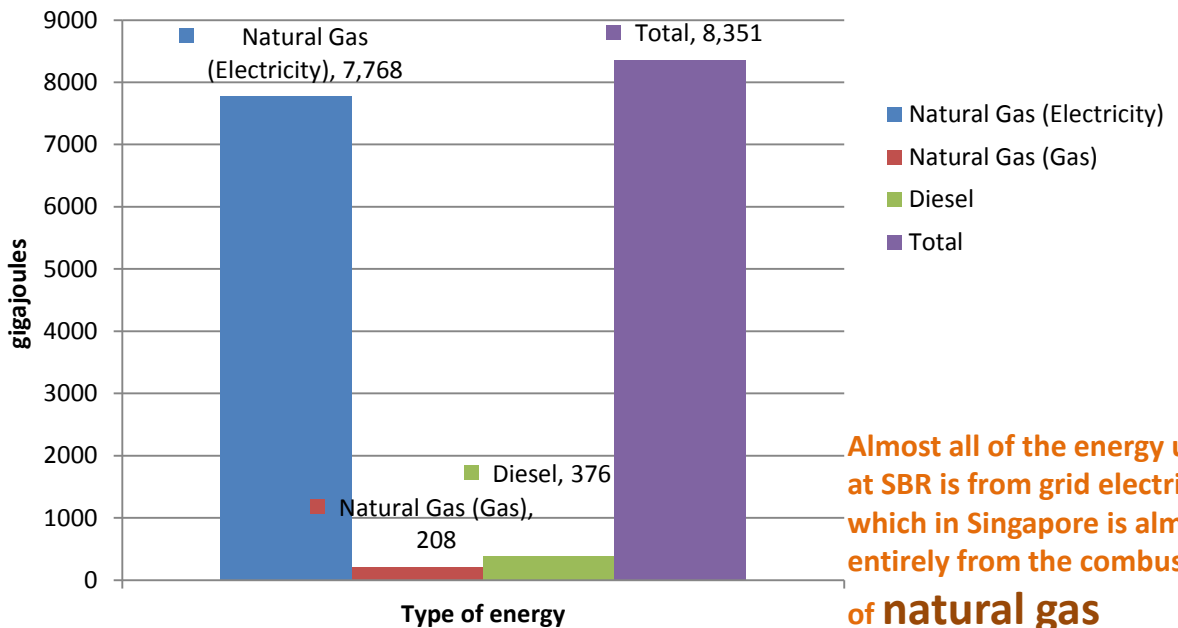
Furthermore, the decision by the management to preserve a vegetal coverage and trees on site contributes to an additional very significant energy saving which we have yet to gain clarifications on. Indeed, trees provide shading, retain humidity and therefore significantly contribute in reducing the building heat load.

EN3 Direct energy consumption by primary energy source

At SBR the energy source is currently from grid electricity. In Singapore the vast majority of grid electricity is produced through the combustion of natural gas.

We also have on site emergency energy generators which operate on diesel. However, these generators are only used in case of main energy supply cut off.

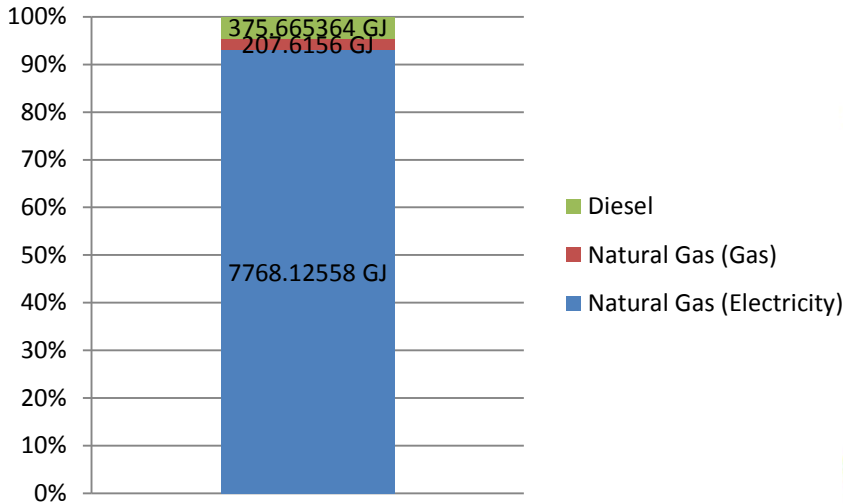
Energy used in 2011 by gigajoules



Almost all of the energy used at SBR is from grid electricity which in Singapore is almost entirely from the combustion of natural gas



Percentage of electricity used based on source



Squirzy: “Prof Monitor, SBR’s energy usage seems out of balance, almost the energy is from natural gas. Why is it so??”

Prof Monitor: “Yes indeed Squirzy. You must understand that in Singapore almost all of the energy is produced from the combustion of natural gas. The energy from the power plants is then redistributed to the grid. Therefore when we switch on the light in fact we are burning NG”



Squirzy: “Right I get it. What about the gas and diesel?”

Prof Monitor: “The gas usage is mostly for cooking and the diesel for vehicles”

EN4 Indirect energy consumption by primary source.

| Indirect Energy Consumption for 2011 | Gigajoules | Source |
|---|------------|-----------------------------|
| Indirect Energy Purchased | 7768 | Electricity (non-renewable) |
| Estimated* Primary Energy Consumed in production of Indirect Energy | 9010 | Natural Gas |

*As no data is available regarding primary energy consumed to produce indirect energy, we have estimated the amount of primary energy used based on the Singapore data for 2009 provided to the International Energy Agency:

http://www.iea.org/stats/electricitydata.asp?COUNTRY_CODE=SG

SBR's View on Energy, and why we are trying our best to be energy efficient



(This article was first published in ecobusiness.com as part of SBR's environmental outreach program)

Renewing renewables

While the deployment of large scale renewables (mostly solar and wind) has started, the situation is such that without major changes, coal and nuclear will likely become the predominant energy sources in the decades to come. However, there is a strong case for why none of the latter energy sources should be adopted on a large scale as the solution. In this series of two articles is a clear case for change to a renewable-based economy.

Coal: an unwanted but likely outcome

Few economists would deny the era of a petroleum-based economy is coming to an end. Supplies of oil are vanishing fast; despite variations in reported supplies most experts agree that within a few decades "easy" supplies of liquid fossil fuels will vanish. The cost of oil can only go up as the supplies become rare or more difficult to access (e.g. deep sea extraction, tar sands, residual reserves).

However, other non-renewable supplies are still largely abundant, especially coal. While renewables are struggling to compete financially with the current cost of cheap (and transportable) energy, coal's low financial cost (oil was four times more expensive than coal for energy production purposes in 2006) makes it an easy replacement for oil. The world will probably come to rely on coal once again, and even derive liquid fuels from this resource, as the cost of the process will still be cheaper than that of oil (technology to convert coal into liquid fuel does exist, in fact it was already used during the Second World War).

This trend is already highly visible. Countries like China and the USA (which are likely to remain the two largest economies in the 21st century) are both investing heavily in coal-based energy. In China alone, every single week at least one new coal-fired power plant opens and almost none of the power plants are oil-based. Furthermore, both of these countries are rich in coal reserves.

The prospect of energy security through a coal-based economy can be seen as a life saver for energy-starved communities, but would really be a time bomb from a climate point of view! As a reminder, 2010 was declared the year with the highest global greenhouse gas (GHG) emissions in recorded history. The finding highlights the failure of over 20 years of international climate change negotiations. While the debate on climate change is clearly over and warnings of serious consequences of inaction are abundant, we do not seem to be changing course from what is rapidly becoming an unavoidable catastrophe impacting future (and even current) generations. We have passed the point at which, no matter what we do, significant changes will happen; it is just a matter of how bad these changes will be.

A shift to a coal-based economy would commit us to this self-destructive path for decades to come. With viable renewable technologies available today, there's no excuse for choosing the "easy" coal option.

Why nuclear is not the solution

Nuclear fission: Many nations have turned to nuclear energy to cut down GHG emissions to avoid reaching dangerous atmospheric build-up. Nuclear has been a hot debate for many years and despite nuclear's promising start at the end of the Second World War, cheap oil has managed to put the technology in the background, with the notable exception of a few countries like France.

Nuclear would indeed allow nations to significantly reduce their GHG emissions; however there are a few major issues with nuclear fission.

First, most current nuclear reactors rely on fissile uranium (U235 isotope) and the process is highly inefficient. Only about one per cent of the caloric content of the fuel is retrieved while the rest is turned into nuclear waste that will last for thousands of years. At about 30 per cent (less than that of modern coal fired plants), the thermodynamic efficiency of current nuclear plants is rather low as well. If nuclear was to be applied and sustained in the long term, we would need to use advanced nuclear reactors ("breeder reactors") which more effectively enrich uranium into plutonium.

These reactors, such as the Super-Phoenix nuclear plant in France, are much more efficient. About 75 per cent of the original uranium is used effectively. However, using plutonium reactors poses serious global security issues as plutonium can also be used to derive nuclear weapons.

Secondly, uranium is not a renewable resource. If uranium were exploited on a large scale (especially for the non-breeder reactor process), power plants would quickly exhaust uranium ore resources (the time scale is about the same as that for oil or gas).



Furthermore, dealing with nuclear waste (transport and disposal) is still a problem, especially if this process was applied on a much larger scale. To date, no country has developed a permanent solution to even the relatively small amounts of nuclear waste generated in today's power plants.

And finally, past and recent accidents involving nuclear plants are putting further doubts on a larger scale implementation of this technology.

Nuclear fusion: Nuclear fusion is seen by many as the Holy Grail of clean energy as it could produce unlimited amounts of energy, mostly from sea water, without nuclear waste and other unwanted consequences. However, the reality is that we are still far from exploiting this technology. Major breakthroughs still need to be achieved to stabilize and confine the reactions. Most experts predict that nuclear fusion will not be commercially available for another 50 years. However, we are running out of time. We cannot afford to wait or put all our hopes on fusion.

While it appears that coal and nuclear are the easy solutions to energy security in this next section, I address the case for renewables and the changes required if we are to avoid the nuclear/coal scenarios.



While the focus has been on a few renewable energies like solar and wind, many other types have been put in the background

II. The path for change

The need to shift from the current fossil fuel economy to a low-carbon economy based on alternative energies is at a tipping point. However, despite the numerous solutions available today; our focus is limited to a few renewable energy technologies. Others remain highly unexploited despite the fact that they could provide a significant contribution. We must continue developing the current primary renewables (solar and wind), but we should also start exploiting other alternatives on a much larger scale than they are used today. No single currently available technology can provide a global solution to the energy crisis.

As previously highlighted, unless major changes are made, it is likely that the world will adopt coal and nuclear as the two main energy sources in the decades to come. Both of these are unwanted outcomes.

A better and highly necessary alternative

A better alternative would be a complete shift from fossil fuels to renewables. And although it may seem unrealistic to many, it is possible based on today's technologies. Here is an overview of the pros and cons of the available options:

The common

Solar photovoltaic: Solar photovoltaic (PV) has greatly improved in efficiency and cost-effectiveness thanks to extensive research and development in recent years. Even so, efficiency remains relatively low (the conversion factor efficiency of commercial photovoltaic panels based on crystalline silicon cells is approaching 20 per cent) and the cost relatively high. Furthermore, in order to produce significant energy supply from PV, very large surface areas would be required. However, keep in mind the following attractive fact: if we were to convert even a fraction of the world's deserts into solar photovoltaic farms (e.g. the Sahara desert) we could power the entire planet on solar energy alone. Indeed, the average solar radiation power falling per year on a square meter in the Sahara is higher than 200W.

Based on this fact alone, solar photovoltaic is and will remain a major area of focus and hope. New technologies such as concentrated solar and solar films will significantly change the current usage of solar cells. Solar energy could also be harvested directly from space and brought back to Earth in the form of microwaves (such technology is possible and countries such as Japan are considering the option). As Thomas Edison once said: *"I'd put my money on the sun and solar energy. What a source of power! I hope we don't have to wait till oil and coal run out before we tackle that."*



Wind energy: Wind energy has been the most rapidly expanding renewable energy source in recent years and offers great potential. However, we must not forget (and it is often forgotten) that modern wind turbines are complex machines which are resource-intensive to make and maintain. For example, one single turbine contains kilometres of copper wires for which mining and production is a highly polluting and energy-intensive process. From a life cycle point of view, wind turbines actually emit significant amounts of greenhouse gases (GHGs). However, wind turbines do pay off over time from an energy perspective and the potential to exploit wind patterns (especially offshore where they do not compete for space) is promising. The main advantage of wind is that it is widely available. Modern wind turbines can generate about 100 megawatts (MW) per square kilometre, which is on par with solar thermal. A major disadvantage of wind power is that it requires storage capabilities (the grid can only absorb variable energy output if wind power is limited to a small percentage of total installed power). It is quite realistic to assume that wind power will contribute no more than about five per cent of total power production as a larger implementation would require significant changes to existing electrical networks.

Hydropower dams: Hydropower dams are well used in countries that have access to large amounts of fresh water. Hydropower works well from an energy efficiency point of view but the construction of dams, especially in biodiversity-rich areas, are sometimes truly devastating. Furthermore, the construction of large scale dams (such as the Three Gorges Dam in China) can be responsible for the disappearance of entire villages, cultural heritage sites and cause major disruptions to natural river flows. For these reasons alone, hydropower dams are in many cases far from a sustainable alternative.



In addition, the large amount of cement required, as well as the destruction of forests, are responsible for the release of significant amounts of GHGs. Hydroelectric project should be evaluated carefully for their impacts on both the surrounding environment and the communities. Smaller scale hydroelectric projects sometimes make more sense as the destruction to the surrounding areas is minimal. On a smaller scale, there is significant potential for micro hydroelectric turbines. These systems, which make use of the pressurised flow in transportation pipes and other installations such as buildings, remain virtually unexploited.

The less common

Passive solar (largely unexploited): New solar passive technologies which use the sun's heat to generate steam to spin turbines are on the rise and very promising. Several long term trials of solar towers (concentrating mirrors on a central heat exchanger) have been held in locations such as Seville, Spain or in the United States. Meanwhile, Australia is constructing another type of passive solar technology on a massive scale: tower funnels that will produce energy in the range of 200 MW. Modern solar thermal power plants have a conversion efficiency of about 30 per cent, about the same as nuclear plants. Furthermore, the energy payback time for solar thermal is highly favourable at about 5 months. We are only beginning to realise the potential of this relatively simple technology, which is reliable and requires little maintenance. One drawback is that it requires large surface areas with high solar exposure. However, as with photovoltaic, desert regions exist where such technology could be implemented on a large scale.

Ocean thermal energy (largely unexploited): Ocean thermal energy has great potential and is one of the least exploited renewables. There is a significant thermal gradient, or temperature difference, between the deep ocean and the water surface. Commercial exploitation of this energy would require significant investment for relatively little output, but it can be accessed almost anywhere on an ocean and is a constant source. Furthermore, new technologies suggest that the process efficiency could be significantly improved by using passive solar to increase the temperature gradient between the deep sea and the surface.

Tidal energy: Tidal energy which is constant and very powerful is also largely unexploited to date. Many locations on the planet have particularly strong tidal currents. A range of new turbine technologies have been tested in recent years and proved that the biggest barrier to the energy source – corrosion – can be reduced. Furthermore tidal energy is predictable (as opposed to wind) and therefore reliable.



Geothermal (largely unexploited): If we put the technology difficulties to the side and focus on the problem as a whole, we come up with the following observation: we are on a planet which contains mostly melted rock at very high temperatures and we are only on a small crust which sits on this magma. We can therefore see our planet as a giant “cooker” with an unlimited supply of energy just below our feet! Of course the situation is a bit more complicated when it comes to drilling and accessing this heat. However, the situation has changed dramatically in recent years as advances in drilling technologies (quite ironically mostly developed by oil and gas companies) now allows drilling at much greater depths and makes the exploitation of geothermal energy possible in many parts of the world that were before non-exploitable. Furthermore, an advantage of geothermal is that it does not require the use of much land area, giving it an advantage over more land-intensive renewables that are increasingly competing with agriculture and forests for space. Much more research should be allocated to the development of geothermal.

Bioenergy: Bioenergy has big potential; despite serious mistakes made in the early development of biofuels. Decisions to replace large swathes of agricultural fields with biofuel crops have led to global food price rises and security issues. Furthermore, biofuel crops have been a major driver of deforestation. However, new developments such as algae biofuels, which would cultivate supplies from oceans rather than on land, are promising although still experimental. Bioenergy’s main advantage is its emissions reduction potential – recently grown biomass does not contribute to climate change as fossil fuels do. Furthermore, there is enormous opportunity to convert the tremendous amounts of waste generated by society to biofuel (waste to energy).

Others: Several less conventional potential renewable sources have barely reached the level of experimental research. One example would be deriving energy from bacterial activity on a large scale (many bacterial processes are exothermic and the free heat generated could be used to derive energy).

The forgotten energies

Clearly the emphasis is increasingly on photovoltaic and wind energies when it comes to renewables. We should continue and even accelerate those efforts. But at the same time, other renewables need much greater attention and research if we are to avoid the unwanted outcome of a major shift from petroleum to a coal-based energy.

Geothermal, passive solar, ocean thermal and tidal energies in particular should become predominant focus points. We need to “renew renewables” in the sense that in addition to current photovoltaic and wind, other renewable energy sources deserve their chances of large scale deployment. They may actually prove more successful at providing sustainable alternatives to the energy crisis.

Article by Sylvain Richer de Forges





Advanced Green Technology

Third generation modular heat exchange Chiller system.

The Resort aims to be a test bed for advanced green technology. This includes our energy efficient third-generation modular heat exchange chiller system, which collects the heat dispersed from the air-conditioning process and uses it for heating water for rooms. In our kitchen, we are testing a special energy-efficient water heater, and a machine that uses bacteria to turn our food waste into fertilized water.



At SBR we believe that investing in more energy efficient technology makes both economic and environmental sense



State of the art Energy efficient water heater for our kitchen

Energy efficient lighting solutions and appliances throughout the resort



Systematic use of LED & CFL lighting throughout the hotel

And much more...

SBR is home to one of the longest self maintained roof top gardens in Singapore



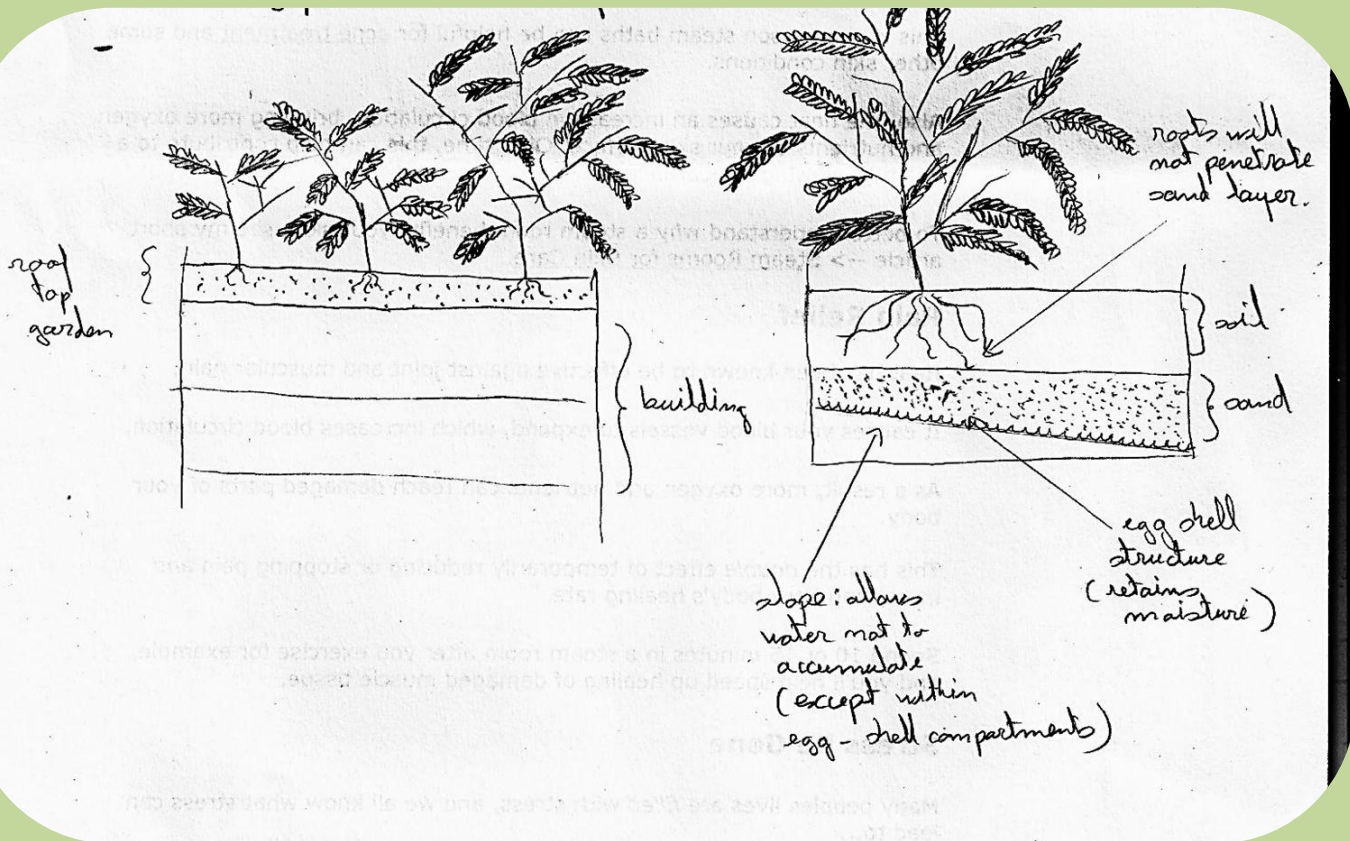
SBR is home to one of the longest self maintained rooftop gardens in Singapore. This helps to significantly increase vegetal coverage and energy efficiency

Our green roof is loooooong!

Section of green roof seen from central rooftop



SBR case study : Roof Top Garden Technology



There are numerous roof top technologies now available (some more proven than others). The advantage of self-sustained roof top gardens is that they provide a significant advantage for naturally cooling the space below. Furthermore, they increase the vegetation coverage and provide habitats for species.

It is important to consider implementing a rooftop garden from the beginning as they will add significantly more weight on the structure which needs to be accounted for in the construction design.

A simple yet effective methodology consist of constructing containers on the roof. The containers bottom should have a slight angle and be connected to a drain so that water does not accumulate. The first layer comprises an egg shell substrate (to retain humidity); on top a layer of sand (about 30cm) so that roots will not penetrate the structure; on top soil is finally added.

Setting a roof top garden is highly beneficial in terms of significantly increasing vegetal coverage, improving energy efficiency and providing water management solutions through rainwater harvesting and filtration

Roof top gardens should become much more present in urban design



Open air pathways

SBR open air structural concept plays a significant role in passively reducing the energy use around the resort (natural air flow + natural lighting). At SBR more than **70%** of the terrain has remained open space



Open air corridors

**Open concept =
Natural lighting +
Natural cooling =
Energy efficiency**

And much more...



Open air cafe

EN6 & EN7 Initiatives to provide energy-efficient or renewable energy based products and services to reduce indirect energy consumption and reductions in energy requirements as a result of these initiatives.

Energy saving through outreach

- Management Energy Saving Guidelines for staff:

SBR has **specific staff guidance for energy management**. The guidance highlights best practices and limitations that SBR staff must respect and that contribute in reducing our energy usage. These guidance include (but are not limited) to aspects such as: Switching lights off in areas not in use (e.g. seminar rooms after events) or switching off specific appliances when not in use.

- Messages to initiate guests to save energy:

Our approach at SBR is that **we try to involve our guests as much as possible**. As an eco resort we promote environmental messages throughout the site. We however believe that in a hotel environment we cannot force our guests to take such actions but we are doing everything we can to encourage our guests to take part in our environmental initiatives. Such measures include: numerous environment education messages throughout the resort (messages are strongly present in all locations starting from the reception); 2 in-house TV channels are dedicated to environmental awareness. One showcases a movie on general environmental trends, while another one is a slide show designed by SBR that intends to educate the guests on main environmental issues and to take actions to contribute in reducing these impacts (water management, climate change, biodiversity losses...).

At SBR we do not provide default amenities (shampoo bottles...). We however explain to our guests that we intend to reduce our impacts by not providing these by default. However guests who would like to have access to these products can request for it free of charge.

Energy Saving through technology

- LED & CFL lights: throughout the resort,
- Energy efficient pumps:
- Extensive use of fans instead of air conditioning:
- Balanced wave technology: (a technology that reshapes the incoming electrical current therefore making it more stable and significantly reducing energy loss through heating).
- 3rd generation heat exchange chiller system:



SBR Energy unit

Our third generation modular heat exchange chiller system is very efficient and was customized for our resort to maximize energy efficiency output

- Third generation modular heat exchange chiller system
- Energy efficient boiler in kitchen
- Energy efficient TVs and general electrical appliances
- Window films: all the rooms windows are fitted with protective films which serve the purpose of filtering sun radiation and dimming the sunlight. By doing so, the rooms are kept at a cooler temperature

Energy Saving through initial design

Open concept: All the room corridors have an open concept which serves the purpose of maximizing natural air flow and natural lighting therefore significantly reducing energy consumption for cooling or lighting purposes. At SBR numerous public spaces adopt an open air concept such as the café/restaurant area, outdoor gym. It was in fact one of the original guidelines that the built area would be kept to a minimal (built-up environment is only 28%).

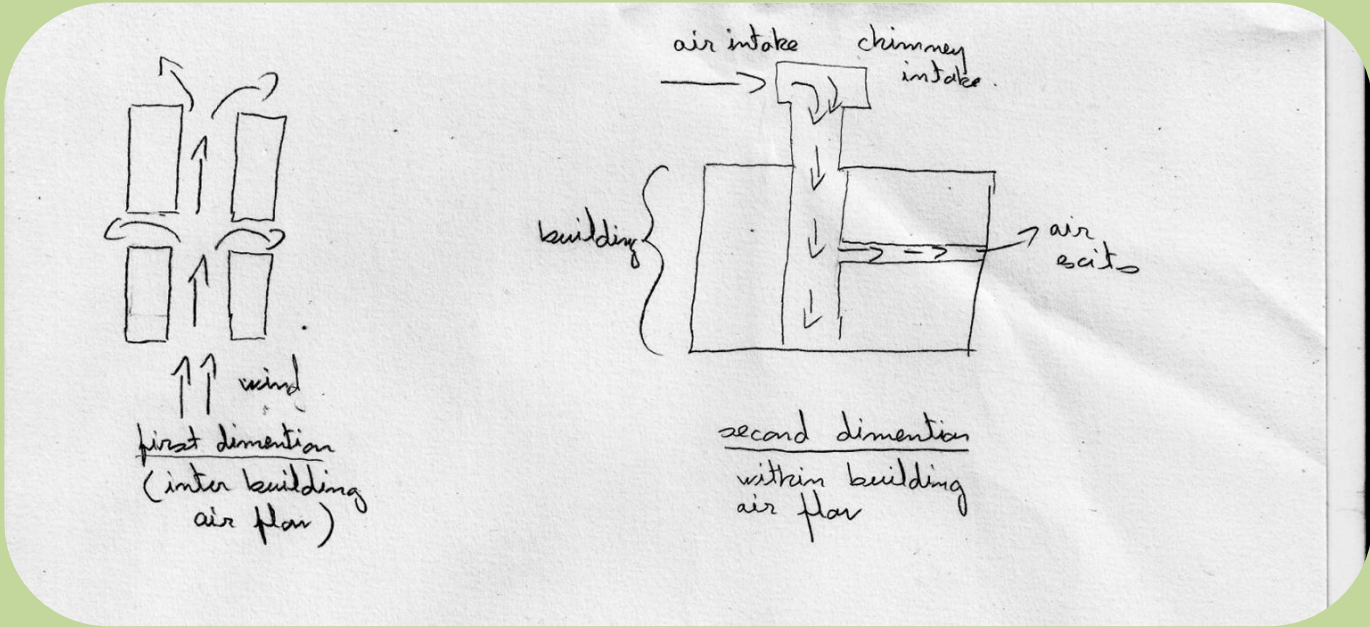
All the buildings are on stilts: It was decided that all the buildings were to be constructed on stilts (main buildings as well as the villas). Having the structures on stilts allows air flow to circulate from below the buildings as well as between buildings which provides a natural cooling effect (only slight cooling is achieved through this mean).

Roof top garden: SBR is home to one of the longest rooftop gardens in Singapore which also plays a key role in passive energy efficiency.

Despite common disbelief, very significant energy savings can be achieved through good design



SBR case study: Open Concept



Constructing to maximize natural air flow patterns

It is very important when conceptualizing the building's orientation and structure that attention be put on air flow patterns.

There are tremendous energy efficiency benefits to be gained by taking advantage of natural wind patterns (e.g. sea breeze) and to even amplify natural patterns through good design.

First dimension (inter building air flow): attention should be put in buildings orientations. A disposition that seems to work well is to subdivide buildings into smaller estates. Each estate would comprise of a few buildings surrounding a narrow central open space (e.g. with a swimming pool in the middle). Such arrangement creates corridors which amplify wind patterns and naturally cool down the space. Another technique to maximize the breeze is to split buildings in two, this will allow further airflow to navigate not just around but also through the building (intakes for second dimension can be made at this location).

Second dimension (inner building air flow): attention should be put within each building on how wind patterns will interact. Now that wind is already flowing through each building (first dimension) there is potential to incorporate corridors within buildings in order to capture and make this wind circulate not just outside but inside the buildings as well.

Prof Monitor: "At SBR, the design of buildings, how they are orientated, keeping as many open spaces as possible allows air to circulate between and within the buildings."





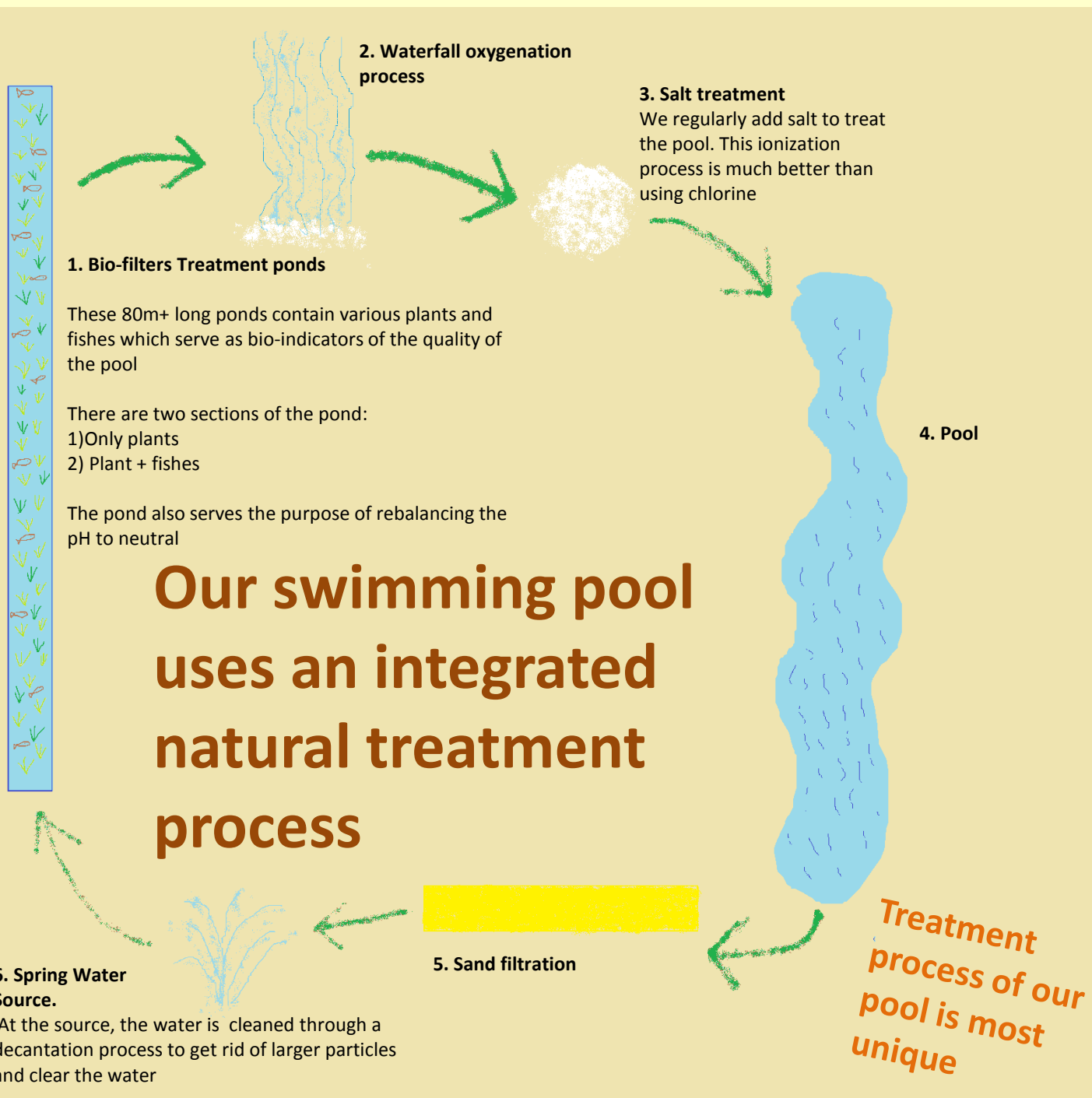
SBR Spring Water Swimming Pool

One of the unique features at SBR is the natural spring that lies below our resort. This natural source of water which would otherwise naturally flow out to sea is used for various purposes including gardening and to provide water for our landscape swimming pool.



At SBR, our swimming pool is truly unique in many ways. Through the way it was built following the natural terrain, to the way it is treated going away from conventional chemical uses to the source of the water which is from an underground reservoir

The below diagram provides a very schematic overview of the process





•**Roof top gardens:** To date (2011) SBR still has one of the longest self maintained roof top gardens in Singapore. This extensive roof top covers the entire surface area of the main building. In addition to **ecological benefits** it also serves the purpose of **cooling** the building below therefore significantly reducing the energy requirements for cooling the below indoor spaces.

WATER

Water saving initiatives at SBR

•**Spring water usage:** Below SBR lies a **natural spring reservoir**. SBR has made good use of this natural resource in order to minimize water wastage. Spring water is mostly used for the swimming pool as well as for all gardening purposes. Government regulations impose the usage of tap water for other usages such as guests rooms and F&B.

•**Water saving appliances:** SBR has installed water efficient appliances throughout the resort including guests rooms and public areas. These include:

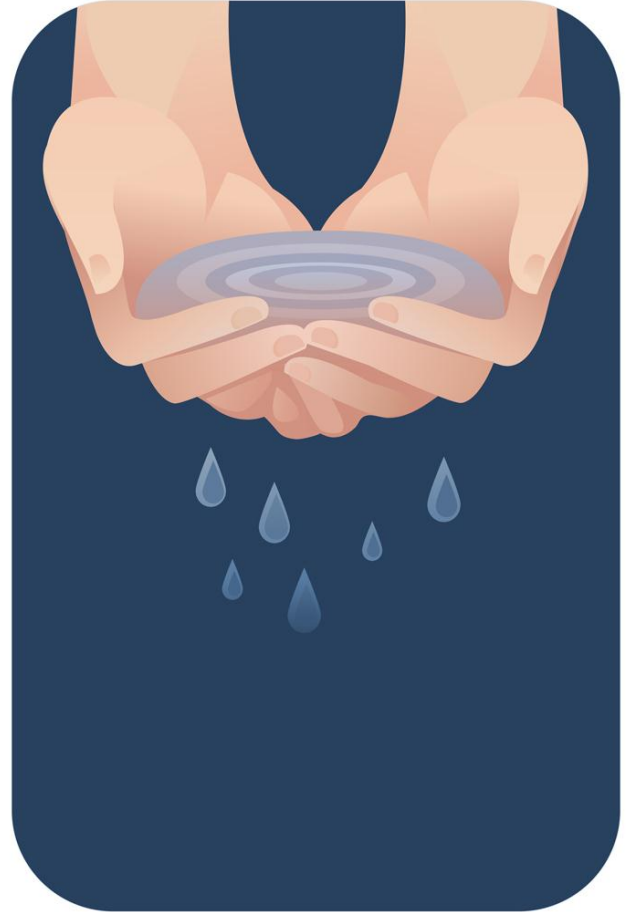
- Water efficient taps (sensors)
- Water control valves
- Water efficient taps and shower heads
- Waterless urinals (in all public toilets)

•**Water saving policies:** SBR has put in place specific guidelines for its staff to minimize water consumption which are part of our environmental management guidelines.

•**Water awareness:** SBR spreads awareness on the need to conserve water resources through numerous educational panels throughout the resort including one of its huts (“the water hut”) which is dedicated to water issues. There is also information on this topic within SBR in-house eco TV channels.

•**Water harvesting/roof top garden:** SBR’s self sustained rooftop garden allows water to be harvested and naturally purified. Plants on the rooftop do not need extra watering due to the water retention properties of the rooftop garden.

SBR has strong water management policies and technologies in place



Squirzy: “SBR treats water as a precious resource. Prof monitor always reminds me that the water that so easily comes out from our taps requires a lot of energy to make, and that we should always be mindful of this when using the resource”



Why we treat water with care at SBR: The value of water, a lesson from arid areas

(This article was first published in ecobusiness.com as part of SBR environmental outreach program)

Fresh water depletion has been identified as one of the most problematic and impactful issues that we will face during the century. Yet, in most modern societies treated fresh water is wasted in large amounts while at the same time many places are facing imminent severe water shortages. We should rethink the value of water and learn from places which through water scarcity have come to understand its value.

Fresh water on Earth is very valuable for us humans as it is not only our lifeline for survival, but also indispensable for agriculture and other essential activities on which we depend.

We live on a “water planet”, but only about 2.5 per cent of the total amount of water on Earth is fresh – the vast majority is stored in the oceans in a salty form. And only a small fraction of fresh water sources are readily available for consumption.

Wastage

Modern societies have completely lost appreciation for the value of fresh water. Indeed, fresh clean water is provided in a very convenient way: we switch on the tap and water comes out. Most of us never bother to consider where the water comes from and which processes it has undergone to transform it into the clean consumable fresh water pouring from our taps.

We tend to forget that the water we drink, the water that we shower with, the water that we waste so easily requires complex treatments which are both highly energy intensive and costly. But most of all, we have forgotten that fresh water is a scarce resource that takes a long time to renew itself through natural processes. In modern developed societies water usage is simply highly inefficient. Wastage occurs at all levels, from over-usage (domestic and industrial) to utilisation of clean treated water for a range of non-necessary applications.



The concerns

Fresh water resources on Earth are running out fast for three main reasons:

Overconsumption: With rapidly growing global population and industrialisation comes an exponential increase in water demand both for individual consumption and industrial use. In fact many aquifers and fossil water storage areas are running dry, and more and more rivers no longer reach the sea because so much has been extracted along the way.

Climate change: Climate shifts will greatly affect and modify the distribution and availability of fresh water on Earth. Many communities, which have been dependent on natural cycles for their water consumption and agricultural needs, will be severely affected.

Contamination: With industrialisation also comes pollution, particularly the contamination of fresh water supplies. Stored underground water sources that used to be consumable have become so polluted that they now require expensive treatments.

An appreciation of its value

While many nations have benefited from seemingly unlimited supplies of fresh water over the years, many places around the world have had to rely on very restricted supplies of fresh water and have had to learn to adapt and value this resource.

Two scenarios occur: In some places water is simply too difficult to access to waste any of it, while in other places water is available but contaminated, and treating the water is too expensive for poor communities to have the luxury of wastage.

In such places, water is clearly the most precious resource and its usage is restricted and valued. All aspects of water management are based on conserving the resource using practices such as no wastage during transport; storing the water and reusing every drop (e.g. closed loop irrigation); but most importantly, the resource is consumed wisely with full recognition of its value.

Citing Antoine de Saint-Exupery: *“What makes the desert beautiful is that somewhere it hides a well.”* As fresh water becomes rarer, more difficult to reach and more expensive to treat, we will come to understand its value as they have done in arid areas. But it may be too late.

Fresh water is scarce and expensive to produce, we should use it with more care...

The business case

Unless significant breakthroughs lead to much cheaper ways of treating water, current technological processes (desalination and waste water treatment) do not provide large scale solutions to the water crisis. The cost of the process is simply too expensive and energy intensive. Indeed, a single modern desalination plant costs hundreds of millions of US dollars! While convenient for wealthier nations, these technologies seem unrealistic for most developing countries.

The cost of tap water (treated water) in developed countries does not reflect its value and is therefore abundantly wasted. Yet, controversially the sale of bottled water is one of the most successful drink businesses, and a single bottle can cost more than US\$20 for 500mL! There seems to be a paradox here: we are willing to pay an expensive premium on water which is naturally purified. However, treated tap water prices remain low while the treatment cost is very high. Distortions in the value of fresh water are synonymous with various instabilities (price, markets, political, etc...) and will likely induce changes in water prices.

At the end of the day, as fresh water resources deplete, the cost of water can only go up. We can therefore expect the cost of consumable water (both treated and untreated) to rise significantly throughout the century. To avoid this scenario, significant advancements in the way water is used and produced need to be found.

“At SBR water management is well established and numerous initiatives are in place to limit as much as possible unnecessary use of tap water. SBR is fortunate to have access to spring water. A lot of efforts have gone into making the most use of this natural resource in a sustainable manner. Water issues will become increasingly important throughout the century and we should all respect this resource and protect it for future generations”



The solutions

Despite recent improvements in water treatment, there is not a clear solution to date on how to provide clean water at low cost on a global scale.

While most of our efforts have focused on technology improvements (desalination and waste water treatment), relatively few efforts have been put into finding more passive ways of cleaning large bodies of water such as using natural filters (e.g. plants) or other means that do not require significant energy inputs; because in fact the water treatment challenge is an energy one.

In the end, large scale water management comes down to maintaining healthy ecosystems. In natural environments, water is purified through the work of organisms and substrates filtration (natural filtration through layers of earth). If we preserve ecosystems, we also ensure the purity of the water supplies.

Another obvious step is to vary the degree of water treatment according to its end use. Still today clean treated consumable water is wasted on applications which do not require it to be thoroughly treated (e.g. cooling in industrial processes, irrigation...) As a general rule the more purification required, the more energy intensive and expensive the process. Wastage could be greatly reduced with better management of clean treated water.

The future will require us to be smarter about the way we treat and use water. We need to diversify water sources, including captured and stored rainfall, and reduce the treatment costs to a level that can be deployed on a wide scale for all economies.

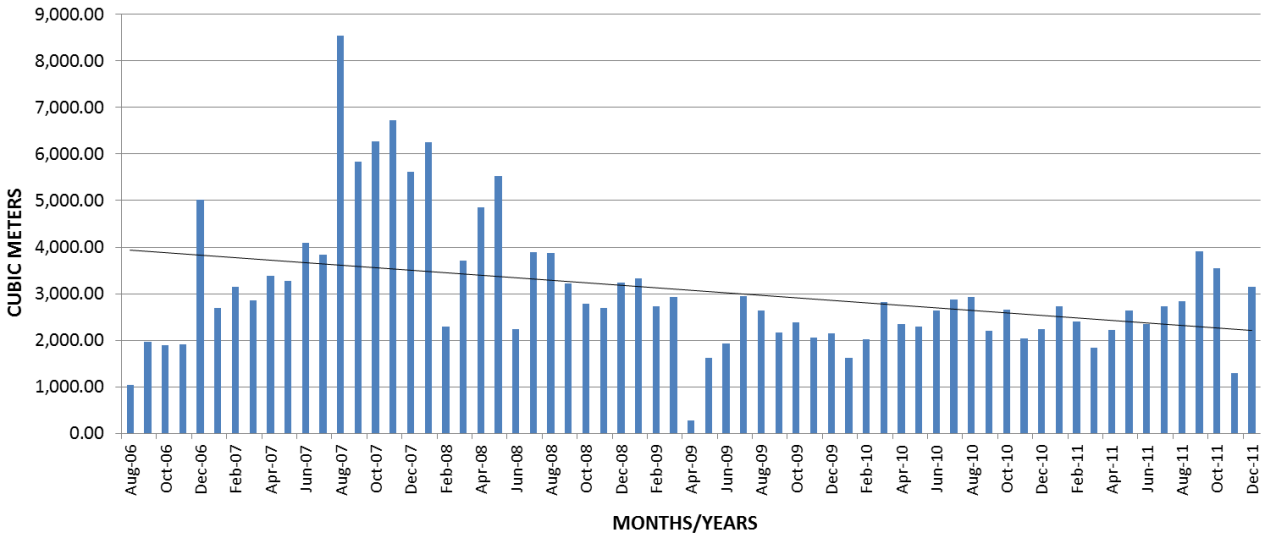
Article by Sylvain Richer de Forges





EN8 Total water withdrawal by source

TOTAL WATER USAGE 2006 TO 2011

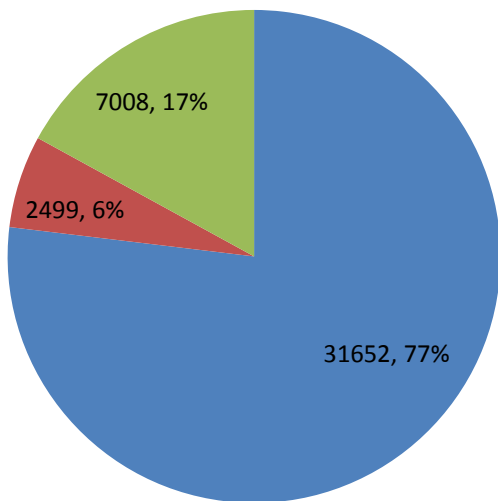


The above graphic represents the water consumption of SBR since August 2006. While water consumption has slightly decreased overtime, **it has remained quite stable.**

It is important to highlight that SBR has very special conditions when it comes to water usage. Indeed, below SBR lies a nature **spring reservoir** which naturally flows out to sea. During the construction phase, this underground source was discovered and SBR has since made good use of the resource.

Because SBR has a natural supply of fresh water that continuously comes out, **its tap water consumption remains very low.** SBR makes use of **two distinct sources** of fresh water: one comes from the **spring** and the other is **tap water** from the network. Spring water is mostly used for the swimming pool and gardening whereas the tap water is used for guests services in rooms (showering...). SBR has a very significant positive impact by allowing the management of Sentosa island to pump water from its spring which is used **to water the surrounding areas** (for gardening and landscaping purposes).

Water Withdrawal by Source in 2011
(in cubic meters)



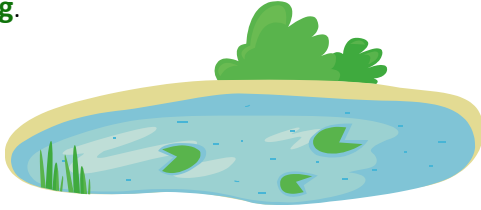
- Tap Water (guest rooms, kitchen)
- Rain Water (rooftop garden and swimming pool)
- Spring Water (swimming pool, gardening, general cleaning)

Squirzy: "SBR is really fortunate to have a spring on its site. But it has also made smart choices to make use of this water in the most sustainable way"





Most of SBR water consumption originates from an underground spring water reservoir. The water that is taken from this source is of natural origin and if not taken would otherwise flow out to sea. As such SBR water usage from this source has **no impacts on diminishing water reserves within the spring.**



SBR's has a **very limited consumption of city tap water** (due to its natural spring source and water saving initiatives)

EN9 Water sources significantly affected by withdrawal of water

SBR water sources are:

Tap Water

Spring water

Rain water

None of these sources are significantly affected by the withdrawal of water from SBR as usage is well managed and kept to a minimal. Actually, the spring water is not actively pumped from the ground but **naturally flows out**. As such, if SBR was not making use of it, it would just flow out to sea. Furthermore, the Spring is regularly refilled with rainwater.

No sources of the water used at SBR are from protected areas/areas of biodiversity value or sources of importance to local community.

SBR takes great efforts into managing the source in the **most sustainable way possible.**



EN10 Percentage and total volume of water recycled and reused.

In addition to its very efficient water consumption practices, SBR also has initiatives in place to recycle and reuse the water.

Such initiatives include:

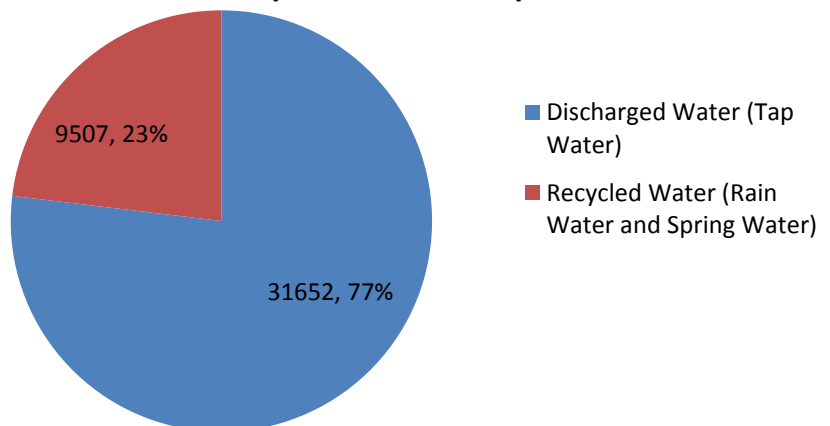
- Roof top garden: allows a significant amount of rainwater to be collected if needed
- Swimming pool closed loop system
- Extensive use of groundwater for gardening
- Excess water from the spring goes to a reservoir which is used by Sentosa management to collect and water the entire island
- Spring water excess:

The below graphic highlights the volumes reused/recycled:

Squirzy: "As you can see, SBR's spring water is very well utilized for a number of applications. Letting all this water flow out to sea would simply be a big wastage!"

When it comes to tap water people might actually say that we are not doing much to find a second use for it. That is what I actually asked Prof Monitor and he replied that in Singapore it is actually not authorized to collect and store grey water without a special permit. On the contrary all used tap water must flow back to the drains where the management is taken care of by the authorities."

Recycled Water for 2011 (in cubic meters)



Water management



SBR is involved in a very special and major water initiative. Indeed, it allows Sentosa water contractors to extract water from its pond to water the entire island



Numerous water saving features throughout the resort

And much more...

BIODIVERSITY



Siloso Beach Resort

Blending Life and Leisure with Nature

At SBR biodiversity has a very special significance. Indeed, because the location of the resort is on pristine forested terrain, biodiversity is relatively high especially when compared to other parts of Singapore.

EN11 Location and size of land owned, leased, managed in, or adjacent to, protected areas and areas of high biodiversity value outside protected areas.

The location of SBR is on a forested mountain hill. Around and behind the resort lies protected terrains which hold many trees and a relatively rich inhabiting biodiversity.

SBR was constructed with minimal digging, does not own any underground area.

The property of SBR is not listed as protected status nor considered as protected by any organization.



Location:



We can see from the satellite image that SBR is **surrounded by forested terrain**. While large parts of Sentosa island have been allocated for development of the built environment, only a patch of greenery remains in the central part of the island around the resort. SBR is **conscious** of this, and has taken strong measures to ensure the **preservation of wildlife** not only on its site but also insuring that its operations have very limited impacts on the surrounding.

Size of land owned:

15,449.0 m²



EN12 Description of significant impacts of activities, products, and services on biodiversity in protected areas and areas of high biodiversity value outside protected areas.

As the site surrounding SBR is a forested terrain, SBR's activities do have certain impacts on biodiversity:

SBR significant impacts on biodiversity

- Noise:** Despite that noise levels are kept at reasonable levels, some disturbances on biodiversity resources do occur.
- Built environment:** As building structures have been developed on site, some disturbance on biodiversity have occurred during the **construction phase**. It is however important to highlight that extraordinary measures to preserve the original terrain and minimize the impacts on biodiversity have been taken. Measures taken at SBR to preserve the natural terrain are unique and exemplary.
- Gardening (e.g. cutting down branches):** Occasional maintenance work in order to insure guests safety are carried regularly. These activities mostly include cutting down tree branches which may cause slight disturbances to wildlife.
- Mosquito control (spraying of chemicals on plants) :** In order to meet government standards and insure guests comfort and safety (dengue control), mosquito treatment do have to be carried on site. SBR has in the past used the traditional fumigation treatment. However, since the last few months, a new treatment using less impactful chemicals is under trial.

Habitat protected or restored

- Overall resort environment:** Despite the built environment, a significant portion of the land has been preserved.
- All trees : All grown trees on site have been preserved.**
- Ponds:** Many **ponds** around the resort have been preserved in order to maintain their rich inhabiting biodiversity. Furthermore, many other man made ponds have been added throughout the resort.
- Roof top garden:** SBR's extensive roof top gardens not only has energy efficiency attributes, but they also allow additional greenery coverage including the plantation of various species that attract insects.



At this time SBR is not working with any other organizations to protect or restore habitat, however this may be a consideration for future CSR initiatives. We are actively using the Biodiversity Portal website to promote parties that protect natural habitat.

At SBR biodiversity is important and here are some reasons why:

Driving an Innovation revolution through Biomimetics

(This article was first published in ecobusiness.com as part of SBR environmental outreach program)

This century, in order to deal with growing environmental crises, significant technology breakthroughs must be found. While we are currently mostly focusing on existing ideas and improving technologies which have long been known, what we really need is a “green revolution” and new ideas to support a low carbon economy. This will only be achieved through a significant new way of thinking.

Biomimetics and using ecosystem services to our advantage could truly be the next big revolution. However, we are currently doing the exact opposite of what is required by destroying the very species holding the key to the innovation breakthroughs that might ensure our own survival.

Biomimetics, the study of natural processes and living species for the purpose of imitating them for human related processes, is very promising but is still in early stages and currently largely unexploited. Gaining inspiration from biology could play a double role of both fueling a green revolution and providing an additional business reason to preserve biodiversity.

There are only a few real case studies to illustrate biomimetic applications to date. Most often examples are merely demonstrations of similarities between natural processes and engineering applications; these technologies haven't really been developed by studying species themselves.

Probably one of the best examples of a technology that is truly the product of the in-depth study of a species trait is “Velcro,” which is widely used around the world to stick surfaces together. This invention was derived from the seed of *Arctium lapa*.

Other examples include the winglets on the tip of airplane wings that mimic birds' wings to significantly improve fuel consumption during flight; certain recent breakthroughs in robotics that have been achieved by studying the walking patterns or neuronal signals of simple insects; a building in Africa that has been constructed by mimicking the structure of a termite nest, which uses a chimney effect to provide very efficient natural cooling.



Also noteworthy is the fact that our medicines are derived from molecules found in the few species that can be replicated and reproduced in the laboratory (most molecules are too complex to be artificially synthesised). Such pharmacy applications are also a branch of biomimetics.

To date the concept hasn't really been exploited to the level it could be and we do not seem to have understood the potential. Yet the main concept is simple: because species on Earth are the result of millions of years of adaptations enabling them to survive over time in their given ecosystems, they already provide highly specialised and adapted traits that we can imitate instead of trying to find the answers by ourselves. Solutions to the numerous engineering problems that we face can be found through the study of species.

This statement relies on simple facts and logical deductions:

There are still millions of species on the planet (anywhere from 40 to 150 millions);

Species are found in almost any given type of environment on Earth;

Each environment requires very specific adaptations for species to have survived over time;

For species to have survived over time, the adaptations they have gained are optimized to deal with their environments.

Thus, wherever we want to find optimal adaptations and efficiency in design, we should first search for it in nature; the odds are that one or more species already provide the ultimate solutions and adaptations.

A methodology for thought

Along with an understanding of the value of exploiting these adaptations, we must also develop a clear methodology for businesses to benefit from the concept. No real methodology has been put in place. Whenever looking into applying biomimetic principles to a problem, the following simple methodology could be applied:

1) Ask: what problem do we intend to solve? E.g. maximize the efficiency of flight; find the best shape to maximise energy and strength output (for instance insect builders such as ants or bees construct structures which through their shape and materials are much stronger and lighter than the constructions that we do today); find a way to climb vertical surfaces;

find an antifouling solution to avoid algae buildup on ships (which costs the shipping economy billions of dollars each year); develop the most efficient solar cells (plants still convert solar radiation to energy in a much more efficient way than any photovoltaic cell can achieve today); and the list of problems that we need to solve and find the ultimate solution for is virtually infinite...

2) Find species in nature that have had to adapt to a similar problem;

3) Perform in depth study of the adaptations or traits that have allowed these species to resolve the problem;

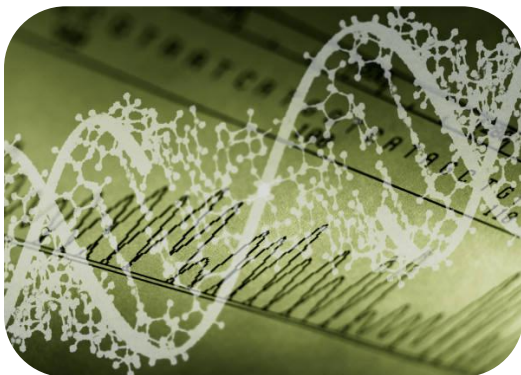
4) Apply the natural traits by artificially mimicking them through engineering, robotics, pharmacology or other discipline.

This last part of the process may take years of research. However, the research has a higher chance of success than non-biomimetic research (having already been proven in nature) and the payback is likely to be an innovation breakthrough.

For biomimetic research to be successful, it requires the work of truly multidisciplinary teams comprising engineers, biologists, chemists and project managers. If we look at history, the real scientific breakthroughs have most often occurred at the frontier of sciences through a multidisciplinary approach. It therefore makes sense that this is the way we should go if we intend to make innovation breakthroughs quickly.

The business angle

Businesses and investors who see the huge opportunity presented by biomimetics will allocate the resources to exploit biomimetic principles. It will be challenging but the payback is potentially enormous. In a world in which we face truly unprecedented environmental and energy crises, we need an innovation revolution and a total change of practices.



Businesses and investors who see the huge opportunity presented by biomimetics will allocate the resources to exploit biomimetic principles. It will be challenging but the payback is potentially enormous. In a world in which we face truly unprecedented environmental and energy crises, we need an innovation revolution and a total change of practices.

The interesting aspect of biomimetics from a business perspective is that a large part of the work is already available; all that needs to be done is to allocate the resources to find the appropriate species to study and then extract the ideas that can be applied to the business. Today, most of the workload in corporate research and development is put into finding new innovative ideas that will provide a market advantage over competitors. The amount of time allocated could be drastically reduced by searching for the solution in nature rather than spending millions of dollars in unproven research. Global corporations wanting to take the lead in innovation and R&D with cost effective solutions should be looking at biomimetic principles to provide precisely what manufacturers and service providers seek in a competitive corporate world.

The limitation and the biodiversity crisis

Even as we struggle to understand the potential of biomimetics, the very material to develop this revolutionary field is on a path of disappearing. We know that species on Earth are being driven to extinction at alarming rates. According to Conservation International at least one species goes extinct every 20 minutes. While the rate of extinction is impossible to estimate with certainty due to the simple fact that the vast majority (about 90 per cent) remains to be discovered and studied, we do know very well that natural habitats are vanishing as a result of our activities (deforestation, urbanization, agriculture, fires...). We also know that the global climate is warming (which is already starting to bring many species to extinction and will become a predominant driver for species extinctions in years to come) and that human induced pressures such as pollution are pushing species to extinction at a rate at least 1000 times the natural rate of species extinction.

Like nanotechnology (which itself could move forward through biomimetic studies), biomimetics could lead to the next industrial revolution. We are however destroying the "knowledge bank" necessary for this revolution to happen. If governments and corporations globally could realise the potential there is in preserving biodiversity for biomimetic applications, they would certainly act to preserve the diversity of life on Earth. They would treat biodiversity as an asset, an investment or perhaps a global data bank. There is still hope that such realisation could happen. But time is running out fast.

Article by Sylvain Richer de Forges

Biodiversity on site



Siloso Beach Resort

Blending Life and Leisure with Nature



Numerous squirrels can be spotted on site

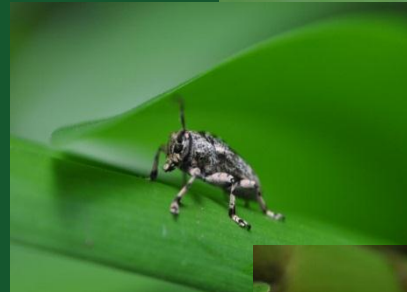


Birds nesting on site

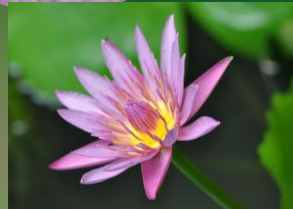
By preserving the trees and areas of forested terrain, SBR has managed to maintain a higher degree of biodiversity on its premises...



8 species of frogs have been monitored on site



Numerous insects and invertebrates in our forested areas



Numerous species of plants on site (mostly local species)



Alternative Environmentally friendly mosquito control

Numerous self sustained ponds have been implemented throughout the resort. In addition to providing habitats for a diversity of species, these ponds are also growing grounds for fish that eats mosquito larvae as well as dragonflies which effectively serve as a natural mosquito control agent

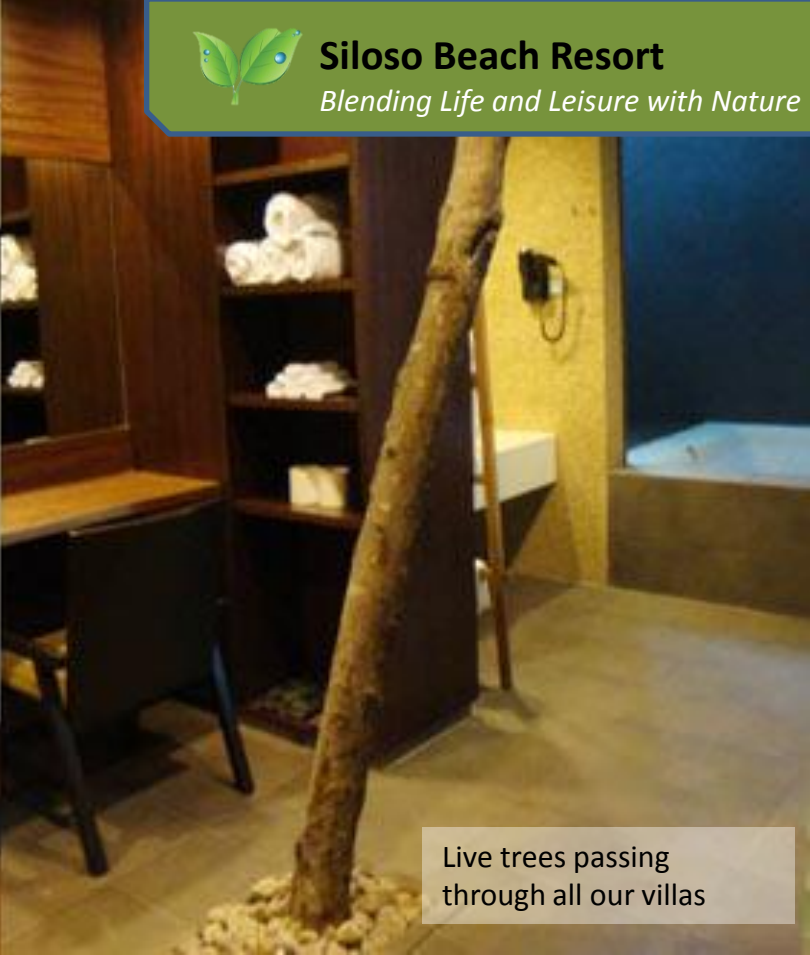


In addition SBR is using an alternative mosquito control treatment (instead of traditional fogging) using a bacterial based solution instead of conventional fogging. This treatment allows much less impact to the variety of species on site (insects, reptiles...)



Using a bacterial based solution instead of petroleum derivative chemicals is much better for the surrounding environment

We believe that a combination of natural means and active treatments can effectively control mosquitos



Live trees passing through all our villas



*Our unique concept of **blending the natural surrounding environment with structures:***

Throughout the resort in order to preserve many of the existing trees, we have integrated the trees within the built structure.

As such almost all of our villa rooms as well as many parts of the buildings actually have trees passing through them. Other techniques of preserving the trees are also found throughout the resort.



A few snap shots from the resort of integrations of trees within the structures. There are in fact countless examples of such practices throughout the resort. Indeed, whenever possible, trees have been preserved and integrated into the built design



Case study: Integrating trees within the structure

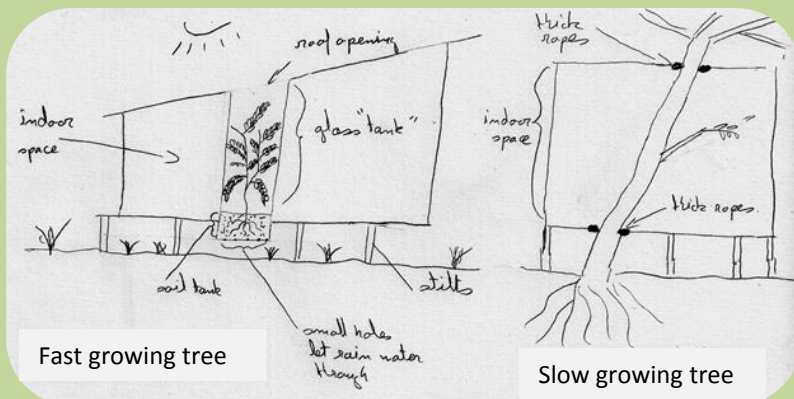
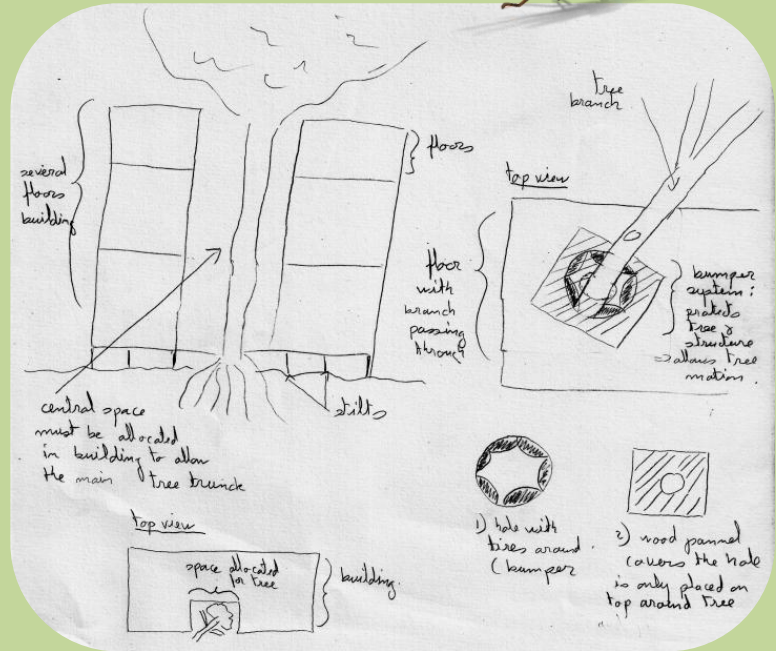


Fast growing trees: There are numerous ways to include plants and trees within the buildings. A simple technique consists of having glass tanks going through the building structure (from ceiling to basement) where trees and plants would be in the middle. This works best if the buildings are constructed on stilts: the trees lie on a container tank; at the bottom of the tank are holes for the water to go through but small enough for the leaves not to pass. This technique both protects the trees and enables them to benefit from rainfall without damaging the surrounding structure (water will just flow on the glass and exit at the bottom of the tank).

Slow growing trees: For larger and slow growing trees, another method consists of having them literally go through the buildings ceiling and basement. This can be achieved by building the structure around the tree branches and trunk and to allocate joints where openings are (openings need to be adjusted on a regular basis as trees grow). This technique is possible and works well. Joints usually only consist of thick ropes (keeps the water out) and rubber (tires serving as shock absorbers when trees move).

For **bigger trees**, the buildings need to be constructed around and tree ways must be part of the design. This is usually done by allocating a space in the structure for the tree to pass (i.e. building walls are constructed around the tree allocating enough space for the main tree element and foliage). Branches can then be let to pass through the floors. For this purpose holes can be made inside the floor. It is important to buffer the movement of the branches with bumpers which are usually car tires. In order to prevent people from falling into the hole, a wooden board is freely placed on top of the hole and surrounding the tree.

Furthermore, it is important to install lightning protection on the tree trunks (metal wire going to the ground) in order to protect both the trees and the structure.



It is possible to build structures while preserving existing trees and maximizing vegetal coverage: SBR is a case study that demonstrates this fact.

Trees VS structures



Our concept of allowing trees to pass through the structure is highly present throughout our resort

Dinosaur bones exhibit



Display of real dinosaur bones within our reception area and information on conservation

SBR Real Dinosaur Bones Display

Location: The bones were displayed at NUS, Dinosaur bones from a Diplodocus species

Origin of the bones: Wyoming, USA

Age: These bones are estimated to be 115-million years old

Size: Diplodocus can reach up to 26 m in length

Condition: These fossilized bones are considered very well-preserved

Notes: Skeleton from the tail part of the animal

Importance: Display of real Dinosaur bones such as these are very rare worldwide. It is currently the only place in Singapore along with The Raffles Museum where these can be seen. Most Dinosaur skeletons displayed in Museums are either reconstructions (fake bones) or only partially complete. The aim of displaying these bones is for people to reflect upon our natural history/heritage.

Environmental significance: Dinosaurs became extinct 65 million years ago as a result of a catastrophic event. Humankind is responsible for such pressures that we are driving very concerning changes to our environment putting our own species long term survival at risk. Climate change and global biodiversity losses are among the top of the list.

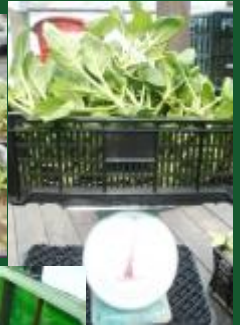
We should learn from the extinction case of the dinosaurs to avoid a similar fate for our own species...

Waste wood workshop

SBR wood workshop. Most of the wood at SBR originates from unwanted wood from construction sites. We then reprocess the wood for maintenance, furniture...



Roof top farming



Roof top garden growing facility. We produce vegetables and spices without any use of chemicals

Case study: Dinosaur



Siloso Beach Resort

Blending Life and Leisure with Nature

At SBR we have recently become very involved with dinosaurs in the most unusual way.

Siloso Beach Resort is proud to **showcase Real Dinosaur Bones on its premises.**

The display of these bones is a joint venture between Siloso Beach Resort (SBR) and the National University of Singapore (NUS).

Background: So how did SBR get into possession of real dinosaur bones??!

Well it all started with the close collaboration that SBR has with the Raffles Museum of Biodiversity Research <http://rmbn.nus.edu.sg/> (NUS). SBR has been in close contact with this reputable institution since SBR started the development of the Biodiversity Portal of Singapore (www.biodiversity.sg) which is one of its CSR programs.

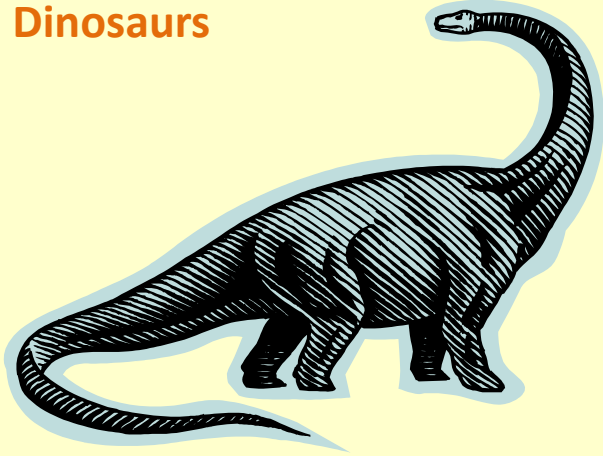


At SBR we display real dinosaur bones

In appreciation of our move in initiating this much needed funding exercise, the RMBR has accepted to collaborate with us in mounting this preliminary dinosaur exhibit which intends to inform the guests passing by the hotel and various stakeholders on the importance of dinosaurs, biodiversity preservation and to promote the upcoming National History Museum where the full skeletons will be displayed starting in 2014.

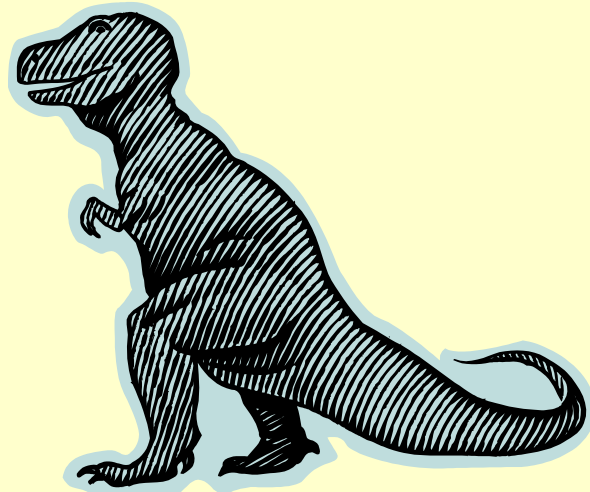
We use our Dinosaur Exhibit to convey strong conservation messages

At SBR we want to share our passion for Dinosaurs



Following this SBR has been actively involved with some of the Museum activities. Recently it came to our attention that the RMBR intended to expend into a new National History Museum for Singapore. One of the main attractions the upcoming Museum was looking forward to was to have a unique display of complete and real dinosaur skeletons.

In order to make this a reality the RMBR embarked on an ambitious fund raising exercise to raise enough money to purchase 3 unique and almost complete dinosaur skeletons (believed to be from the same family), a world first! SBR immediately responded to this by gifting a significant amount of money for this unique and most worthy cause. SBR was the first donor to put money on the table which sparked other donors to come on board as well. Since then, the necessary funds of 12 million have been collected from various donors (including SBR) and the dinosaurs skeletons are now under way to Singapore!



EN14 Strategies, current actions, and future plans for managing impacts on biodiversity.



Siloso Beach Resort

Blending Life and Leisure with Nature

SBR is Fully compliant with national regulations and goes above and beyond regulations for preserving trees and biodiversity.

Since its construction stage, **very significant consideration** has been taken to preserve the biodiversity on site. Biodiversity preservation and education remain to date **one of the main guidance of SBR.**

During the initial development stage very special care and measures have been applied to preserve as much as possible the biodiversity on site.

One of the strongest decisions was to **preserve all the trees.** This was a very serious commitment which required a lot of special attention and extra efforts:

SBR conducted an environmental site assessment of the trees affected by construction. **More than 200 fully grown trees have been preserved** on site: In order to achieve this, special construction techniques had to be applied. This included the use of **micro bore pilling** techniques. This pilling technique using lighter equipment bores a hole instead of compacting the earth, which allows to significantly reduce the amount of vibrations near the tree roots and to preserve the trees (the use of conventional pilling techniques would have killed most of the trees).

Training and supervision. Such decision to preserve the trees was very unusual at the time of construction in Singapore and therefore required extra attention during construction. Indeed, constant supervision of the worker's teams was required to make sure that no toxic spills or other common practices were going to affect the trees. Because there were so many trees to preserve, buildings had to be built around these trees. This was a particular challenge and each tree required an average of 10 consultants to make sure that both the trees and the surrounding structures would co-exist well.

Preserving the trees not only requires commitment but also a lot of patience and supervision

Anyone coming to SBR will quickly notice the extent of the efforts which have been made to preserve the trees and incorporate them within the structure.

- *Different innovative construction techniques were applied to incorporate the trees.*
- *In some parts, buildings have been built around trees.*
- *In some parts, trees literally go through the structure.*
- *In other parts, trees are in close proximity of buildings.*

Going beyond just preserving the trees, one other important initial guidance in the development of SBR was to **preserve the terrain.** In order to do this, a minimum of built surface area has been allocated while the vast **majority of the resort remains open terrain**, much of it with its original vegetal coverage.

In order to preserve the terrain, the resort was built making use of original shape of the land. For instance, the swimming pool was just placed where an old dirt road used to be. The same concept was applied in many other locations such as the villa wing where villas emplacements were chosen according to the less impactful locations for the trees and surrounding vegetal coverage.

In a later phase of development of SBR, further targets were developed to enhance biodiversity. In particular, 450 additional trees were planted, and numerous man-made ponds have been placed in various locations of the resort. These self-maintained ecosystems, attract a variety of wildlife including frogs, dragonflies and many others.

Pushing the concept, SBR is trying hard **new solutions of mosquito control** (which is usually done by fumigation) that would be less impactful to biodiversity. A new control mechanisms using BTI technology is currently under trial. These treatments are meant to be more focused on certain species (mosquitoes) and therefore known to have lesser impacts on other species inhabiting the premises.

A future objective would be to better understand and monitor the biodiversity of the area by establishing a photo database to record the various species and sightings.

Having done so many efforts to preserve the biodiversity on site, SBR is very active at promoting not only the preservation of species on site but also **educating on the concept of biodiversity** on a large scale. Indeed, SBR has implemented various educational programs on this topic.

SBR will continue its efforts to develop solutions to make its facilities a biodiversity sanctuary

SBR Biodiversity Outreach Programs

•**Biodiversity Exhibit:** A **permanent picture exhibit on biodiversity** within our café area. The pictures (both medium and large size) on display were all taken within the resort. Our aim is to promote biodiversity and to showcase that our conservation efforts have allowed to preserve a rich variety of species on site.

•**Biodiversity Portal:** **SBR has developed the Biodiversity Portal of Singapore** Website which has gained strong support from leading organisations in the field both locally and internationally.

Program supported by: United Nations, Conservation International, World Wide Fund for Nature (WWF), National University of Singapore, Singapore Science Centre, Singapore Institute of Biology, Singapore Environment Council.

Website:(www.biodiversity.sg)

•**Eco tours:** SBR eco tours have a special emphasis on biodiversity preservation on our site. To date, more than 3500 persons have attended the tours from various stakeholders: schools, universities, corporates, guests...

•**TV eco channels:** Two in-house TV channels are dedicated to environmental awareness and both cover elements of biodiversity issues amongst other environmental issues.

Biodiversity is a very important focus point at SBR

www.biodiversity.sg



Siloso Beach Resort

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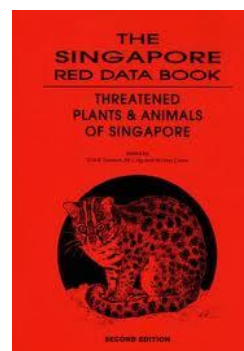
EN15 Number of IUCN Red List species and national conservation list species with habitats in areas affected by operations, by level of extinction risk.

Singapore National Parks board has published a book highlighting endangered species in Singapore.

SBR has a copy of this book for its reference and information can also be obtained from the following website:

Singapore red list

http://www.nparks.gov.sg/cms/index.php?option=com_content&view=article&id=146&Itemid=128



Number of IUCN red list species potentially affected: 2

According to the Singapore Red List, both these species are present on Sentosa and thus could potentially be affected by our operations:

- **Spotted Owl** (*Strix occidentalis*)
Status: Near Threatened

- **Oriental Magpie -Robin** (*Copsychus saularis*)
Status: Least Concern

We are also concerned about these issues and we provide a range of information on species including links to endangered species in Singapore from our biodiversity site .

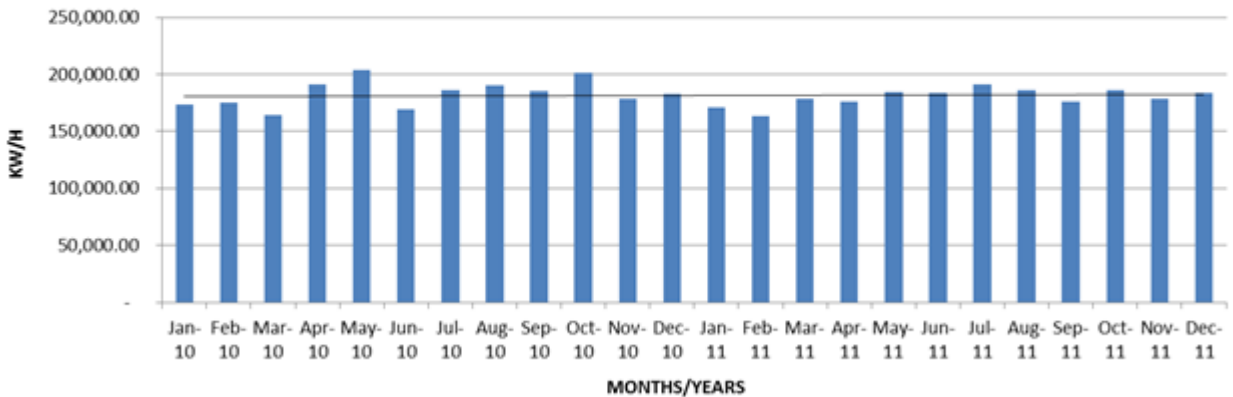
Biodiversity Portal of Singapore

www.biodiversity.sg





TOTAL ELECTRICITY CONSUMPTION 2010 TO 2011



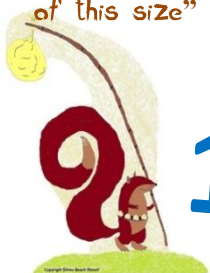
SBR takes the consequences faced by global climate change seriously.

Despite that it is aware that its own operations have insignificant impacts on a global scale (and climate change is a global scale issue), it also recognises the fact that any given business including its own has an important role to play in doing the right thing by significantly **reducing its Green House Gas Emissions**. But most importantly to actively promote, share and showcase how it does so in order to inspire many other businesses to do the same, especially in its own line of business: the hospitality and leisure sector which is a global significant contributor.

Numerous efforts have been done at SBR to cut down atmospheric emissions. Some related to **energy management** while others are more towards a **passive approach**.

The below section provides an evaluation of SBR's emissions based on energy use at the resort:

Squirzy: "First I thought it was huuge but then Prof monitor explained to me that it is actually very reasonable for an hotel of this size"



SBR annual carbon footprint:

1130 tonne of CO₂e

EN16 Total direct and indirect greenhouse gas emissions by weight.

In Singapore 1kwh corresponds to 0.5233 kg of CO₂ (equivalent) (source NEA)

SBR monthly average electricity consumption is **180,000 KWh**

Therefore SBR monthly carbon emission is 0.5233 x 180,000 = 94,194 kg CO₂e

And for one year: 94,194 X 12 = 1,130,328 kg CO₂e or 1,130.328 tonne of CO₂e

SBR annual estimated carbon footprint: **1130 tonne of CO₂e**

(This value is only an estimate based on electricity consumption; it does include external operations, supply chains and transport)

Furthermore, the above amount should be **significantly reduced** once taken into account the **trees present on site**.

SBR Dense Foliage



Elements of canopy at SBR



Due to its extent of vegetal coverage , SBR benefits from an **excellent air quality** environment



EN17 Other relevant indirect greenhouse gas emissions by weight

The main source of GHG emissions at SBR is primarily from **electricity consumption** which originated from the **combustion of natural gas**.

In addition to this primary consumption, several smaller and irregular activities are also contributing but to a much smaller extent. While aware of these sources, SBR is still in the process of gaining a more precise understanding of the emissions involved from these sources.

Other indirect GHG sources:

Gardening activities: May involve from time to time the usage of machineries which burn fuel, these include:

- Land-mowers
- Chainsaws
- Various other cutting machines
- Emergency generator

Fumigating (mosquito control)

The chemicals are sprayed through a blowing machine which consumes fuel.

Transports: SBR operates two **small buses** to transport its guests to and from the resort. The trips involved are however short (about 4 km) and therefore the emissions involved through this mean relatively small.

SBR 12 seater van emissions

Emission factor: 2.68 kg CO₂/L of diesel
 Litres of fuel from June 2010 to June 2011:
 9051 L

Annual CO₂ emissions: 24256.68 kg of CO₂
 The annual emissions from our 12 seater van is

26.7 tons of CO₂

SBR 30 seater van emissions

Emission factor: 2.68 kg CO₂/L of diesel
 Litres of fuel from June 2010 to June 2011:
 4084.5 L

Annual CO₂ emissions: 10946.46 kg of CO₂
 The annual emissions from our 30 seater van is

12.1 tons of CO₂



Our gardening activities account for a very small amount of emissions

EN18 Initiatives to reduce greenhouse gas emissions and reductions achieved.

•**Tree preservation and planting** (passive approach): preserving trees on site, has also in the process significantly contributed to offset emissions on site. Indeed, preserving the trees also preserves the carbon stored within the trees as well as the carbon dioxide removal potential of these trees. While it is **very difficult to evaluate** how much carbon emissions is saved through this means, **It is significant**. SBR has preserved over 200 trees on its site and additionally planted another 450.

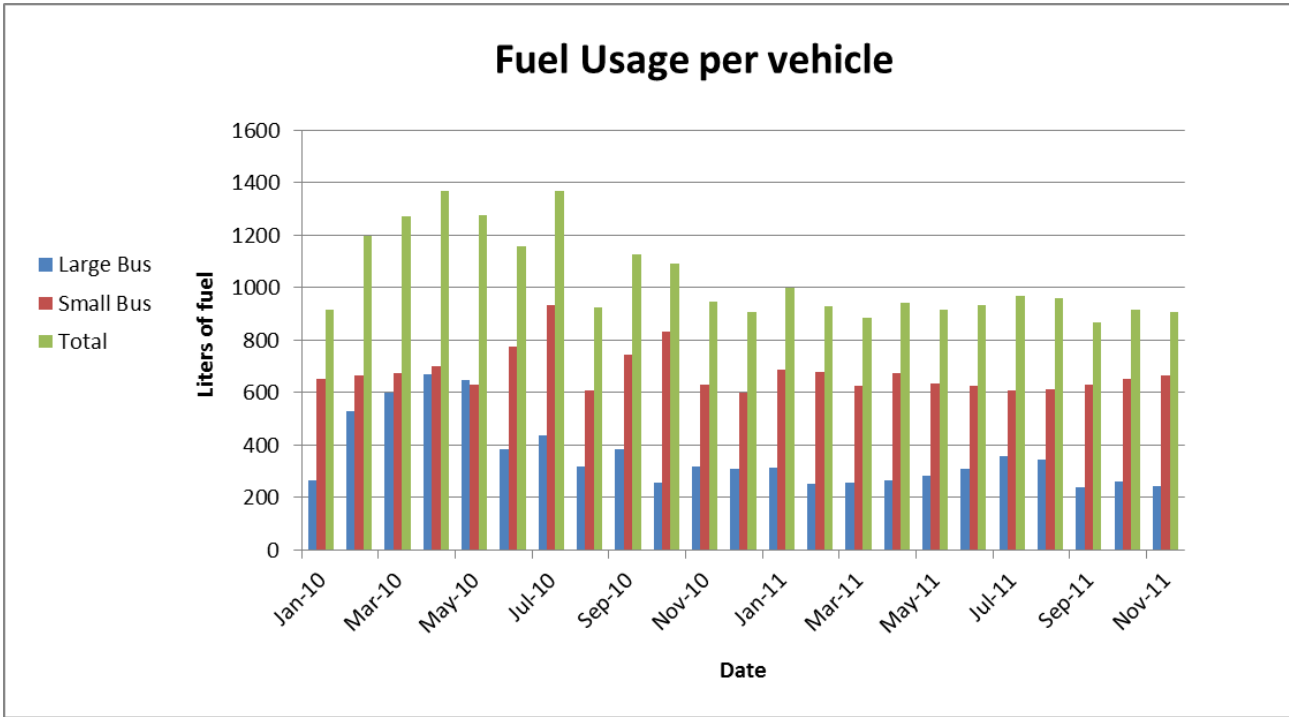
•**Good design** (passive approach) :Due to the energy efficient design of the buildings, SBR energy use is significantly reduced which translates to significant reduction in atmospheric emissions.

•**Active approach:** SBR has numerous initiatives to reduce its energy consumption through the use of **new energy efficient technologies**. The reduction in energy usage translates to reduction in atmospheric emissions.

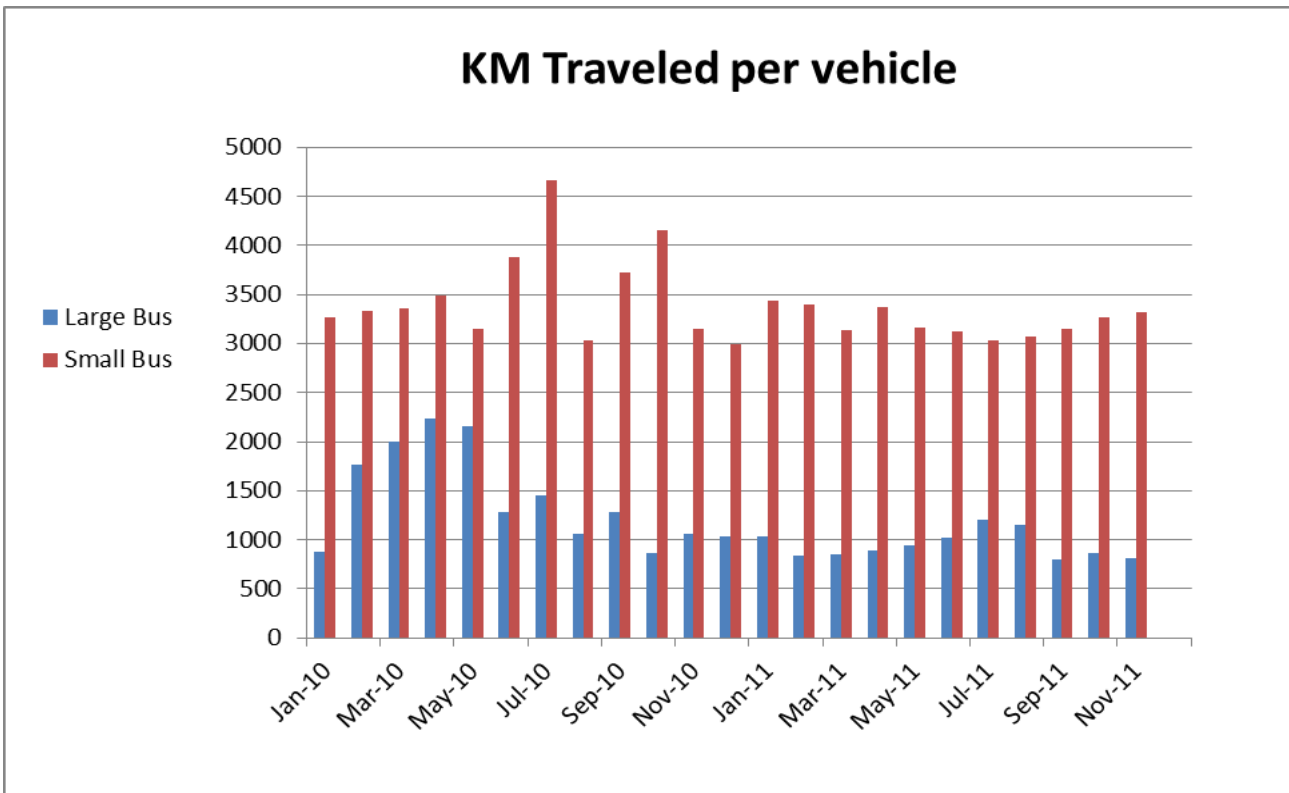


Our newest 30 seat van is much more environmentally friendly than our older 12 seat bus

SBR transport data



SBR usage of its buses remains very minimal as we only cover short distances to and from Sentosa island



EN19 Emissions of ozone-depleting substances by weight.

SBR has a policy in place to avoid the usage of ozone depleting substances. As such, very few if any are actually used on site. These substances may only be contained in:

- Coolants in fridges
- Sprays of various sorts

SBR is free of any CFC's

HCFC's are present in small amounts and within government regulations.

Emissions by weight: **insignificant**

EN20 NO, SO, and other significant air emissions by type and weight.

The only SBR related activities that involve some of these substances are transportation and gardening.

Values have not been directly measured but are very low considering the amount of transport and gardening requiring machineries involved.

Transport **SO_x**
 +
Gardening machinery **NO_x**

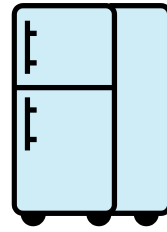


Very small amount of **SO_x** and **NO_x** come from our bus exhausts (our bus trips only cover small distances)



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Small amounts of **HCFC's** are contained in our fridges and cold rooms in refrigerants liquids



Insignificant amounts of **SO_x** and **NO_x** originate from gardening machineries

At SBR atmospheric emissions of either ozone depleting substances or Nitrous or Sulfuric oxides are:

Not significant



Why we do not use any ozone depleting substances at SBR or in our supply chain

(This article was first published in ecobusiness.com as part of SBR sustainability outreach program)

Significant improvements have been made to slow the trend of **ozone** depletion, yet the problem is still with us and we cannot afford to ignore it.

Awareness of the ozone problem has completely lost momentum and seems to have been forgotten by the media. Indeed, we often talk about the ozone problem as if it were a thing of the past – a problem solved. Unfortunately that is not true; the reality is that, while the causes have been identified and international measures taken to limit the trend, ozone related problems and their very real consequences are still present today.

The problems

There are three distinct problems with ozone which often lead to confusion:

The ozone hole: refers to a periodic, near-total depletion of the ozone layer in the upper atmosphere. This depletion occurs every year during springtime over the poles, particularly the South Pole, and their surroundings;

Global depletion of the ozone layer: refers to a slow global thinning of the ozone layer (to a much lesser degree than the ozone hole);

Ground level ozone pollution: is often associated with smog events in urban areas. Ground level ozone forms in a very different way and has nothing to do with the ozone layer in the upper atmospheric ozone.

Of the three issues above, the ozone hole has been the focus of the most attention since its discovery in 1985 during routine atmospheric studies in Antarctica. News quickly spread throughout the world scientific community, which soon identified the ozone hole as a serious global threat requiring an immediate response to avoid a dramatic deterioration of our atmosphere protective layer.

The ozone layer plays a crucial role on Earth by blocking a certain wavelength of hazardous radiations, such as UVBs. Without the ozone layer, life on Earth could simply not exist

The causes and response

After numerous studies and investigations, scientists determined that human activities were the direct cause of ozone layer depletion. They identified a number of ozone depleting substances (ODS), including chlorofluorocarbons (CFCs), Halons and Freons, which were widely used in the chemical industry and in refrigerator coolants and sprays.

The solution to the ozone crisis was to ban certain chemicals and to replace them with less damaging alternative options. The Montreal Protocol has mostly succeeded in doing this by banning the production of the most harmful ODS.

This response has averted the catastrophic ozone depletion we would otherwise be facing today.

The current situation

The global community has limited the spread of ozone depletion; however, it has not completely stopped the trend. Indeed, two points need to be highlighted:

ODS stays in the atmosphere for a very long time. Therefore, whatever we added in the past (and still do today to a lesser extent) will remain there for decades, or centuries depending on the substances, and will continue to drive ozone depletion for many more years;

While CFCs were banned in most countries (some still use them), the main replacements – hydrochlorofluorocarbons – also contribute to ozone depletion, although to a lesser extent. Therefore, we have in fact only significantly slowed down the trend without really fixing the problem.

The ozone problem is still very present. In fact, scientists recorded the largest ozone hole on record in 2006.

The uncertainties and concerns

Currently, scientists predict the ozone hole will only recover to pre-industrial levels around the year 2065.

Indeed, recent studies indicate that certain parts of the Earth, including major cities, are experiencing dangerous levels of UVBs resulting from global thinning of the ozone layer and the spread of the ozone hole. Higher exposure to this harmful radiation brings significantly higher risks of skin cancer and other chronic illnesses.

Furthermore, while the most harmful ozone depleting substances have been banned, other ODS substances that are not covered by the Montreal Protocol are on the rise, particularly Nitrous Oxides (NOx).

As with climate change predictions, current ozone models do not truly take into consideration the effects of social trends, such as global population growth and the resulting exponential increases in consumerism and chemical activities. As such, current recovery estimates may well be faulty, particularly given the fact that we still do not fully understand the relationship between climate change and ozone depletion.

It may well take much longer than anticipated to resolve the ozone problems, which may in fact worsen with trends in society developments. Meanwhile, for the next 50 to 100 years, harmful effects from damage to the ozone layer – a global health concern – will continue to occur.

Moreover, the ozone layer may face new threats from the rising development of space tourism and the booming aviation sector. The world narrowly averted a similar risk a few decades ago when plans for the deployment of a large scale fleet of supersonic flights, in the form of the Concorde programme, were scrapped. Such activity would have been disastrous to the ozone layer as these planes fly right through it and drive depletion as a side effect of engine combustion.

The key message here is that our atmosphere is fragile, and we cannot afford to destroy it. The ozone problem, followed by the climate change crisis, was our first major warning. Yet we do not seem to have fully learnt the lessons from these on-going threats. We must raise awareness of the continued urgency of the problem, and tread with care in future developments that directly impact our atmosphere.

Article by Sylvain Richer de Forges

Squirzy: "Prof Monitor, Ozone depletion seems a very scary issue. If humans know that their activities have such impacts that they are putting their very own safety at risk (and ours) why do they take such risks?"



At SBR we are conscious of the issues and we do not use any ozone depleting substances...

Prof Monitor: "That's a good question Squirzy and I'm not sure I actually have the answer to this one. It seems that it is in humans nature to destroy itself. They tend to only react when situations get extreme. The ozone problem is a good example. They have reacted to the issue only when the problem was getting critical. The climate crisis is even a greater threat but they do not seem to react. Unlike the ozone issue, climate change will be irreversible and once the situation really gets critical it will simply be too late to do much apart from adapting to the change."





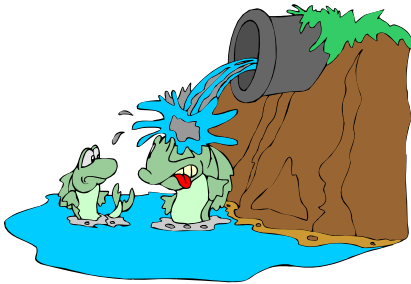
EN21 Total water discharge by quality and destination.

Total amount of water discharge for 2011:

31450 cubic meters (based on estimates from employee and guest water usage).

All of our discharged water comes from the public water supply, and goes back to the public water treatment. Almost all of the water used is discharged through guest activities like showering and flushing of toilets. A very small percentage (less than 1%) of our water withdrawn is consumed as drinking water by our guests or used by our housekeeping staff for general cleaning and evaporates.

Our other sources of water, such as spring water and rain water, are not discharged, but rather the excess is used for gardening purposes by SBR and Sentosa.

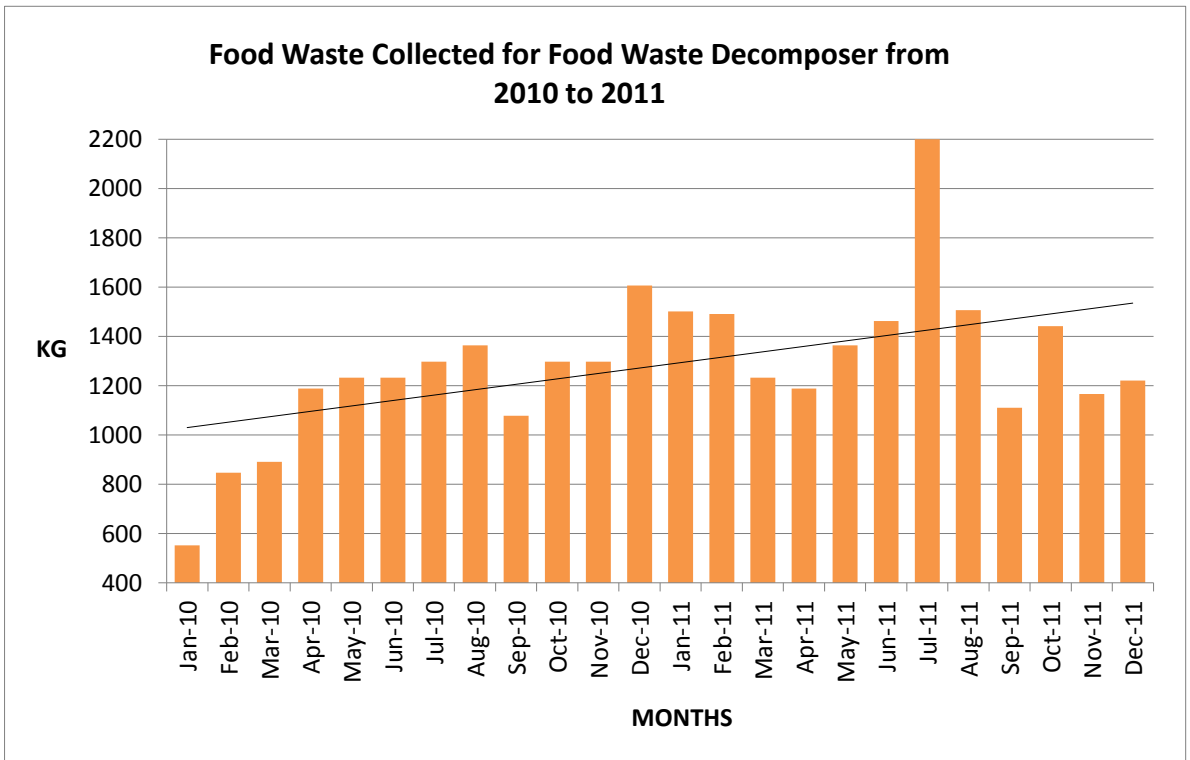


EN22 Total weight of waste by type and disposal method.

A large portion of the waste at SBR is recycled, especially from the housekeeping and food and beverage departments, which recycle many plastic drinking bottles, tin cans, and cardboard containers. As SBR does not produce any hazardous wastes, 100% of the waste that is not reused or recycled is collected and sent for incineration (as Singapore is land-scarce, the default method of disposal is incineration). We are constantly improving our monitoring systems, and plan to provide more information about the amount of total waste produced in subsequent sustainability reports.

Food waste is also entirely recycled, through either a food waste decomposer machine or vermicomposting (using earthworms). We also recycle some of our cardboard through the vermicomposting process.

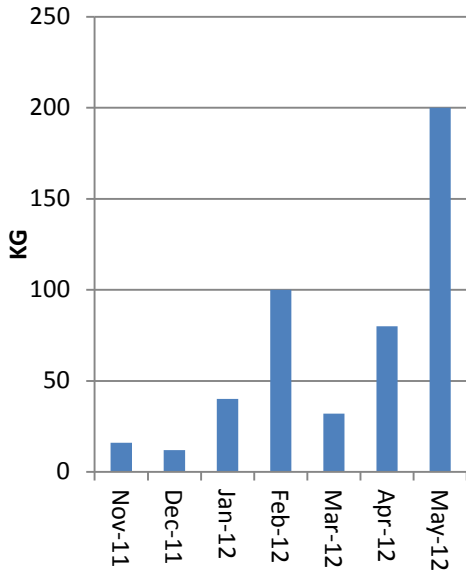
In total for 2011, the amount of waste recycled through the food waste decomposer and vermicomposting systems: **17.242 tonnes.**



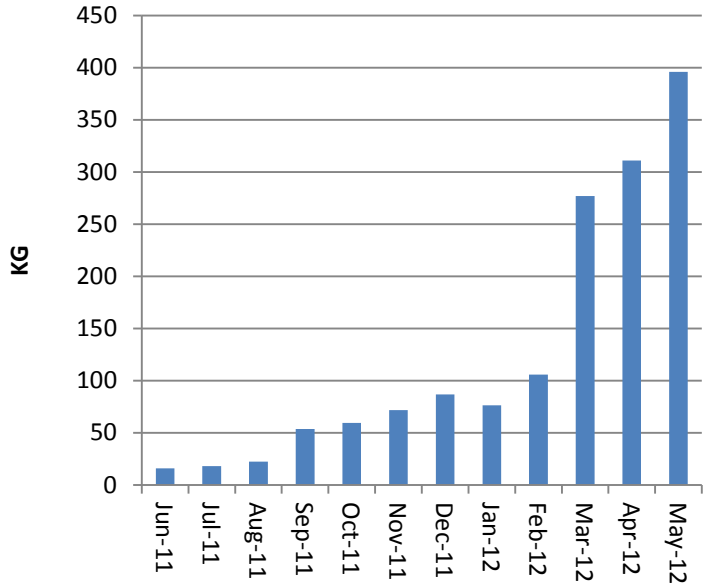


Our earthworms also play a large part in our recycling efforts!

Cardboard Recycled through Vermicomposting

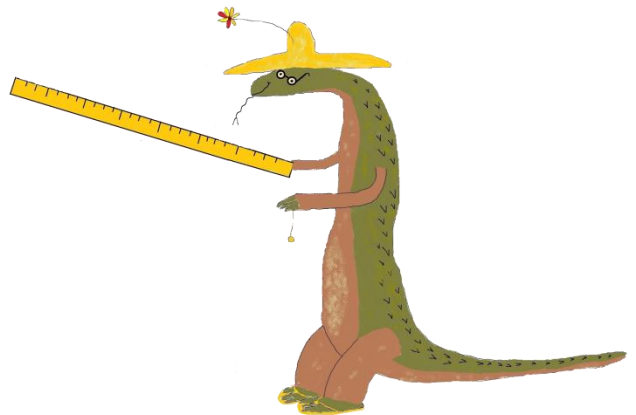


Food Waste Collected for Vermicomposting



Squirzy: "Prof Monitor, SBR takes a lot of efforts to recycle its wastes. Does this really have a positive influence on the world resources?"

Prof Monitor: "Well Squirzy that is a tricky question. To be honest we are conscious that our efforts to recycle all our waste that can be recycled only have insignificant implications on a national or global scale. But we also believe in setting the example for ourselves and others. If we are the only ones to do this of course there are no significant impacts but if we can do it properly and influence a few others to do the same then impacts will start to become significant. By doing this we are also creating a company culture of practicing the 3R's and getting ourselves ready for future more stringent regulations on recycling in Singapore which we believe is coming."



Time for a rethink of mining exploitation?

Why at SBR we think that it is important to recycle

(This article was first published in ecobusiness.com as part of SBR sustainability outreach program)

The demand for metals and other resources continues to rise exponentially with devastating environmental impacts. While it's easy to point the finger at mining companies, the real ethical questions surrounding the exploitation of natural resources are much more complex. Their solutions require us to deeply rethink our societal models.

It is a simple fact that the world's expanding population and exponentially rising consumerism is pushing up demand for natural resources tremendously. Such a rise in demand requires more resources to be extracted from the ground with often significant environmental impacts, particularly in biodiversity rich areas.

The roots of the problem *Society*

While clearly mining companies are directly responsible for the negative impacts of extraction, these companies exploit resources because society demands that they provide raw materials for a multitude of uses that are part of our daily lives.

Who in this new century would deny they conveniently make use of metals and minerals in the cars that we drive, the computers that provide our daily work tools, the factories that make our goods and the buildings where we work and live? Metals and minerals are simply everywhere around us and we often forget their true costs and origins.

The bottom line is that as consumers, we are all responsible for mining exploitation.

The extracting companies

Having said that, we still need to hold the mining industry accountable for the widespread unsustainable practices in use today. Numerous mining corporations are directly responsible for significant environmental damages, which include deforestation as well as physical degradation and chemical pollution.



But the greatest threats of mining activities by far are the destruction and contamination of bio-diverse locations which are driving the extinction of species. Indeed, many mining activities take place in biodiversity rich areas.

Governments

Those governments which allow mining companies to destroy sensitive environments within their jurisdictions are also responsible. Governments are the only authorities which can control and, in some cases, deny exploitation in areas which have been assessed as sensitive from an environmental point of view.

People need to hold their elected officials responsible for protecting such areas, which have better long term value as eco-tourism destinations or other uses, from the irreversible damage that can occur from short term exploitation.

Trends and new threats

While environmental impacts of mining activities have long been known, if not acted upon, new significant threats are starting to emerge.

Because the demand for resources is growing and their price (especially metals) is also rising, mining companies are now looking at operations in areas which have long been considered too expensive or difficult to exploit. These remote sites include lands in the Arctic zones below the permafrost and deep-sea beds.

Of particular concern is the large scale exploitation on ocean floor mountain formations called seamounts, spurred by recent discoveries of certain rare and valuable resources including cobalt and nickel.

Seamounts are also extremely rich in biodiversity with a very strong endemism, and the mining of the ocean formation should be considered with care. Exploitation of its resources will have devastating impacts on rare marine life forms which are yet to be studied and discovered.

We can all do our part to reduce the usage of consumables but also to practice the 3R's. By reducing the need to consume we also reduce the need to extract primary resources

The solutions

While many measures have been put in place to limit the impacts of the mining industry, with varying levels of success, the new threats described above should raise deep concerns about the effects of mineral exploitation on biodiversity.

Recycling

While metals and minerals recycling already takes place in many parts of the world, the overall effectiveness is still relatively low.

To relieve the pressure to extract new resources from the ground, we should vastly improve systems for recirculating used metals and minerals. This would require improving collection, treatment and recirculation of these items in sectors as diverse as construction, transport and consumer goods through the implementation of closed-loop systems, take-back policies and trading mechanisms.

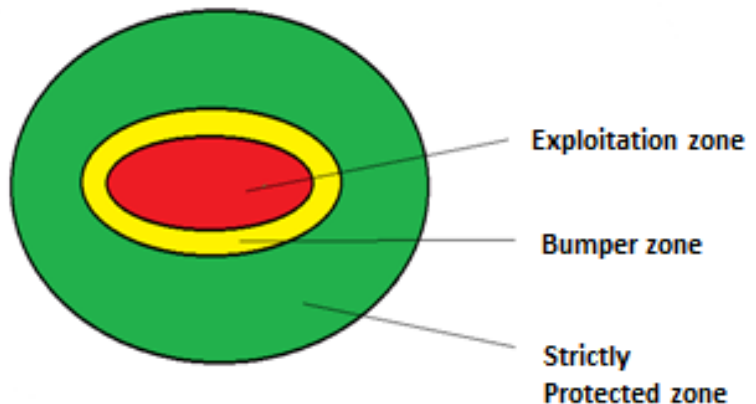
However, recycling alone will not suffice.

Protecting the most sensitive areas

One controversial alternative would be to designate small exploitation zones, near biodiversity sensitive sites, to be sacrificed under tight monitoring and within strict boundaries to better preserve larger areas nearby.

Conditions:

- 1) the assigned protected area coincides with the area most at risk;
- 2) the exploitation zone must be much smaller than the protected zone;
- 3) an initial assessment of the exploitation zone is carried out before exploitation



The philosophy behind this is acceptance of the fact that it is not possible to both exploit physical resources and preserve living organisms on the same site. Current efforts to do just that are failing.

This idea might seem extreme, but if we analyse the problem as a whole with an understanding of how conservation efforts work, the idea could show more promise than current practices.

Article by Sylvain Richer de Forges

At SBR we are mindful of the fact that overconsumption is the cause of serious environmental degradation at the source during the extraction process. We are doing our part by setting an example and spreading the message of the real cost of not practicing the 3R's

At SBR we have a unique approach to promote recycling by **linking the end product to the source**. Below are some of the panels that we developed and display



Cans



Recycle Cans = Less Mining

General Waste



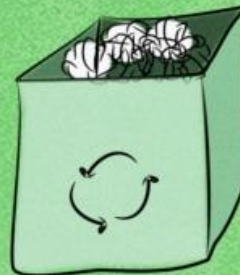
General Waste = Not Recycled

Plastic



Recycle Plastic = Less Oil

Paper



Recycle Paper = Save Forests



EN23 Total number and volume of significant spills.

To date, SBR did not have any instances of spills whatsoever.

No Spills to date and SBR intends to keep it this way

EN24 Weight of transported, imported, exported, or treated waste deemed hazardous under the terms of the Basel Convention Annex I, II, III, and VIII, and percentage of transported waste shipped internationally.

SBR does not have, produce or use any waste that is considered hazardous under the Basel convention.

As a hotel environment, hazardous waste are very limited.

Cleaning products used are selected to be environmentally friendly.

No hazardous wastes at SBR



EN25 Identity, size, protected status, and biodiversity value of water bodies and related habitats significantly affected by the reporting organization’s discharges of water and runoff .

No water body is directly affected by SBR’s water runoff.

Water runoff goes to the Sentosa drain which then flows to treatment facilities.

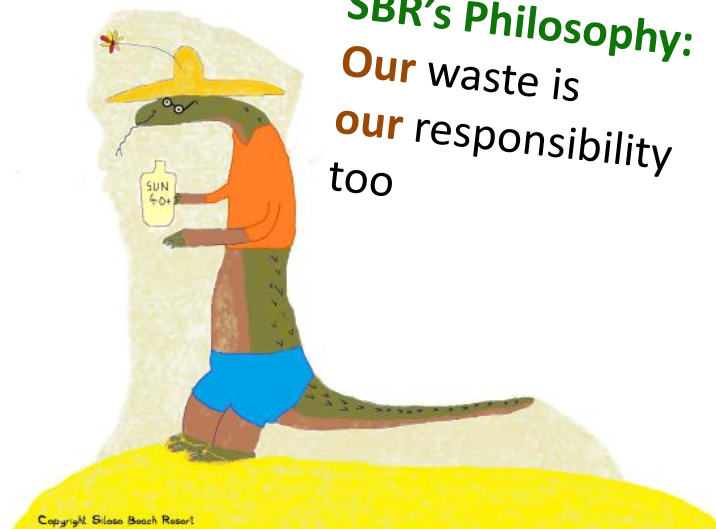
SBR actually has a positive impact in water conservation through two activities.

- SBR has constructed numerous ponds throughout the resort which bring biodiversity back to these areas.

- SBR has set up a main pond nearby its resort where the overflow of the spring goes. This pond has created a natural habitat for various species of insects fish and frogs.

Prof Monitor: “SBR is very conscious that its rejects of various forms should it be liquid waste or solid waste can have adverse effects on the surrounding environment if not managed properly. For this reason extra care has always been a priority and as explained earlier, the precautionary principal is very present especially in waste management. Not only SBR does not reject very significant amounts of waste but the waste that is discharged is very controlled”

SBR’s Philosophy:
Our waste is our responsibility too



Copyright Siloso Beach Resort



Metals recycling



Stone table



Recycling bins for the guests

At SBR we
make use
of waste in
any way
we can



Cartons recycling



All guest rooms equipped with soap and shampoo dispensers



In-room messages



Stairs made from reused railway wood

And much more...

Waste management



Making use of recycled materials

At SBR many of the items are actually from 100% recycled origin or simply from unwanted sources. A few of these items include:

A large portion of the outdoor steps are from reused timbers from a railway trail in Australia



Outdoor stairs from railways wood

All the corridors and a large portion of walkways are layered with rubber mats which are 100% recycled



**If we could we would do more...
However there are limitations to the amount of recycled items that can be used in core construction under current Singapore law**

The children playground comprises items which are have been reused from an unwanted source



And much more...

...

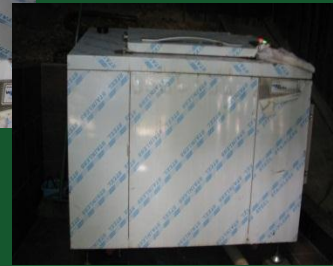


F&B no wastage policy

At SBR there are absolutely **no wastage** from our F&B department. There are two distinct waste management paths:

1. Food decomposer:

This technology decomposes all organic waste to liquid within 24h which goes back to the public water treatment



Food Waste

About **5KG** of vegetable and fruit waste is collected daily for vermicomposting



Earthworms

Food waste gets eaten by our **40,000 earthworms**, and turned into castings

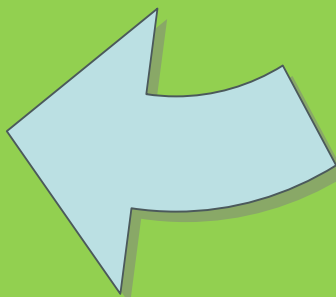
2. Worm-Composting closed loop:



No Wastage
0%

Restaurant

Vegetables from farm **supply about 20%** of event needs

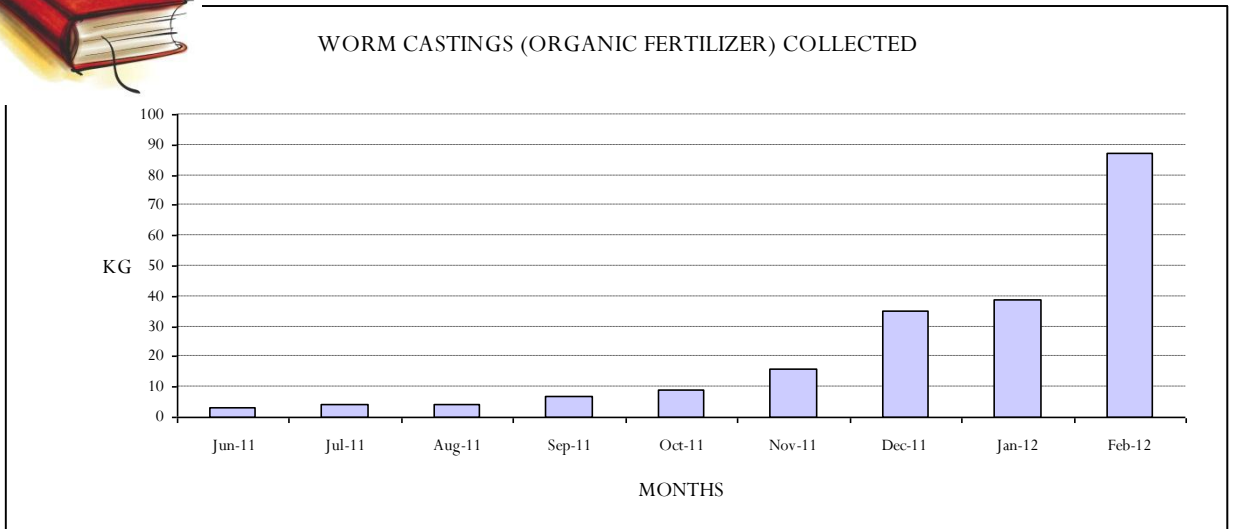
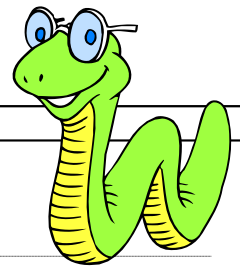
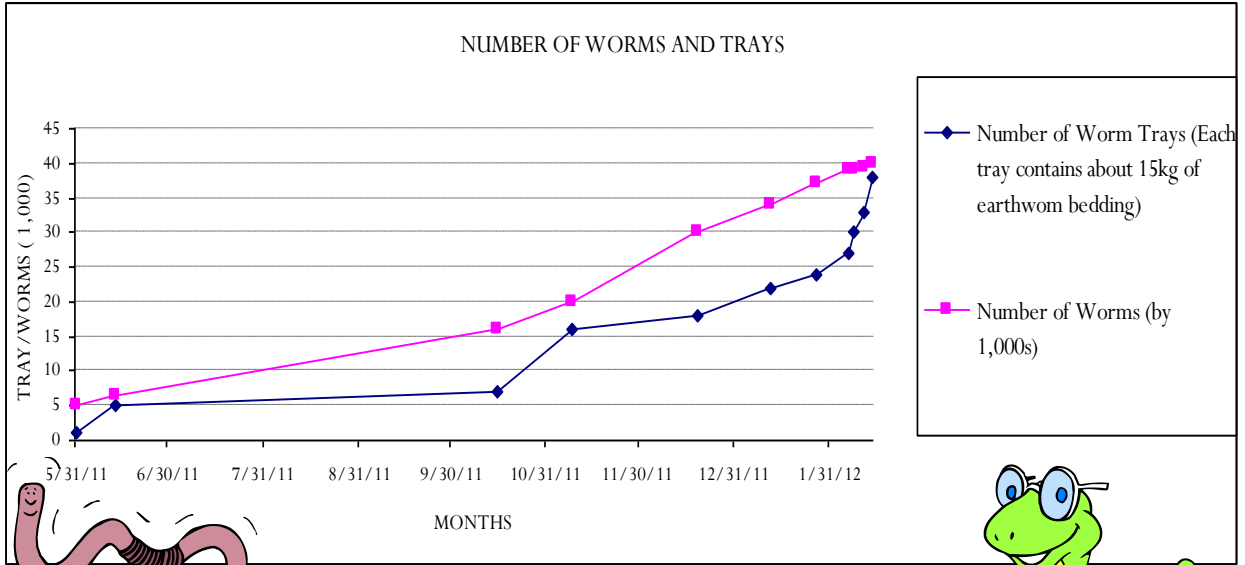


Vegetables

Castings are fertilizer for vegetables **free of pesticides and chemical fertilizers**



SBR Worm Composting Data & Progress Indicators



So why are we experimenting with sustainable food production methods at SBR?



Food security through sustainability: an urgent need for change

(This article was first published in ecobusiness.com as part of SBR environmental outreach program)

While we have been relying on the same food practices since the invention of agriculture thousands of years ago, in the 21st century the world needs to deeply rethink these practices and to find new ways of feeding the planet while maintaining our food cultural heritage and without continuing to seriously impact the environment in the process; It is without doubt a serious challenge!

“Food” or “way of life” security?

We often talk about food security issues focusing on whether the Earth’s resources can be sufficient to feed a growing population. This is actually the wrong question as the answer is clearly **YES**: there are sufficient food resources on the planet to feed the current population and in fact many more.

The real question is whether many countries (especially developed nations) can continue to sustain their way of life in food habits while dealing with a rapidly increasing population and mounting environmental pressures? The answer to the latest is clearly **NO**.

Indeed, we can easily feed people just for the sake of feeding them (i.e. producing food that provides sufficient nutrients to keep people alive). For instance many nutritious food supplies abundantly available are to date virtually unexploited (e.g. deriving energetic food from insects which are very rich in protein and vitamins). However, while such practices could be seen as a life saver to feed populations in desperate need or in disaster affected areas, it raises serious ethical questions.

The reality is that most societies are quite understandably not ready, nor willing to adopt such practices. Food habits are deeply embedded within nation’s cultural heritage and the appreciation of “good” food is actually one of the joys of life. Many would agree that living while feeding on concentrated pills is not really an aspired way of life!

However, if we do not want to have to get to such extreme practices of science fiction proportions one day, we must not forget the current trends. In order to maintain our way of

life and eating habits, major changes and sacrifices will unconditionally have to be made.

Generally speaking, agriculture and fisheries have been the causes of serious environmental impacts since the industrial revolution and the need for mass food production. However, while ecosystems have long been able to cope and buffer the pressures, we are reaching a tipping point. An imminent significant change of practices is required to avoid a coming great instability in global food industry.

Un-sustainability in the current practices

The reality is that traditional agricultural and fisheries practices, still widely used today, are simply unsustainable and no longer meet the requirements of a fast changing world. Three points are pressing the urgency for change:

The world population is quickly increasing and expected to exceed 9 billion by 2050 (some studies actually now forecast 11 billion!), as a result the increase in demand for food in the coming decades will be tremendous;

Many natural food supplies are diminishing fast and numerous ecosystems are on the verge of collapse due to overexploitation of their living resources and associated impacts;

Furthermore, climate change is becoming a very serious threat to global food security by altering weather patterns around the globe. Additionally, it will significantly reduce the surface areas of cultivable lands around the world through the impacts of sea level rise and salt water infiltration.

In addition to the above, there are many issues with current food industry practices which make them unsustainable: *Extensive use of pesticides and fertilizers for land agriculture (which we should not forget are petroleum derivatives); Overexploitation of resources (especially fisheries); Non-respect of food chains and natural food cycles; Un-ethical practices through aspects such as excessive and uncontrolled use of genetic engineering; reconversion of land and associated deforestation...*

Many of these practices are responsible not only for un-sustainable practices but also for a range of serious environmental impacts.

We need to change our food practices if we are to sustain in the future

The solutions

In order to sustain in the long term we have to apply more sustainable practices at all level of the food industry:

Respect Food chains: A greater respect and understanding of food chains through integrated cultures is the way to go for food production of the future. We need to produce food in large quantities through close loop systems. In order to achieve this we must put greater emphasis on primary food producers such as microorganisms whose by-products are then used to feed larger organisms which are then fed to live stocks). In recent years numerous small scale projects (e.g. aquaponic systems, integrated organic farming...) demonstrate that such practices are not just feasible but also financially viable. However, a lot more research is required to scale up these efforts. Governments and the private sector should invest heavily in these areas;

Put more emphasis on the oceans as primary food sources: Indeed, it is an energy reality: oceans cover more than 70% of the surface of the world, it therefore would make sense that the majority of our food should come from the oceans rather than from land;

De-centralise food production: (i.e. produce food locally where needed). Businesses and individuals should start to produce part of their usage on site. Urban agriculture/aquaculture through vertical and integrated urban farming is the way to go to reduce the usage of land needed for food production purposes;

Reduce the reliance on pesticides and fertilizers. Current food industry makes heavy use of chemicals to the point that it is a health hazard (latent toxicity). Through the adoption of integrated systems, we can not only come up with processes which are much better for the environment but also much healthier by significantly reducing the use of chemicals;

Prof Monitor: "At SBR we are trying very hard to find innovative solutions to food security by trying new techniques of integrated roof top farming. We believe that there is a real potential for cities to become much more self sufficient by producing food locally on rooftops which are still to date totally unused. It is possible and really just a matter of will by governments and companies to embark on similar ventures. The technology is already there, so what are we waiting for!"



Demography control: The main problem with food security is that there are too many people to feed and the trend is worsening fast. Demography control seems inevitable and a first priority. It is a simple fact that current food production practices will not be able to meet the needs of nations for much longer without dramatic degradation of our environment. It is also clear that with growing population numbers, **quantity will be increasingly favoured over quality** for the food that we eat.

It is apparent that the way forward is not a question of food security on one end and sustainable development on the other, but rather to achieve food security **through** sustainability.

Real sustainability in all aspects should it be energy, pollution, fisheries or agriculture come down to the same point: **we need to maintain healthy ecosystems by working with nature, not against it.** Should this concept become accepted by decision makers and society in general, significant changes will eventually start to happen in a positive way.

Article by Sylvain Richer de Forges



At SBR we are doing our part to find new avenues for food security with our rooftop integrated organic farming



PRODUCTS AND SERVICES



EN26 Initiatives to mitigate environmental impacts of products and services, and extent of impact mitigation.

Such initiatives are highlighted throughout the report. The table below tentatively summaries the **main initiatives** :

| Impacts | Initiatives to reduce impact |
|---------------|--|
| Materials Use | <ul style="list-style-type: none"> Minimize Amenities, such as only providing toothbrush and toothpaste upon request Extensive use of recycled wood for poolside furniture and various other areas. |
| Water Use | <ul style="list-style-type: none"> Extensive use of spring and rain water. Water saving taps and showerheads in rooms, and encouraging guests to change towels/linens alternate day. Use of Waterless urinals |
| Emissions | <ul style="list-style-type: none"> Controlled shuttle bus timings to reduce vehicle emissions. |
| Effluents | <ul style="list-style-type: none"> Not a significant impact. |
| Noise | <ul style="list-style-type: none"> Not a significant impact. |
| Waste | <ul style="list-style-type: none"> Recycling of food waste through worm composting and food waste decomposer machine. Extensive waste recycling program. |

EN27 Percentage of products sold and their packaging materials that are reclaimed by category.

SBR Eco Shop?

To date SBR does not really sell products. It has plans to open a shop on its premises in the near future. This shop would focus on selling ecological products of various sorts.

Currently the only products sold that involve packaging are F&B items such as cans of soft drinks.

100% of the packages (empty cans) or other packets are sent for recycling.

In room products (shampoos, soap...) are only provided if requested by the guests. By doing so, wastage of packaging and products is significantly reduced.

As a general rule we minimize packaging and reuse or recycle them wherever we can

As a combined effect of all our initiatives we have managed to reduce and mitigate very significantly environmental impacts of our products & services



Combining a sustainably designed and maintained environment with messages is our key formula

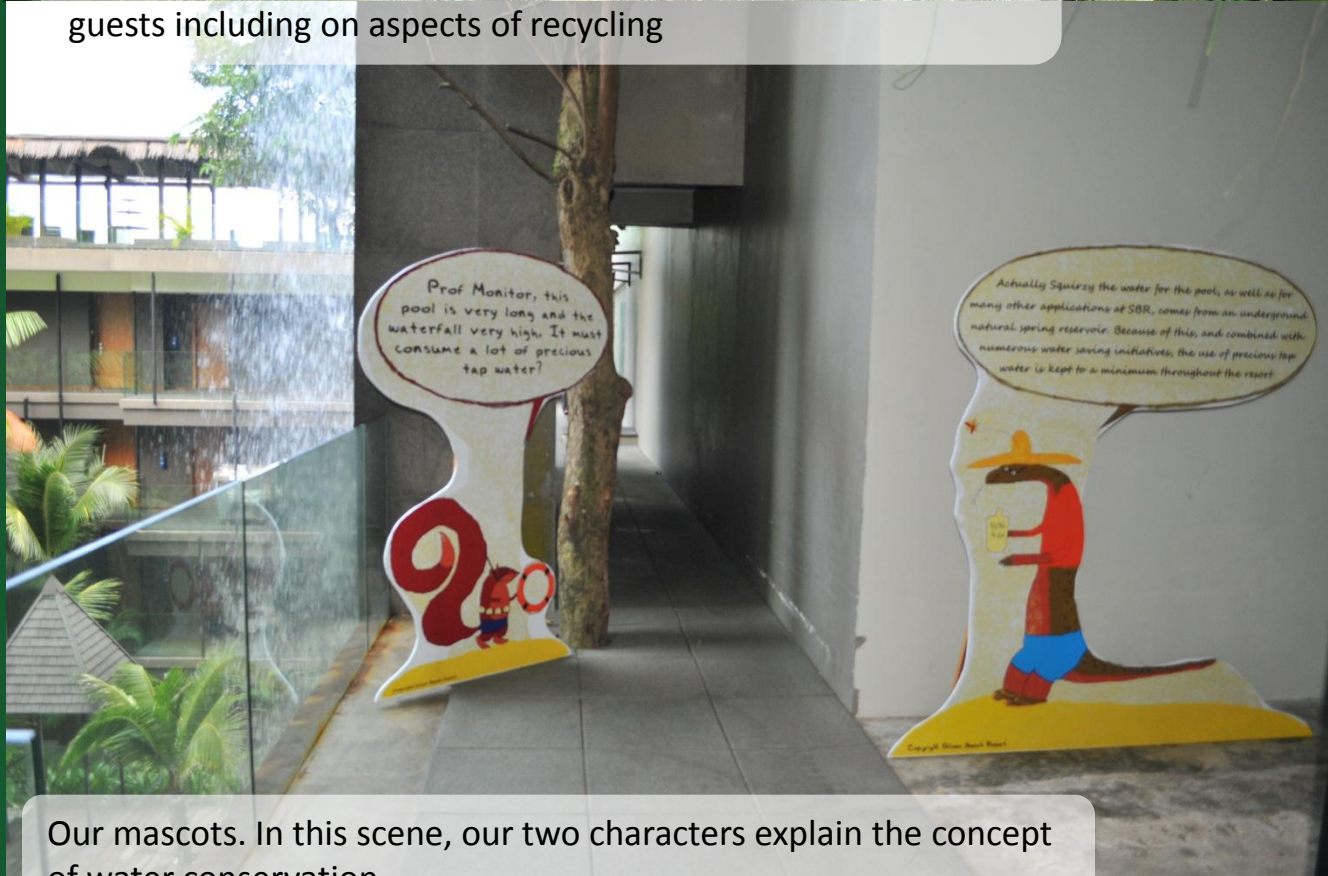


Siloso Beach Resort

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Messaging is very present throughout the resort. Our newly introduced mascot concept allows to pass key messages to our guests including on aspects of recycling



Our mascots. In this scene, our two characters explain the concept of water conservation



COMPLIANCE

SBR has **always been compliant** with national regulations and has not received any fines for misconduct.

SBR will continue to apply most stringent practices when it comes to meeting regulatory requirements. In fact **many of the initiatives carried at SBR go far beyond the legal requirements.** This includes aspects such as energy efficient design, water management, energy management, waste management and more.

SBR has an holistic approach to sustainable management and believes in test-bedding new practices and technologies in order to continuously improve. Having done this for many years now, it has also put SBR a significant step ahead of government regulations.

EN28 Monetary value of significant fines and total number of non-monetary sanctions for noncompliance with environmental laws and regulations.

To date, SBR has **never endured any fines** or non-monetary sanctions of any kind for noncompliance with environmental laws and regulations. **Monetary value is 0**

SBR is a very responsible business and takes great care in **applying the precautionary principle.**

SBR is fully compliant with rules & regulations



TRANSPORT

EN29 Significant environmental impacts of transporting products and other goods and materials used for the organization’s operations, and transporting members of the workforce.

•Environmental impacts of transporting the workforce:

SBR has **2 small buses** in operation to transport both the hotel guests and the workforce. As the buses are only used over short distances (in and out of Sentosa island). Overall the environmental impacts of transporting the workforce are **very minimal** if not insignificant.

| Impact | Description |
|--|---|
| Atmospheric emissions | Emissions of carbon dioxide, Nox, and Sox from the combustion of fossil fuels |
| Oil leaks from engine into the environment | Very minimal. The buses are new and well maintained |

•Environmental impacts of transporting products and other goods and materials used for the organization’s operations

SBR outsources the transport of goods to and from the resort. It is therefore out of its influence. However, SBR has policies in place for the selection of responsible transporters that are fully compliant with transport safety rules and regulations.

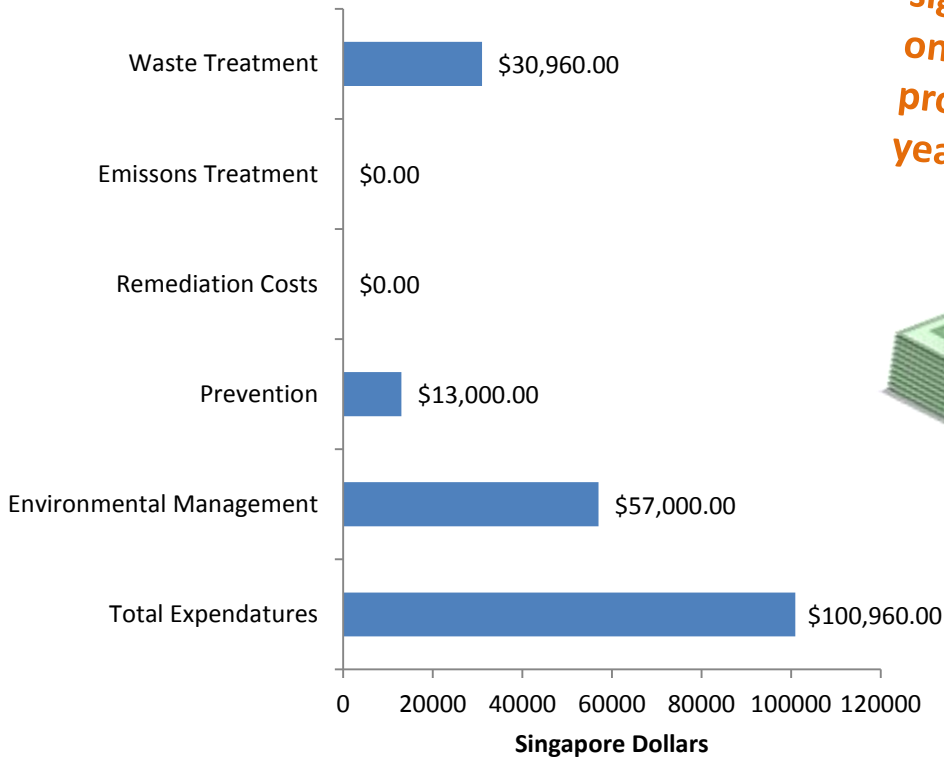
| Impact | Description |
|--|--|
| Potential (This has to date never occurred) spills of chemicals on the way to and from the hotel | <ul style="list-style-type: none"> • Potential contamination of soil and water ways • Potential impact on wildlife |
| Noise pollution from engines | Very minimal |
| Oil leak from engine to the environment | Remains very minimal |

As a hotel environment, SBR is not involved in the transport of hazardous materials that can be of great risk to the environment. **Overall transportation potential impacts are very minimal.**



EN30 Total environmental protection expenditures and investments by type.

Total Environmental Protection Expenditures in 2011



SBR spends a significant amount on environmental protection each year



| Program | Cost | Type |
|---|------------|--------------------------|
| Normal Waste Disposal | S\$ 3000 | Waste Disposal |
| Vermicomposting System to deal with food waste | S\$ 14400 | Waste Disposal |
| Guest Environmental Educational Program | S\$ 13,000 | Prevention |
| Extra working activities dedicated to training and environmental management | S\$ 32,000 | Environmental Management |
| Investment in E-clean Technology for Chiller System | S\$ 25,000 | Environmental Management |



INVESTMENT AND PROCUREMENT PRACTICES

HR1 Percentage and total number of significant investment agreements and contracts that include clauses incorporating human rights concerns, or that have undergone human rights screening.

As a small hotel business, SBR is not really involved in investment agreements.

To date no business agreement has been signed or undertaken with organizations which have had human right issues. As SBR operates in Singapore, activities in the hospitality business are already very controlled by the government.

Total number of agreements: 0

Percentage: 0%



We only do business with responsible employers!

HR2 Percentage of significant suppliers, contractors and other business partners that have undergone human rights screening, and actions taken.

SBR has policies in place to make basic background checks on the ethical practices of its suppliers and contractors.

SBR only does business with like minded individuals and companies which share its principals with regards to sustainability including human rights.

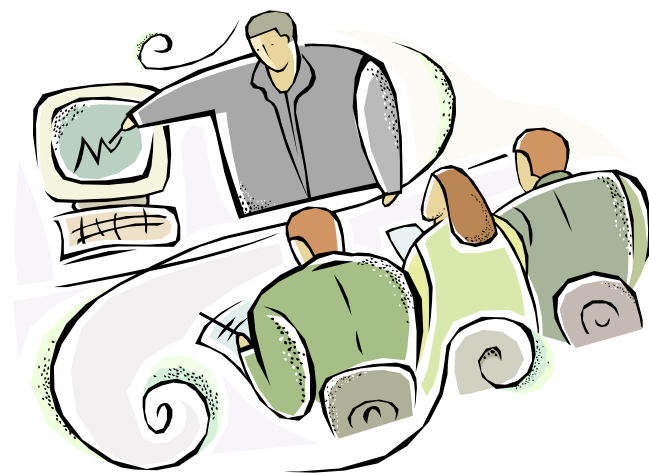
To the best of our knowledge we never have or had any reports of our business partners which have been involved with human right screening and/or sanctions.

Percentage: 0%

HR3 Total hours of employee training on policies and procedures concerning aspects of human rights that are relevant to operations, including the percentage of employees trained.

Total hours of employee training on policies and procedures concerning aspects of human rights that are relevant to operations: **48 hours per year**

Proportion of employees trained: 100 %. All new hires are required to undertake a compulsory training which includes aspects related to human rights throughout.



Training is an integral part of our new employees integration process

NON-DISCRIMINATION

HR4 Total number of incidents of discrimination and corrective actions taken.

Total number of incidents of discrimination: 0

So far SBR did not have any incidents of discrimination and we intend to keep it this way

At night our resort offers a unique atmosphere



Siloso Beach Resort

Blending Life and Leisure with Nature



Usage of lights is carefully planned to procure both a comfortable resort feel and also to limit the usage of energy





FREEDOM OF ASSOCIATION AND COLLECTIVE BARGAINING

HR5 Operations and significant suppliers identified in which the right to exercise freedom of association and collective bargaining may be violated or at significant risk, and actions taken to support these rights.

Operations: At SBR, employees have a total right to exercise freedom of association and collective bargaining through joining relevant trade unions or associations. **The management always takes great attention to what its employees have to say** and take feedbacks into consideration which in many instances has influenced the decision making process.

Suppliers: SBR has not identified any suppliers which would not meet the above. SBR is always mindful to select suppliers which share its ethical and sustainability principles.



At SBR employees have a voice and the right to express their thoughts

CHILD LABOR

HR6 Operations and suppliers identified the significant risk for incidents of child labor, and measures taken to contribute to the effective abolition of child labor.

SBR does not practice child labor!

So far, SBR has not identified any supplier having potential risk for incidents of child labor.

SBR has strict policies on the selection of suppliers which systematically include a basic background check including child labor risks. This screening is done for suppliers, especially for countries had involved in child labor.

Measures taken to contribute to the effective abolition of child labor:

SBR is not particularly involved in movements that promote the abolition of child labor at this point in time. However, it supports the cause of the abolition of child labor.

SBR is a **member of the UN Global Compact** and has pledged publicly not to practice or involve with companies which are known to practice child labor.

FORCED AND COMPULSORY LABOR

HR7 Operations and suppliers identified the significant risk for incidents of forced or compulsory labor, and measures to contribute to the elimination of all forms of forced or compulsory labor.

SBR does not practice child labor nor does it practice forced labor and does not do business with companies which have such practices



We actively showcase **a children friendly hotel Environment** to send the message that child has the rights of childhood and **should not be working.**



Our hotel provides Various children Friendly facilities

SECURITY PRACTICES

HR8 Percentage of security personnel trained in the organization's policies or procedures concerning aspects of human rights that are relevant to operations.

Proportion of security personnel trained: **100 %**. All new security personnel including 3rd party security personnel hired are required to undertake a compulsory training which includes aspects related to human rights throughout.

INDIGENOUS RIGHTS

HR9 Total number of incidents of violations involving rights of indigenous people and actions taken.

Total number of incidents of violation: 0

Singapore, as a relatively new country and multicultural society does not have a clear definition of "indigenous people". However, SBR has strict human rights policies which **respects all ethnic backgrounds and cultures.**

ASSESSMENT

HR10 Percentage and total number of operations that have been subject to human rights reviews and/or impact assessments.

All of our departments have been subject to human rights reviews and impact assessment. **100%**

Specific management guidelines cover aspects of human resource and ethical behavior at work. These guidelines are followed by all departments and are an integral part of our management and new hires training process.

Feedbacks are regularly collected from employees to assess satisfaction and human rights.

Recently we have stepped up our efforts by conducting an overall **risk assessment** of our resort including operations and departments. This assessment has identified various areas that we need to improve.

We are also in the process of implementing six sigma guidelines which will improve our management with respects to human rights.

Some of the latest implemented measures include:

- Raise of employees' salaries
- Implementation of various employee benefits which include dental care, health care, physical & sport activities
- Employee development training
- Attend seminars



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Our security personnel are well trained in human rights issues and are requested to look out for any infringements and report such incident to the management

REMEDIATION

HR11 Number of grievances related to human rights filed, addressed and resolved through formal grievance mechanisms. Labor Practices and Decent Work.

SBR has taken various actions against the employees to fix issues related to misconduct, unprofessionalism and other internal matters over the years. However, **none of these were related to human rights.**

Our employees have always been treated with respect and we did not have issues related to human rights.

Number of grievances related to human rights: **0**



EMPLOYMENT

LA1 Total workforce by employment type, employment contract, and region, broken down by gender

Total workforce: 64 employees
(as at June 2012)

Female : 31 employees

Male : 33 employees

Employment type:

Full time employee: **38 (60%)**
(21 female / 17 male)

Part time employee: **26 (40%)**
(10 female / 16 male)

Region: All our workforce is **on a single site** which is the island of Sentosa

Our workforce can be described as:

Qualified Friendly
Eco conscious Versatile Hard working
Diverse Dedicated
Attentive



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SBR is a single site operated business. All of our workforce is actually at our hotel.

We have a relatively well sized workforce in the range of 60-100 employees which varies from time to time.

The **balance between men and women is well distributed** with on average as many men as women. The numbers tend to change slightly with part timers intakes.

We are also constantly having long term **Interns**. They are part of our workforce during the attachment.

SBR is an equal opportunity employer

We support:

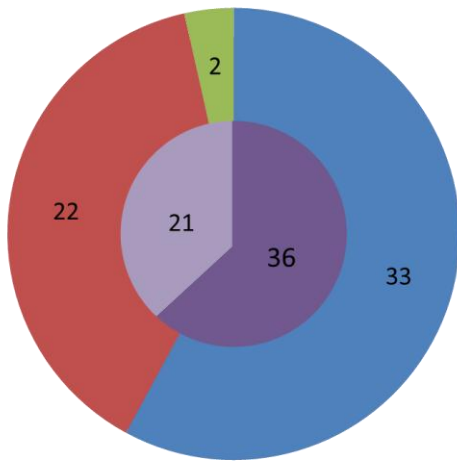
- Diversity
- People in need
- Fairness
- Honesty
- Responsibility

**We support
The UN Global
Compact
10 Principals**



LA2 Rate of new employee hired and employee turnover by age group, gender, and region.

Breakdown of new employees hired



- Male
- Female
- below 30
- 30-50
- Above 50

Squirzy: "SBR has a good balance of males/females hired with currently more males than females."

The trend was reversed in the past with more females than males but tends to turn around an equilibrium of both genders.

The other thing is that SBR has a young and energetic work force, just like me!"



New Employees Hired

| Group | Persons | Rate |
|----------|---------|------|
| Male | 36 | 1.09 |
| Female | 21 | 0.67 |
| Below 30 | 33 | 1.18 |
| 30-50 | 22 | 0.81 |
| Above 50 | 2 | 0.22 |

Employee Turnover

| Group | Persons | Rate |
|----------|---------|------|
| Male | 37 | 1.12 |
| Female | 34 | 1.10 |
| Below 30 | 32 | 1.14 |
| 30-50 | 29 | 1.07 |
| Above 50 | 10 | 1.11 |

*All employees are in the same region/operation at Siloso Beach Resort

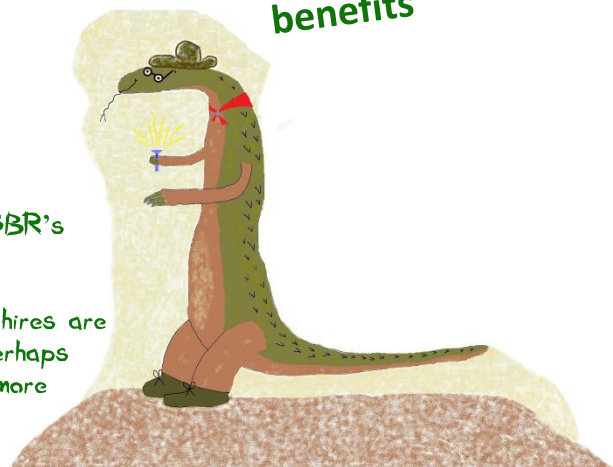
LA3 Benefits provided for full-time employees by significant locations of operation.

- Leave entitlement
- Medical
- Public holidays
- Island partner card
- Bonuses
- Special allowances

Full time employees contribute more to our organization as such they are entitled to the benefits

Prof Monitor "It seems that most turnover occur in SBR's middle aged group and more males than females."

This is actually a healthy sign that most of our new hires are young and stay in the company for longer period. Perhaps Squirzy would have a nonsense explanation on why more males leave than females?"



LABOR/MANAGEMENT RELATIONS

LA4 Percentage of employees covered by collective bargaining agreements.

SBR has created various employee committees which aim to engage discussions with the management and to advise.

Such committees include:

- The Sustainability Committee
- The Health and Safety Committee
- The Human Resource Committee
- The Annual Review Committee

These committees are composed of department managers and cover about **20%** of the workforce

LA5 Minimum notice period(s) on operational changes, including whether it is specified in collective agreements.

While some decisions are made by the management, a significant portion of all decisions made for SBR will involve employee consultation committees and a feedback collection.

This process of engaging employees collective bargaining usually **takes 2 weeks to 2 months.**

OCCUPATIONAL HEALTH AND SAFETY

LA7 Rates of injury, occupational diseases, lost days, absenteeism, and number of work related fatalities by region and gender.

We abide by the Singapore national laws in recording and reporting accident statistics, which follow the recommendations of the International Labor Organization.

| Year | Number of Staff* | Gender | Lost Days** on Medical/Hospitalization Leave | Injury Rate | Occupational Disease Rate | Lost Day Rate |
|------|-------------------|--------|--|-------------|---------------------------|---------------|
| 2010 | 3 (no fatalities) | Male | 54 | 5.555556 | 0 | 100 |
| 2011 | 1 (no fatalities) | Male | 10 | 1.851852 | 0 | 18.51852 |

* Not including minor injuries. No independent contractors were injured or suffered from occupational disease.

** Lost Days refers to scheduled working days and is counted when more than half of a working day is lost.



LA6 Percentage of total workforce represented in formal joint management-worker health and safety committees that help to monitor and advise on occupational health and safety programs.

SBR is active in participating with various groups looking for the improvement of workers health and safety. SBR regularly sends representative staff to attend such training which include:

- Fire safety training
- CPR and AED training
- Risk assessment

Percentage of total workforce: **5%**

Only staff that are most relevant in applying these skills to improve the safety of others are sent for training.

LA8 Education, training, counselling, prevention, and risk-control programs in place to assist workforce members, their families, or community members regarding serious diseases.

In 2012 SBR has put into place a **free and compulsory health screening program** for all of its employees. This screening process also aims to raise awareness on a range of common illnesses and chronic diseases (SBR does not have any occupational activities that are related to a high incidence of occupational disease). During this screening, health professionals come on site to conduct a series of tests and to educate the staff on health related topics.



Our health screening program combined with our employee health package provides a good medical coverage

Assistance Programs regarding Serious Diseases



| | Education/Training | | Counselling | | Prevention/Risk Control | | Treatment | |
|--------------------|--------------------|----|-------------|----|-------------------------|----|-----------|----|
| | Yes | No | Yes | No | Yes | No | Yes | No |
| Program Recipients | | | | | | | | |
| Workers | X | | | X | X | | | X |
| Worker's Families | | X | | X | | X | | X |
| Community Members | | X | | X | | X | | X |

LA9 Health and safety topics covered in formal agreements with trade unions

SBR does not have any formal health and safety agreements with trade unions. Health and safety is very important to SBR, which is why we are **BizSAFE Level 3** (SBR has recently obtained this local health and safety endorsement).

TRAINING AND EDUCATION

LA10 Average hours of training per year per employee by gender, and by employee category

All of our employees are required to undertake a **2 day compulsory training** upon joining the organization. In addition every employee has **1-2 days of additional training** every year regardless of gender or employee category.

| Category | Average Hours of Training per year for 2011 |
|---------------------|---|
| Senior Management | 40 hours |
| Managers/Executives | 40 hours |
| Staff | 28 hours |
| Males | 30.9 hours |
| Females | 31.5 hours* |

*The reason that females have slightly higher average hours or training, is that there are slightly more females in the Managers/Executives category.

LA11 Programs for skills management and lifelong learning that support the continued employability of employees and assist them in managing career endings

In addition, numerous opportunities are offered to the staff to attend training programs and educational talks which varies depending on what opportunities for learning come available (conferences, trade shows., workshops...) In Singapore the CPF fund , for which SBR contributes, is a main mean for employees to manage their career ending

LA12 Percentage of employees receiving regular performance and career development reviews, by gender

All our employees receive performance and career development reviews once a year.

– **100%** (males and females)

At SBR we offer our staff a range of options to improve their skills throughout the duration of their employment with us





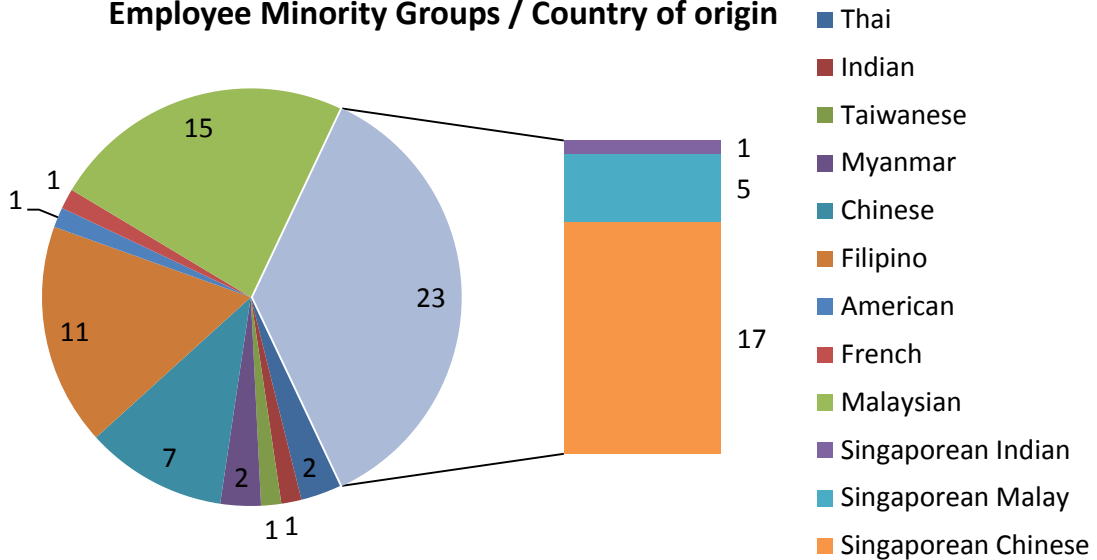
DIVERSITY AND EQUAL OPPORTUNITY

LA13 Composition of governance bodies and breakdown of employees per employee category according to gender, age group, minority group membership, and other indicators of diversity.

Composition of Governance Body:

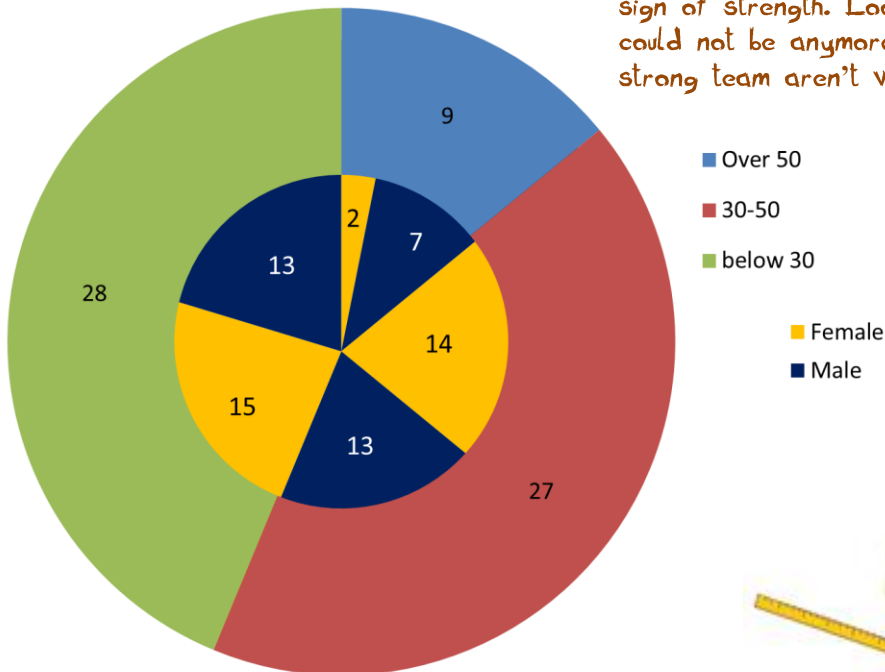
| Nationality | Above 50 years | 30-40 years | Male | Female |
|------------------|----------------|-------------|------|--------|
| 100% Singaporean | 33% | 67% | 67% | 33% |

Employee Minority Groups / Country of origin



Squirzy: "SBR has a rather diverse and multicultural workforce. I believe that diversity is a sign of strength. Look at me and prof monitor we could not be anymore different but we are a strong team aren't we?"

Age and Gender



Prof Monitor "As already highlighted, SBR has a rather good balance of males/females. This is especially true for new hires which are mostly in the young category. This reflects SBR's policies as an equal opportunity and non-discriminative employer"



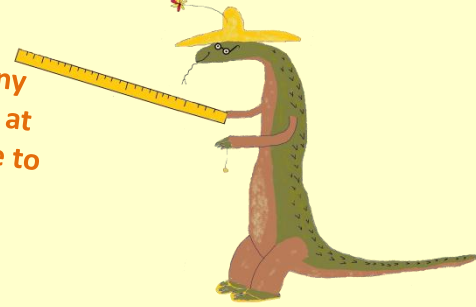
Case study : Why should organizations practice CSR and give back to society?



2

Prof Monitor: "Well squirzy, that is a big debate that you raise. There are a multitude of reasons to do so. Let me tell you my thoughts on the matter."

"Every company should choose at least one cause to support"



1 Squirzy: "Prof Monitor, SBR's business is into hospitality, why do they give so much back to society in terms of donations, venue sponsorships, developing social programs and trying their best to be a responsible citizen when they could just run their business without contribution to any of these??"

3 Squirzy: "Well for a start why NOT focus just on the business, wouldn't SBR make more money in this way?"



4 Prof Monitor: "The world has changed a lot in the last few decades only. While most businesses continue to operate in the same way our environment is deteriorating at unprecedented rates, social issues are mounting, the world economy is unstable... it does not take much though to realize that businesses which do not start to practice sustainability will have increasing difficulties to operate and remain afloat."

5 Squirzy: "Yes I already learnt about all the worlds problems but what I want to know is why participate in social causes??"

6 Prof Monitor: "Well more specifically SBR and other like minded businesses are giving back by trying to reduce their impacts and donating parts of their profits because all our problems will not be solved by governments only. It is obvious that businesses are the real entities which are in a position to make a faster change in this world. If the private sector does not act to support a range of social causes, things will move but believe me much much much much slower...this is the reality!"

"Businesses take from society to operate, they should therefore give back as well"

7 Squirzy: "So you are saying that corporates should give back to society to complement what governments are doing?"

8 Prof Monitor: "In a way yes, but most importantly is the power of the snowball effect. The actions of one organization can have a real impact in influencing other organizations to take similar actions and in the end make real changes in societies."

9 Squirzy: "But most companies seem to think that they don't need to contribute because first it is not a legal requirement and secondly other companies will do it."

10 Prof Monitor: "This is a common mistake to think that others will do it. At SBR the philosophy is that we should do what we feel is the right thing to do regardless of the average opinion. The bottom line is that businesses through their operations are taking a lot from society and should therefore pay back their debts by giving back. It is called being responsible. The same way people do not like irresponsible people, they also do not like irresponsible companies. At SBR, we want to be and be seen as a responsible corporate citizen."

"The private sector is the only hope of a faster change"

SBR puts a lot of efforts into CSR, here are some reasons why:



Siloso Beach Resort

Blending Life and Leisure with Nature

Putting CSR and sustainability at the heart of a business

(This article was first published in ecobusiness.com as part of SBR sustainability outreach program)

The role of the private sector is crucial in driving a much needed “green revolution”. The response time of governments around the world at dealing with global environmental issues is slow, and they struggle to implement even basic changes. Businesses are in a far better position. In fact, they are the only hope of driving real change quickly. If we wait for governments to react it will be too late. This is the story of one business that took a simple corporate social responsibility (CSR) project and turned it into a national scale programme that reverberates across national boundaries and multiple sectors.

Biodiversity Portal of Singapore

Recently, Siloso Beach Resort (SBR) sponsored the development of the Biodiversity Portal of Singapore, which it plans to manage in collaboration with a range of institutions both in Singapore and internationally. The CSR project was developed during the International Year of Biodiversity in 2010 to raise awareness of the intensifying trend of the extinction of species on Earth.

The portal was conceptualized and developed based on a book (written by the author of this article): “The Biodiversity of Life on Earth: from Heritage to Extinction”. More than merely a unique educational platform on biodiversity, the website was specifically designed to serve as a hub for individuals and organisations willing to learn and act on the subject both locally and internationally.

Biodiversity loss has been identified as one of the four main important challenges that mankind must face during the 21st century, along with access to clean water, poverty and climate change. In a world where environmental issues are reaching a critical point that requires immediate action on a global scale, there is need for a new wave of educational and action initiatives. Indeed, too often the key message still does not seem to reach the public.

While the message from the scientific community has been clear for a long time, we are still a long way from meaningful and significant change. However, time is running out fast. Most scientists have warned that we are reaching the point of no return. Citing Donella Meadows, “we have exactly enough time...starting now!”

Redefining CSR

SBR has taken this message to heart: its CSR efforts extend far beyond the portal. The resort has redefined the concepts of sustainability and environmental preservation from the beginning. As the first TUV Rheinland Eco-certified hotel in Southeast Asia, the hotel served as the model for the development of Singapore’s SEC Eco-Hotel Certification Scheme and was the winner of the Singapore Environmental Achievement Award (SEAA) 2010/2011.

Their environmentally sustainable business model spans all aspects of managing the Eco-Resort and provides ambitious conservation targets. The facility serves as a test-bed of new environmentally friendly technologies as well as a showcase of best sustainable practices.

One of the fundamental principles of SBR is to maintain harmony with nature and protect biodiversity. It does this by developing land with minimum disruption to the existing terrain and facilitating the growth of over 600 trees native to Sentosa Island. Throughout the resort, trees are literally incorporated within the infrastructure.

The extensive tree cover, coupled with numerous energy saving technologies and one of Singapore’s largest surface areas of insulating rooftop garden, dramatically reduces the resort’s energy needs. This same innovative approach to sustainability is applied to water use and to the restaurant’s food sourcing.

Sharing the message

Throughout the restaurant, a unique photography gallery showcasing numerous pictures of wildlife, taken both within the resort and externally, intends to showcase biodiversity and to stir an interest in conservation. In addition, SBR conducts regular onsite Eco Tours to various stakeholder groups and guests to share the message of sustainability. The resort feels that its achievements and commitments to preserve the environment should not be limited to within the resort. For this reason the resort has a strong CSR programme that regularly contributes to meaningful initiatives.

I would encourage many other businesses to take the same path and challenge both themselves and society. We must keep in mind that extinction of species is dramatic, forever and irreversible!

Article by Sylvain Richer de Forges

DIVERSITY AND EQUAL OPPORTUNITY

EQUAL REMUNERATION FOR WOMEN AND MEN

LA14 Ratio of basic salary and remuneration of women to men by employee category, by significant department of operation.

SBR is an **equal opportunity employer**. The salary ratio of women/men is **1**.

At equal carrier level and background, women and men can expect the same salary range and the same level of consideration and attention.

LA15 Return to work and retention rates after parental leave by gender.

Employees entitled to parental leave / took parental leave / returned to work after parental leave ended / are still employed 12 months after leave ended:

Female: 1, Male: 0

retention and return to work rate = 100%

Society - LOCAL COMMUNITY

SO1 Percentage of operations with implemented local community engagement, impact assessments, and development programs.

100% of our operations are implemented with such community engagement, impact assessments, and development programs.

An initial impact assessment of potential construction damage to trees and terrain was conducted (this was for internal use as has not been publically disclosed). We have a sustainability committee and a Health and Safety Committee which deal with the relevant environmental and social impacts.

We engage with the community for feedback on any grievances, however as an SME located in a primarily tourist destination, we have not found it necessary to establish formal community consultation committees or formal local community grievance processes.



We do purposefully create plans on how to engage our stakeholders, and use stakeholder mapping to assess which stakeholders would be most impacted and interested in our activities.

Community engagement: SBR has put into place a range of programs which intend to engage our staff with the community.

Such programs include helping community groups in need such as the St Andrew's Autism center or the older workers. We encourage our staff to participate in such social movements and offer rewards for those who do.

Impact assessment: SBR has recently conducted an in depth assessment of its operations and a range of surveys both internal and external to gain a better understanding of the impacts of its various programs and guests satisfaction. SBR also engages in

SBR is currently implementing a **six sigma** program as well as various customer centric management initiatives.

SBR supports & participates in various community initiatives



Development programs:

SBR is actively participating to various community development programs. Such programs include the sponsorship of university scholarships, schools educational programs, the make a wish foundation and many others...





SO2 Percentage and total number of business units analysed for risks related to corruption.

100% (one business unit) - All departments are required to strictly follow the anti corruption guidelines. Managers of all departments are instructed to screen and report on any suspicion of corruption to the management.

In Singapore, corruption is controlled and severally punished, therefore the occurrence of corruption is very low.

SO3 Percentage of employees trained in organization's anti-corruption policies and procedures.

All employees are trained on corruption matters and company policies during the **general employee training** upon commencement of employment at SBR.

SO4 Actions taken in response to incidents of corruption.

SBR takes corruption matters very seriously and has not had any case of corruption to date.

Any instance of corruption involving the staff would be subject to immediate action which could lead to dismissal from the company without compensation.

Employees are made aware of the strict policy during their general employment training.

SO5 SBR Public Policies Involvement

Some of our recent involvements include:

•Singapore Eco Hotel Certification Scheme

SBR was a key contributor in the development of Singapore's Eco Hotel certification scheme. SBR served as the case study to develop this scheme and was subsequently the first hotel to be certified under this newly implemented scheme by the Singapore Environment Council.

•Singapore Tourism Board

SBR is active in participating in meetings with the Singapore Tourism Board that intend to shape the future of tourism in Singapore.

•Sentosa Island Partners

As an island partner, SBR actively participates in various meetings and discussions that intend to shape the future developments of Sentosa island.

Influencing: In addition to this, we feel that our main contribution is to **actively promote the concept of adopting sustainability within the hotel industry** and we hope that sharing best practices will influence decisions makers in imposing more stringent standards in the field.

SO6 Total value of financial and in-kind contributions to political parties, politicians, and related institutions by country.

SBR has to date not given direct financial contributions to political institutions. We have however provided **numerous in-kind contributions** mostly in the form of sponsorships of events and providing free or discounted venues and accommodations for political related events;

- Sponsorship of accommodation for Jose Ramos Horta, former President of Timor Leste

- Providing venues for the Ministry of the Environment and Water Resources

- Providing venue for the National Environment Agency

- Sponsorship of event for the National Environment Agency

- Hosted PS21 event for the National Environment Agency (providing venue for over 60 delegates)

- Host for various events and venues for the Singapore Environment Council

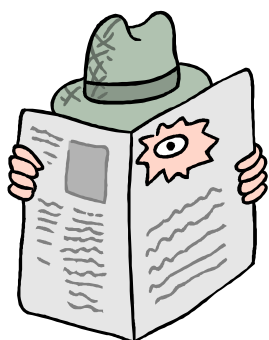


ANTI-COMPETITIVE BEHAVIOR

SO7 Total number of legal actions for anticompetitive behaviour, anti-trust, and monopoly practices and their outcomes.

To date, **no legal actions have been taken against SBR** for such matters.

SBR is not a very competitive business. Our primary aim is not to be competitive but to sustain the business while providing good services to our guests as well as being a socially responsible company. This philosophy is reflected in our moderate marketing campaign which is not aggressive.



We believe that our sustainable business model will give us a competitive advantage in the future

COMPLIANCE

SO8 Monetary value of significant fines and total number of non-monetary sanctions for noncompliance with laws and regulations.

Since its opening, **SBR did not have any fines or non-monetary sanctions for non-compliances** with laws and regulations.

SO9 Operations with significant potential or actual negative impacts on local communities.

As a single operated business on the island of Sentosa (considered a leisure and entertainment hub), SBR does not have significant negative impacts on local communities.

On the contrary, SBR has **a positive impact** by providing leisure services while operating its business **in a sustainable way.**



We believe that we have a net positive impact on local communities by giving much more than we take

SO10 Prevention and mitigation measures implemented in operations with significant potential or actual negative impacts on local communities.

As our operations do not really have significant impacts on local communities, we do not have mitigation programs in place.

Should we identify such issues, we will definitely come up with mitigation programs and solutions to reduce such potential impact.

Some of our community donations include:



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(SBR regularly donates to causes which are close to its heart)

St Andrews Autism Centre

We actively work with this group to provide training that could help these people integrate society

Make a Wish Foundation

We regularly support this cause that aims to grant children facing life threatening illnesses a wish

Singapore Red Cross

We donate to this cause and support some of their events

Employment of people in need

We employ some of our staff from groups in need such as disabled, older workers, handicapped...

Sponsorships of university scholarships

We regularly sponsor scholarships for talented students who cannot afford to pursue their education

Sichuan Earthquake Disaster relief aid

We were one of the first companies to fund the relief efforts

Wishing well foundation

We support

Singapore Heart Foundation

We support

Tribob Singapore Sprint Series

Miss Earth Singapore Event

Raffles Museum of Biodiversity Research

We have recently donated **half a million dollars** for the sponsorship of real dinosaur skeletons to come to Singapore

MCYS Beautifully Imperfect Event

And many more...

Product Responsibility

CUSTOMER HEALTH AND SAFETY

PR1 Life cycle stages in which health and safety impacts of products and services are assessed for improvement, and percentage of significant products and services categories subject to such procedures.

Products: SBR does not produce its own products, however has policies in place to purchase in the most responsible manner. This involves analyzing the products that we purchase in order to get the most sustainable options and which will also be safe for our staff and guests to use.

Services: The services that we offer have gone through a health and safety risk assessment and audited by a third party. As such every aspects of our operations follows stringent health and safety standards. Even from the beginning development stages of the Resort, health and safety impacts were assessed for improvement.

List of life cycle stages subject to health and safety assessment:

| | Yes | No |
|------------------------------------|-----|----------------|
| Development of product and concept | X | |
| R & D | | Not Applicable |
| Certification | | Not Applicable |
| Manufacturing and Production | | Not Applicable |
| Marketing and promotion | | X |
| Storage distribution and supply | X | |
| Use and Service | X | |
| Disposal, reuse, and recycling | X | |

Percentages of products and services undergoing such procedure:

Products: **Not Applicable**

Services: **100%**



Raw materials
manufacturing
Finished product
services
afterlife



At SBR we apply a life cycle analysis to most products and services. This is part of our precautionary approach guidelines.

PR2 Total number of incidents of non-compliance with regulations and voluntary codes concerning health and safety impacts of products and services during their life cycle, by type of outcomes.

Since opening, SBR did not have any incidents of non-compliance with regulations and voluntary codes concerning health and safety impacts of products and services.

There has been a few cases of minor incidents at the hotel for aspects such as:

- Fall from Slippery floor after rain: **3**
- Cuts after broken glass: **5**
- Fall in staircases: **4**

These incidents were found to be accidental and not related to non compliance

At SBR the level of incidents is very low



PRODUCT AND SERVICE LABELING

PR3 Type of product and service information required by procedures, and percentage of significant products and services subject to such information requirements.

100% of relevant product and service categories

Products: As a hotel business, many of the products that SBR uses are purchased from third parties. As such, these products already contain the regulatory labels on them with regards to content, safety, disposal and other specific aspects. SBR ensures that these labels remain on the products before handling by staff and guests. Relevant information regarding the sourcing of component products of our hospitality services, where applicable, is required.

Services: Labels and banners promoting various types of services are widely present at SBR. SBR meets all regulatory requirements with regards to labeling of safety aspects which include:

- Fire exits/extinguishers location/emergency exits
- Food type (e.g., nuts, spices...)
- Non-smoking signs

But also extensive labels and panels on services location:
-reception/café/roof top garden...

SBR has gone much beyond this by setting a range of information corners such as location panels at each elevator floor or our Green Hub Corner where a large scale map of the resort is displayed.

PR4 Total number of incidents of non-compliance with regulations and voluntary codes concerning product and service information and labelling, by type of outcomes.

Since opening, **SBR did not have any incidents of non-compliance** with regulations and voluntary codes concerning product and service information and labeling.

SBR intends to keep it this way and is constantly collecting feedbacks in order to improve such aspects even further.

There are currently truly numerous information panels and labels throughout the resort informing on the nature of products and services.

Labeling is important because it provides key information which can be related to safety and well being



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At SBR all required labeling Are present on site



We are compliant with rules and regulations and no we do not use inappropriate of funny signs when it comes to serious aspects or legal requirements

PR5 Practices related to customer satisfaction, including results of surveys measuring customer satisfaction.

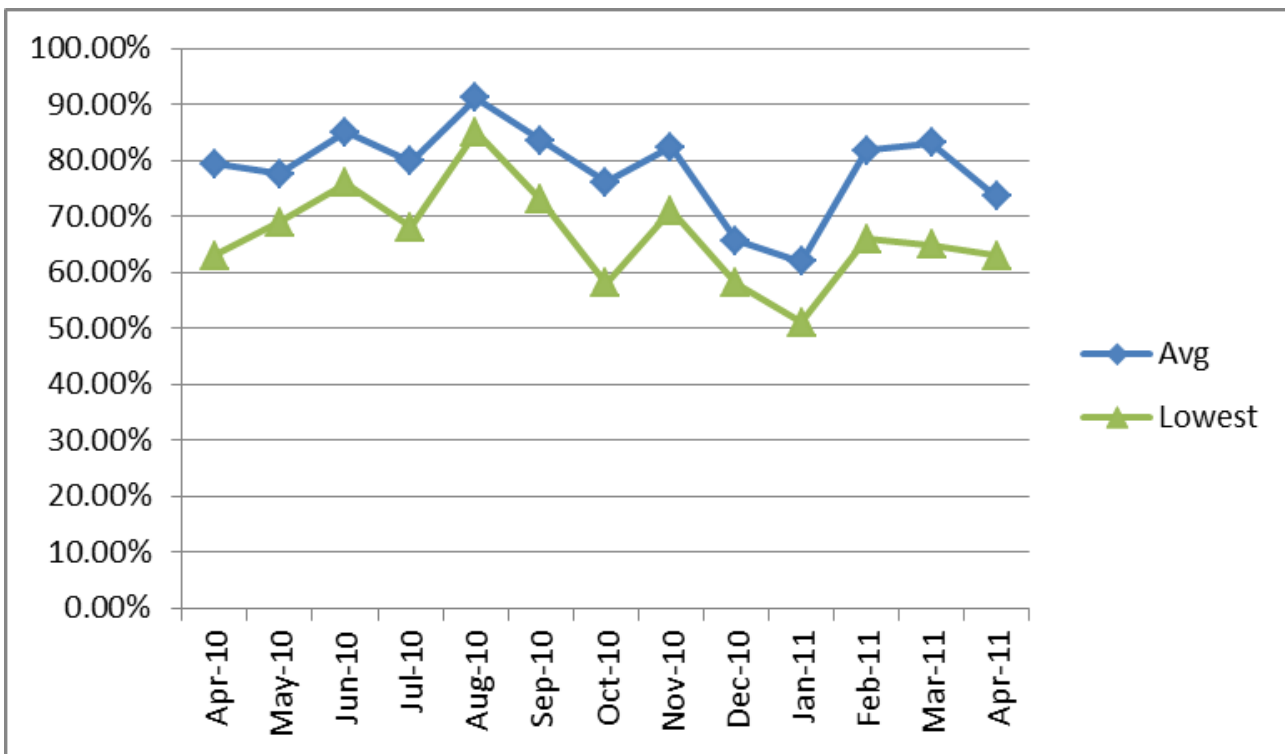
The below graphic showcases compiled monthly customer satisfaction feedbacks over a year period.

SBR conducts monthly survey of customer satisfaction. Different means are used to do this which include:

- In room feedback forms
- Random surveys
- Website surveys



Customer feedback is important to us so that we can continuously improve



SBR is currently in the process of a **major facilities renovations** which include a total refurbishing and design change for all our rooftop suites and facility rooms in a first phase. In a second phase our standard and deluxe rooms will also be upgraded.

This major upgrade should significantly contribute towards customer satisfaction improvement in addition to a range of other measures which are also currently being implemented.



We are significantly improving our services and facilities to respond to customer satisfaction

A happy customer Also makes us happy

MARKETING COMMUNICATIONS

PR6 Programs for adherence to laws, standards, and voluntary codes related to marketing communications, including advertising, promotion, and sponsorship.

SBR does not sell any banned or similarly questionable products. We follow the **DMAS (Direct marketing Association of Singapore) marketing code of conduct**. We are not one of the members, however, the code of practice serves as a general guideline. We review this voluntary codes on a yearly basis.

PR7 Total number of incidents of non-compliance with regulations and voluntary codes concerning marketing communications, including advertising, promotion, and sponsorship by type of outcomes.

We have **not had any reported incidents so far.**

SBR has a soft approach to marketing and our approach is not aggressive or competitive with other hotels.

CUSTOMER PRIVACY

PR8 Total number of substantiated complaints regarding breaches of customer privacy and losses of customer data.

Like any other hotels, we are always dealing with a range of customer complaints, however so far, we have **never had any issues or complaints regarding breaches of customer privacy and losses of data.**

At SBR, customer privacy is one of our priority and we treat such data with care and professionalism.

Recently SBR has invested and put into place a major internal backup computer system that allows all the customer data to be safely stored on our servers.

SBR does not store information without prior approval of its customers. Most of the data that we collect is on a temporary basis between the time the customer makes a booking to the time he leaves the hotel or cancels the reservation.



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PR9 Monetary value of significant fines for noncompliance with laws and regulations concerning the provision and use of products and services.

To date SBR **did not have any fines** for noncompliance with laws and regulations concerning the above



Customer data and privacy protection is important to us

Squirzy: "Prof Monitor always tells me that privacy protection is important. I agree, I'm always annoyed when I'm trying to have a quiet breakfast in the morning and that hotel guest always want to take pictures of me. I don't have any privacy anymore! I'm not sure

it really relates to data protection but I definitely understand what privacy is about!"





ECONOMIC PERFORMANCE

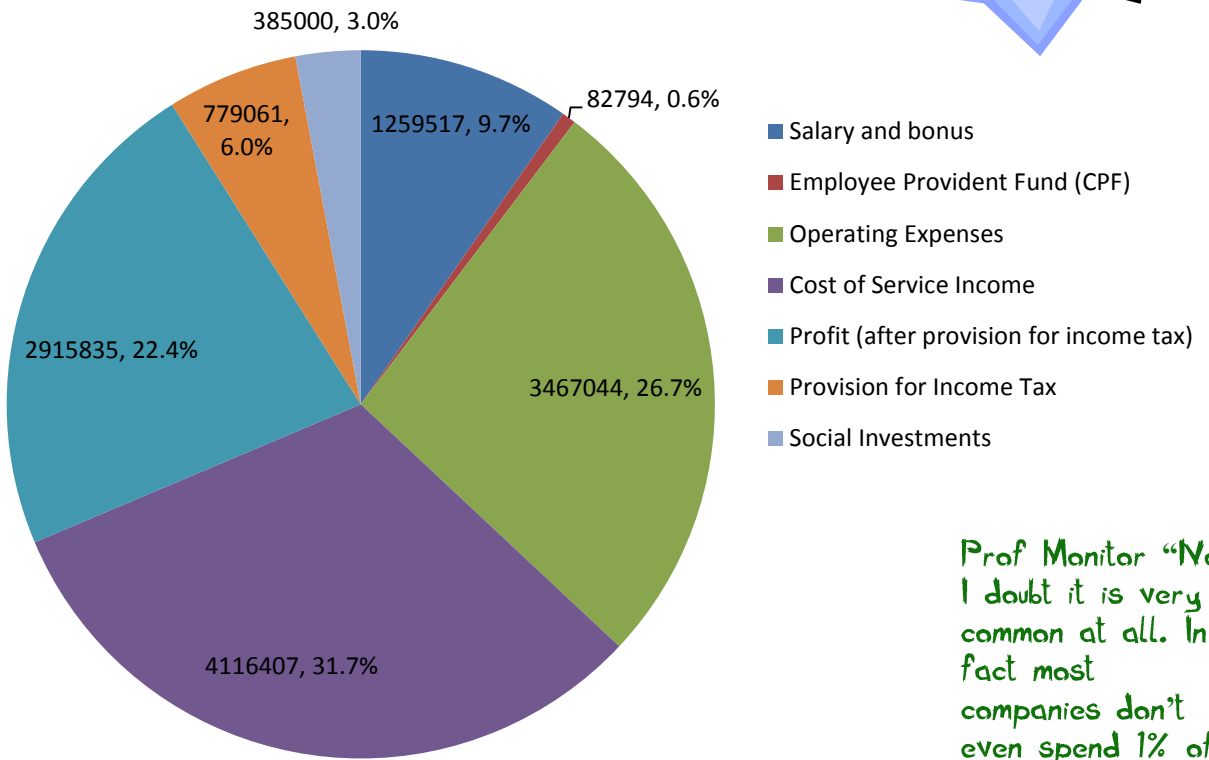
EC1 Direct economic value generated and distributed, including revenues, operating costs, employee compensation, donations and other community investments, retained earnings, and payments to capital providers and governments.

Total business revenue for FY 2011: S\$13,005,658



Distribution of Total Revenue

(in Singapore Dollars and by %)



Prof Monitor "No, I doubt it is very common at all. In fact most companies don't even spend 1% of their revenues on CSR or sustainability projects. In 2011 alone SBR has spent over SGD 380,000 on CSR"

Squirzy: "Prof Monitor, I notice from the above graphic that SBR spends 3% of its annual revenue on social investments. I was wondering, is this common for a company?"



EC2 Financial implications and other risks and opportunities for the organization's activities due to climate change.

SBR takes climate change issues seriously. SBR acknowledges the fact that climate change is real and that progressive changes as a result will be felt throughout the century.

Short term: While SBR does not see any significant financial impacts in the short term, many aspects of how it operates and plans its business in the medium to long term to take climate risk into consideration.

Medium and long term:

SBR foresees that financial risks in the medium to long term may include:

• **Adaptive costs** of various sorts: e.g. coastal erosion from sea level rise, stronger and more frequent rainfall events and tropical storms which could cause structural damages and associated problems such as floods, water infiltration in buildings...

- As ambient temperature will increase, SBR will have to find new solutions to deal with **mosquito control**. This will add cost to our operations.
- As the impacts of climate change will increase, the **world economy will suffer** heavily. This will affect leisure travels and therefore SBR's business.
- As a beach front business, **in the long term** sea level rise will become a major issue for SBR.
- The potential of future environmental regulations and taxes serve to potentially increase operating cost.

Opportunities

- With climate change also comes the opportunity to provide sustainable hospitality services.
- Having been environmentally conscious from the very beginning, climate change also could add a competitive advantage to the resort as other businesses work to catch up and improve their environmental credentials.

EC3 Coverage of the organization's defined benefit plan obligations?

Our coverage includes the below:

| | |
|---|-------------------|
| CPF Contribution | Work/life balance |
| Compulsory | Accommodation |
| Transportation | Meals |
| Medical insurance (+ hospital coverage) | |



EC4 Significant financial assistance received from government.

SBR has **not received any financial assistance** from the government so far. The construction of the hotel was privately funded.

SBR is however starting to look into a range of government funds especially for the implementation of new energy efficiency projects

MARKET PRESENCE

EC5 Range of ratios of standard entry level wage by gender compared to local minimum wage at significant locations of operation.

Our wages are **in line with standard minimum entry level wage in the hotel industry in Singapore.**

We have recently increased our minimum wages to make them **more competitive**. This process is also part of our strategy to attract and retain local talents.

Ratio for both genders is in the range of **0.93** (in our favor).

EC6 Policy, practices, and proportion of spending on locally-based suppliers at significant locations of operation.

SBR has a strong policy to purchase its supplies as much as possible from local suppliers.

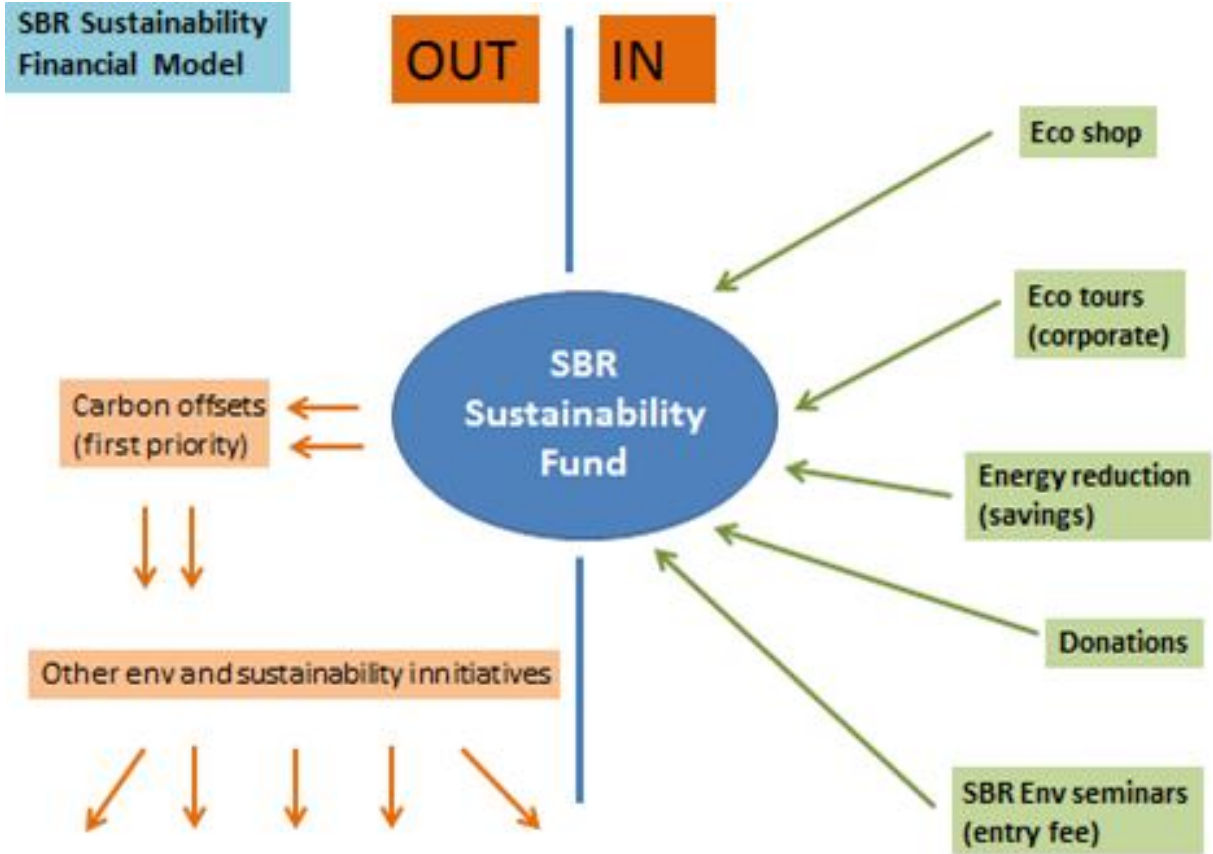
For aspects such as F&B, local is defined as within South East Asia. One of our primary reasons for purchasing locally is to reduce our carbon footprint.

More than **70%** of our purchases are done locally (as a percentage of the total purchasing budget)

In addition to the geographic location, we also take into account cost and quality, carbon footprint of transport, the sustainability of the supplier in its production and disposal processes, and social performance.

Our purchasing policy is Asia centric





Recently, SBR has implemented a sustainability fund

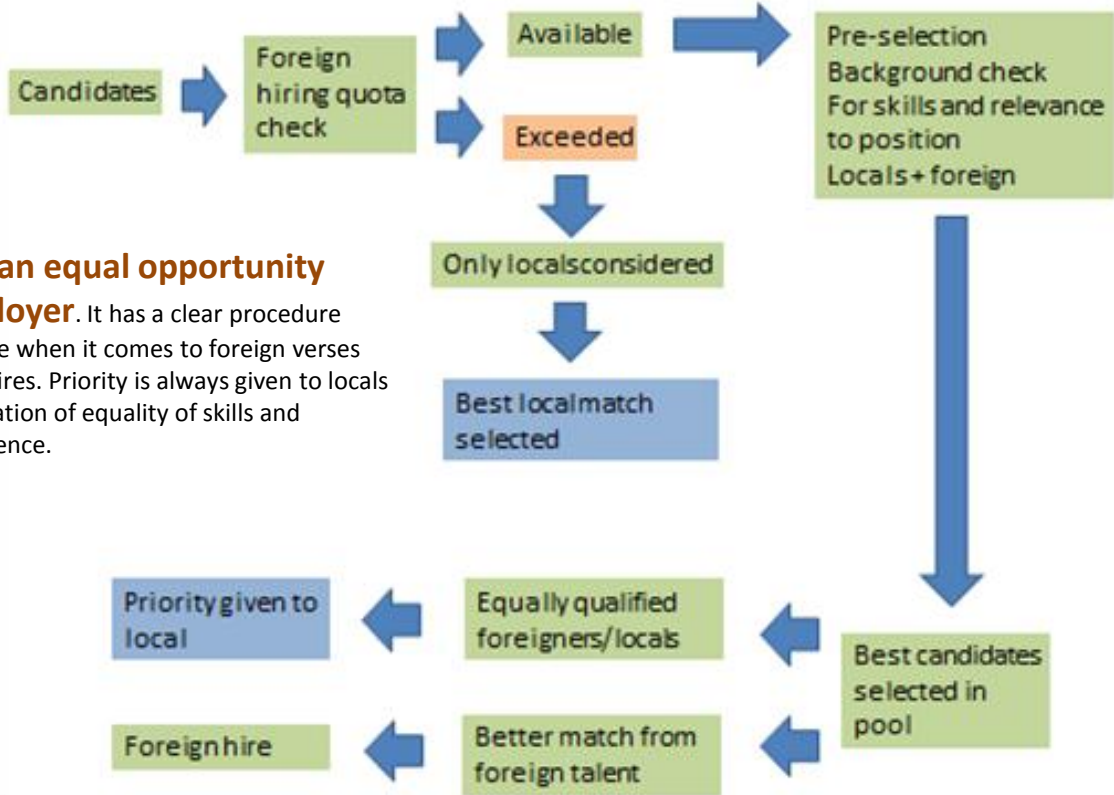
This fund collected through various means will help to fund our sustainability Projects with the aim of having our sustainability programs self sustained
In the future





Procedure for local hiring

EC7 Procedures for local hiring and proportion of senior management hired from the local community at locations of significant operation.



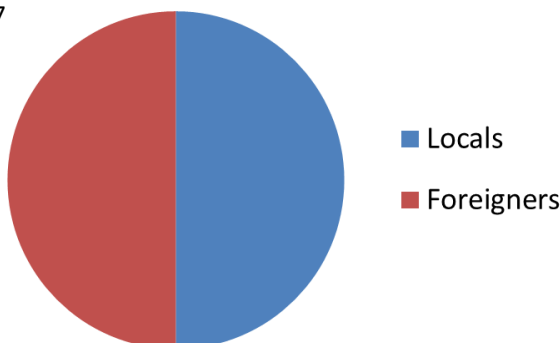
SBR is an **equal opportunity employer**. It has a clear procedure in place when it comes to foreign versus local hires. Priority is always given to locals in situation of equality of skills and experience.

Proportion of senior management hired from the local community:

At SBR Senior management is 100% local and composed of family members (senior management is defined as those above the normal department manager positions).

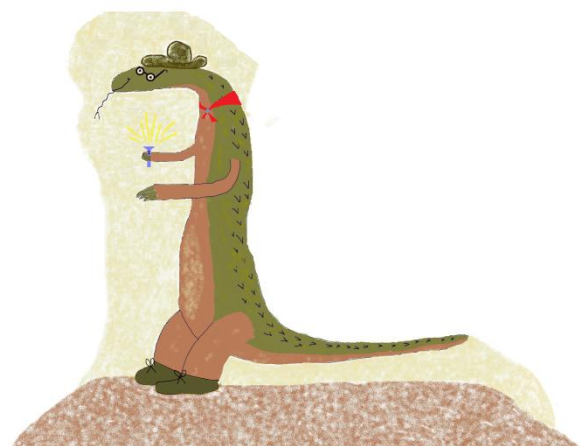
Breakdown of Department Managers:

Total: 14
Locals: 7
Foreigners: 7



SBR has a balance between locals and foreigners in its management

Prof Monitor "At SBR there is good balance of locals/foreigners in the management. SBR believes that it is important to have such a balance because diversity in the work force provides a stronger management by integrating views from different angles"





INDIRECT ECONOMIC IMPACTS

EC8 Development and impact of infrastructure investments and services provided primarily for public benefit through commercial, in kind, or pro-bono engagement.

Infrastructure Investments: While many of the infrastructure at SBR was developed with guest satisfaction and the environment in mind, they were not developed primarily for public benefit. Most of the resort's infrastructure has a direct economic return such as rooms and restaurants facilities.

Services: Before implementing a new service, SBR conducts a financial analysis of how much it's going to cost versus financial returns. Initiatives are subdivided into two categories:

-Financial investments: Investments for which a positive financial return is expected

-CSR investments: Investments for which no financial return is expected.

For CSR projects, a budget is allocated from the total hotel revenues. SBR has no financial interest in doing so but also believes that acting as a responsible corporate citizen in giving back to society is an important moral task that any business should consider.

Our Eco Tour program in particular is a CSR project that is for public benefit by teaching students, companies, and the community about sustainable business using SBR as a case study. Although a local community assessment has not been conducted, we are confident of the importance of this program as it has been requested by many teachers and business. We believe that knowledge about sustainable business will benefit the public as they will have better quality of life from business impacts when society accepts that sustainable and responsible practices are the only viable way of doing business.

Our Eco Tour program is conducted free of charge (pro bono) and since its start in 2007 has been conducted for more than **3500 participants** (as of July 2012). In 2010, the Eco Tour was conducted for over **991 participants**, and in 2011 for over **852 participants**. The estimated cost of running the program for 2010 and 2011 is about **S\$12,000 per year**.

EC9 significant indirect economic impacts, and the extent of impacts.

SBR works with various organizations who advise us on the economic needs of Singapore and help us to understand our indirect economic impacts.

Indirect economic impacts

Significance of Impacts

Seasonality of Tourism Industry

Negative: Seasonality can result in some economic instability.

Attracting tourists to Singapore

Positive: Attracting more tourists will bring additional money into the Singapore economy. This is aligned with the national policy of promoting Singapore, and Sentosa Island in particular, as a tourist destination.

Employment of Foreign Talent

Negative and Positive: Hospitality is an industry that by necessity employs a significant percentage of foreign talent. This can have a positive effect on the economy, but also it may result in otherwise lower wages for some occupations.

Raising awareness of sustainable business

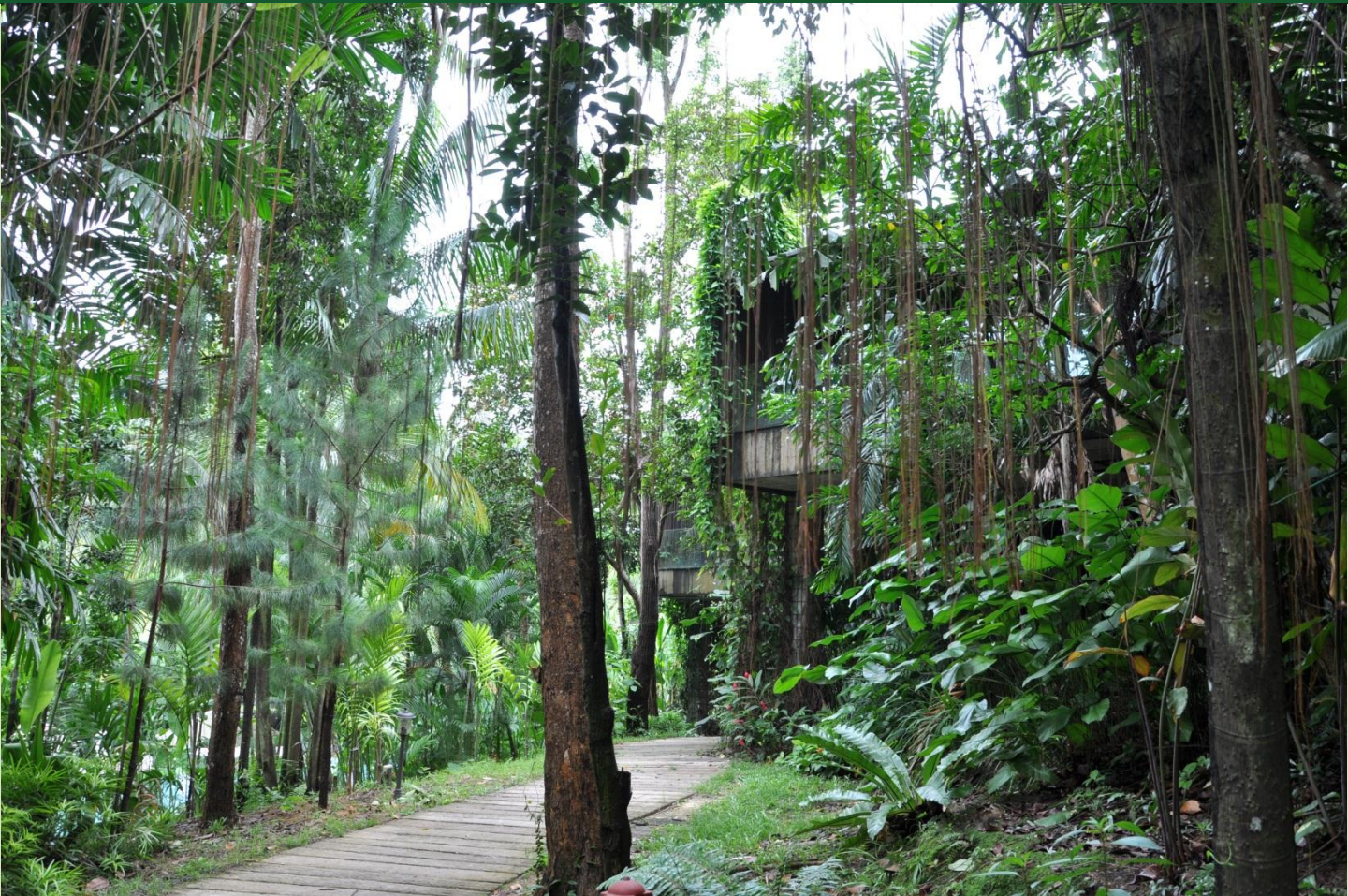
Positive: Actively promoting sustainable business serves to have a positive effect on the Singapore economy. This is a better model for creating long-term prosperity and in line with Singapore's pledge to cut GHG emissions 16% by 2020.

Extent of Impacts: For all of our indirect economic impacts, the extent of the impact is very small, and not possible to observe in relation to the overall Singapore economy. However, as a responsible business, we still feel it is important for us to study and understand our indirect economic impacts

Our economic impact may be small, but it is important to know and understand.



Our final key message



Doing business while maintaining a harmony with the surrounding natural environment is possible. At SBR this is precisely what we have been doing and will continue to do...

Don't Wait...

Be the Change, Act now...



Thank you for reading through!

On behalf of SBR we hope that you have found our sustainability report useful in highlighting the efforts that are done here to be a responsible and sustainable business.



That's all folks!



Profile Disclosures

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Economic

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| | EC 2 | Financial implications and other risks and opportunities for the organization's activities due to climate change | Fully | 170 |
| | EC 3 | Coverage of defined benefit plan obligations | Partially | 170 |
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| Market presence | EC 5 | Range of ratios of standard entry level wage by gender compared to local minimum wage | Fully | 170 |
| | EC 6 | Policy, practices, and proportion of spending on locally-based suppliers | Fully | 170 |
| | EC 7 | Procedures for local hiring and proportion of senior management hired | Fully | 172 |
| Indirect economic impact | EC 8 | Infrastructure investments and services provided primarily for public benefit | Fully | 173 |
| | EC 9 | Significant indirect economic impacts, and the extent of impacts | Fully | 173 |

Environmental

| | | | | |
|--------------|-------|---|-----------|-----------|
| Materials | EN 1 | Materials used by weight or volume | Partially | 90 |
| | EN 2 | Percentage of materials used that are recycled input materials | Fully | 90 |
| Energy | EN 3 | Direct energy consumption by primary energy source | Fully | 94 |
| | EN 4 | Indirect energy consumption by primary source | Fully | 94 |
| | EN 5 | Energy saved due to conservation and efficiency improvement | Not | 94 |
| | EN 6 | Initiatives to provide energy-efficient or renewable energy based products and services | Partially | 104 |
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| | EN 9 | Water source significantly affected by withdrawal of water | Fully | 112 |
| | EN 10 | Percentage and total volume of water recycled and reused | Fully | 112 |
| Biodiversity | EN 11 | Location and size of land owned, leased, managed in, or adjacent to, protected areas and areas of high biodiversity value outside protected areas | Fully | 114 |
| | EN 12 | Significant impacts of activities on biodiversity inside and outside the protected areas | Fully | 114 |
| | EN 13 | Habitats protected and restored | Fully | 114 |
| | EN 14 | Strategies, current actions, and future plans for managing impacts on biodiversity | Fully | 125 – 126 |
| | EN 15 | Number of IUCN Red List species and national conservation list species with habitats in areas affected by operations | Fully | 126 |



Performance Indicators

Environmental

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| | EN 19 | Emissions of ozone-depleting substances by weight | Fully | 131 |
| | EN 20 | NO, SO, and other significant air emissions by type and weight | Partially | 131 |
| | EN 21 | Total water discharge by quality and destination | Partially | 134 |
| | EN 22 | Total weight of waste by type and disposal method | Partially | 134 - 135 |
| | EN 23 | Total number and volume of significant spills | Fully | 139 |
| | EN 24 | Weight of transported, imported, exported, or treated hazardous waste and percentage shipped internationally | Fully | 139 |
| | EN 25 | Size, protected status, and biodiversity value of water bodies and habitats affected by discharges of water and runoff | Fully | 139 |
| Products and services | EN 26 | Initiatives to mitigate environmental impacts | Partially | 146 |
| | EN 27 | Percentage of products sold and packaging materials reclaimed | Fully | 146 |
| Compliance | EN 28 | Fines and sanctions for non-compliance with environmental laws and regulations | Fully | 148 |
| Transport | EN 29 | Significant environmental impacts of transporting products and other goods and members of the workforce | Fully | 148 |
| Overall | EN 30 | Total environmental protection expenditures and investments | Fully | 149 |
| Social: Labor practices and decent work | | | | |
| Employment | LA 1 | Total workforce by employment type, employment contract, and region, broken down by gender | Fully | 154 |
| | LA 2 | Number and rate of new employee hired and employee turnover by age group, gender, and region | Partially | 155 |
| | LA 3 | Benefits provided for full-time employees | Fully | 155 |
| | LA 15 | Return to work and retention rates after parental leave | Fully | 161 |
| Labour/ management relations | LA 4 | Percentage of employees covered by collective bargaining agreements | Fully | 156 |
| | LA 5 | Minimum notice period(s) on operational changes | Fully | 156 |
| Occupational health and safety | LA 6 | Percentage of total workforce represented in formal joint management-worker health and safety committees | Fully | 156 |
| | LA 7 | Rates of injury, occupational diseases, lost days, absenteeism, and number of work related fatalities | Partially | 156 |
| | LA 8 | Education, training, counselling, and risk-control program regarding serious diseases | Fully | 156 |
| | LA 9 | Health and safety topics covered in formal agreements with trade unions | Fully | 157 |



Performance Indicators

Social: Labor practices and decent work

| Performance indicator | | Report section or full GRI content index | Reported | Page |
|--------------------------------------|-------|---|-----------|------|
| Training and education | LA 10 | Average hours of training per year per employee by gender, and by employee category | Fully | 157 |
| | LA 11 | Programs for skills management and lifelong learning | Fully | 157 |
| | LA 12 | Percentage of employees receiving regular performance and career development reviews, by gender | Fully | 157 |
| Diversity and equal opportunity | LA 13 | Composition of governance bodies and breakdown of employees per employee category | Partially | 158 |
| Equal remuneration for women and men | LA 14 | Ratio of basic salary and remuneration of women to men by employee category | Fully | 161 |

Social: Human rights

| | | | | |
|--|-------|--|-------|-----|
| Investment and procurement practices | HR 1 | Percentage and number of investment agreements that include human rights clauses or screening | Fully | 150 |
| | HR 2 | Percentage of suppliers, contractors and other business partners have undergone human rights screening | Fully | 150 |
| | HR 3 | Total hours and percentage of employee trained on policies and procedures concerning aspects of human rights | Fully | 150 |
| Non-discrimination | HR 4 | Number of incidents of discrimination and corrective actions taken | Fully | 150 |
| Freedom of association and collective bargaining | HR 5 | Operations and significant suppliers identified in which the right to exercise freedom of association and collective bargaining may be at significant risk and actions taken | Fully | 152 |
| Child labor | HR 6 | Operations and suppliers identified the significant risk for incidents of child labor, and measures taken | Fully | 152 |
| Prevention of forced and compulsory labor | HR 7 | Operations and suppliers identified the significant risk for incidents of forced or compulsory labor, and measures taken | Fully | 152 |
| Security practices | HR 8 | Percentage of security personnel trained in the human rights policies or procedures | Fully | 153 |
| Indigenous rights | HR 9 | Number of incidents of violations involving rights of indigenous people and actions taken | Fully | 153 |
| Assessment | HR 10 | Percentage and number of operations that have been subject to human rights reviews | Fully | 153 |
| Remediation | HR 11 | Number of grievances related to human rights filed, addressed and resolved through formal grievance mechanisms | Fully | 153 |



Performance Indicators

Social: Society

| Performance indicator | | Report section or full GRI content index | Reported | Page |
|---------------------------|-------|--|-----------|------|
| Local communities | SO 1 | Percentage of operations with implemented local community engagement, impact assessments, and development programs | Partially | 161 |
| | SO 9 | Operations with significant potential or actual negative impacts on local communities | Fully | 163 |
| | SO 10 | Prevention and mitigation measures implemented with significant potential negative impacts on local communities | Fully | 163 |
| Corruption | SO 2 | Percentage and total number of business units analysed for risks related to corruption | Fully | 161 |
| | SO 3 | Percentage of employees trained in anti-corruption policies and procedures. | Fully | 161 |
| | SO 4 | Actions taken in response to incidents of corruption | Fully | 161 |
| Public policy | SO 5 | Public policies involvement | Partially | 162 |
| | SO 6 | Total value of financial and in-kind contributions to political parties, politicians, and related institutions | Fully | 162 |
| Anti-competitive behavior | SO 7 | Total number of legal actions for anticompetitive behavior and the outcomes | Fully | 162 |
| Compliance | SO 8 | Significant fines and sanctions for non-compliance with laws and regulations | Fully | 162 |

Social: Product responsibility

| | | | | |
|-------------------------------|------|---|-------|-----|
| Customer health and safety | PR 1 | Life cycle analysis of products and services | Fully | 165 |
| | PR 2 | Number of incidents of non-compliance with regulations and voluntary codes (health and safety impacts of products and services) | Fully | 165 |
| Product and service labelling | PR 3 | Type of product and service information required by procedures | Fully | 166 |
| | PR 4 | Number of incidents of non-compliance with regulations and voluntary codes (product and service information and labelling) | Fully | 166 |
| | PR 5 | Practices related to customer satisfaction | Fully | 167 |
| Marketing communications | PR 6 | Programs for adherence to laws, standards, and voluntary codes related to marketing communications | Fully | 168 |
| | PR 7 | Number of incidents of non-compliance with regulations and voluntary codes (marketing communications) | Fully | 168 |
| Customer privacy | PR 8 | Number of substantiated complaints regarding breaches of customer privacy and losses of customer data | Fully | 168 |
| Compliance | PR 9 | Monetary fines for non-compliance with laws and regulations concerning the provision and use of products and services | Fully | 168 |

Annex

Squirzy: “In these annexes you will find a range of supporting documents that highlight some of our sustainability achievements. These are only selections amongst many other documents.

PS: Thankfully, otherwise I couldn't even carry this sustainability report; and I'm always the one assigned to carry documents for Prof Monitor!”





2. Environmental Targets Achieved

ENVIRONMENTAL TARGETS ACHIEVED

PURPOSE

Since the construction of the Resort, the Owners had a vision to develop an eco friendly resort. Below details the targets that have been set by the Environmental Management Committee and the ensuing results for the 2006-2010 period:

LIST OF ENVIRONMENTAL TARGETS AND INITIATIVES: 2007-2009

| <u>SNO</u> | <u>TARGETS</u> | <u>STATUS</u> |
|--|---|---------------|
| <u>PRESERVATION OF NATURAL ENVIRONMENT</u> | | |
| 1. | The built up areas of the Resort will not exceed 30% of the land use. | Done |
| 2. | The natural terrain will be preserved, especially for the swimming pool which is built on the terrain rather than in the ground, and Villa Wing where all the villas are built on stilts. | Done |
| 3. | The trees will be preserved in their natural environment. The rooms and other facilities will be built around the trees. | Done |
| 4. | All tall trees will be equipped with lightning protection and properly maintained, to ensure guest safety and the preservation of trees. | Done |
| 5. | Create 12 ponds to house fish and turtles, and to encourage frogs, dragonflies, and other native biodiversity. | Done |



2. Environmental Targets Achieved

| <u>ENERGY CONSERVATION</u> | | |
|----------------------------|--|------|
| 6. | The Resort will use energy saving PL and LED lightings. | Done |
| 7. | Chillers will be energy efficient with heat exchangers that will heat up hot water for showers. | Done |
| 8. | Gym, pool, café, and other areas will be outdoors to use natural lighting and be without air conditioning. | Done |
| 9. | Corridors will not be enclosed and with rooms on only one side, so as to allow use of natural lighting and minimize use of air conditioning. | Done |
| 10. | Dimmers will be used on lighting where appropriate. | Done |
| 11. | Card access system will control lighting and appliances in the room so that when removed these will be switched off. | Done |
| 12. | Set up self-maintenance roof top garden, that absorbs solar energy to cool the building and reduce air conditioning usage. | Done |

| <u>WATER MANAGEMENT</u> | | |
|-------------------------|---|------|
| 13. | Ground spring water will be treated and used for swimming pool, gardening, and washing of floors. | Done |
| 14. | Taps especially in public areas to have automatic cut off. | Done |
| 15. | Introduce time switch sprinklers for spring ground water irrigation. | Done |
| 16. | Use of water efficient Grohe shower system, and showerheads that restrict water flow. | Done |

2. Environmental Targets Achieved



| F&B WASTE MANAGEMENT | | |
|----------------------|---|------|
| 17. | Food waste will be separated and recycled into compost. | Done |
| 18. | Worms will be cultivated and their secretion used as fertilizers for gardening. | Done |
| 19. | Food waste is collected and converted into water via food waste decomposer before disposing. | Done |
| 20. | Introduce Children’s menu to reduce food wastage. | Done |
| 21. | Refuse to serve endangered species, such as Sharks Fin and Blue Fin Tuna. | Done |
| 22. | Use flowers and other plant-based table decoration instead of table cloths. | Done |
| 23. | Introduce late night room service that requires micro wave cooking so that the main kitchen can shut down to reduce electricity consumption by 80%. | Done |
| 24. | Use herbs from garden for food garnishing | Done |

| ENVIRONMENTAL EDUCATION | | |
|-------------------------|---|------|
| 25. | Develop environmental educational program and market to schools, polytechnics and Universities. | Done |
| 26. | Environmental education will be included in staff orientation program. | Done |
| 27. | Guests to be kept informed of Resort’s Environmental Policies and Initiatives. | Done |

2. Environmental Targets Achieved



| <u>REDUCE</u> | | |
|---------------|--|------|
| 28. | Front Office to group guests on floors to reduce environmental impact of frequent elevator usage. | Done |
| 29. | Newspapers to be kept in a central location at Front Office Reception area to reduce daily newspapers. | Done |
| 30. | Outsource laundry to enjoy economy of scale and reduce washing at Resort. | Done |
| 31. | Tooth brush and tooth paste provided upon request, and not placed in rooms. | Done |
| 32. | Paper reduction through more extensive use of email. | Done |
| 33. | Electric hand dryers introduced in washrooms to replace paper towels. | Done |

| <u>REUSE</u> | | |
|--------------|--|------|
| 34. | Implement towel and linen program to reduce washing. | Done |
| 35. | Reuse railway sleepers as walk way planks. | Done |
| 36. | Reuse children’s playground equipment. | Done |
| 37. | Recycle fallen flowers as table decorations. | |
| 38. | Reuse guests unwanted shopping bags, office printing cartridges, carton boxes and office stationery. | Done |
| 39. | Make it standard practice to reuse paper that has only been printed on one side. | Done |
| 40. | Reuse secondary wood from sources like reclaimed wood from conservation houses for making and repairing furniture. | Done |

| <u>RECYCLE</u> | | |
|----------------|---|------|
| 41. | Recycle glass, paper, metal, food waste, plastic. | Done |
| 42. | Set up recycle bins in prominent areas. | Done |

2. Environmental Targets Achieved



| <u>ENVIRONMENTAL MANAGEMENT, TRACKING AND MONITORING</u> | | |
|--|---|------|
| 43. | Form Environmental Management Committee. | Done |
| 44. | Develop Environmental Vision, and Value statements. | Done |
| 45. | Develop Department Environmental Policies, Procedures, and Practices. | Done |
| 46. | Keep track of water consumption statistics. | Done |
| 47. | Keep track of electrical consumption statistics. | Done |
| 48. | Keep track of food waste statistics. | Done |
| 49. | Keep track of paper usage statistics. | Done |
| 50. | Keep track of food purchases, capturing their source and value. | Done |

| <u>LANDSCAPING GARDENING</u> | | |
|------------------------------|--|------|
| 51. | Develop a “green sanctuary” (nursery) for growing, nurturing, and testing through research and development new plants for use in the Resort. | Done |
| 52. | Plant herbs and vegetables for Resort’s use. | Done |
| 53. | Plant an additional 400 trees, 20 different herbs, 15 types of fruit trees and 100 flowers | Done |
| 54. | Use shrubs to decorate the top of rubbish bins (normally used as ash tray) to remind guests about the environment and to discourage smoking. | Done |

| <u>PURCHASING PROCUREMENT</u> | | |
|-------------------------------|--|------|
| 55. | Develop purchasing guidelines. | Done |
| 56. | Inform suppliers and vendors of Resort’s Environmental Policies. | Done |
| 57. | Introduce Green Labeling to suppliers. | Done |

2. Environmental Targets Achieved



| <u>SAFETY HEALTH</u> | | |
|----------------------|--|------|
| 58. | Allow guests the option of with Feather or Polyester (Hypo allergenic) pillows. | Done |
| 59. | Guests to be given quality Sealy mattress. | Done |
| 60. | Housekeeping to compile MSDS for all chemicals. | Done |
| 61. | Pool to be sanitized with a salt ionization electrode system instead of using harsh chemical chlorine. | Done |
| 62. | Housekeeping to brief staff on chemical usage and safety. | Done |

LIST OF ENVIRONMENTAL TARGETS AND INITIATIVES:

2009- Q1 2011

| SNO | TARGETS | STATUS |
|----------------------------|---|--------|
| <u>ENERGY CONSERVATION</u> | | |
| 63. | Implement infrared technology for chillers that minimize power leakage by stabilizing the current, for energy savings of 20%. | Done |
| 64. | Test bed new energy efficient heater in kitchen that can heat 500L of water to 70 degrees Celsius using just a standard household 13amp plug. | Done |

| <u>WATER CONSERVATION</u> | | |
|---------------------------|--|------|
| 65. | Placement of signage for towel and linen program in rooms to inform guests who wish to save water | Done |
| 66. | Test bed environmentally friendly bacteria product from Envirofriendly that saves water by not requiring flushing for urinals. | Done |



2. Environmental Targets Achieved

| <u>F&B AND FOOD AND WASTE MANAGEMENT</u> | | |
|--|--|------|
| 67. | Over 75% of food sourced from local sources or ASEAN countries | Done |

| <u>ENVIRONMENTAL EDUCATION</u> | | |
|--------------------------------|---|---------------------|
| 68. | Develop and place Self Guided Eco Tour Storyboard's around the resort, so that anyone can give themselves an Eco Tour of our Resort. | Done |
| 69. | Set up Siloso Beach Resort Facebook Group to inform guests and online community of the Resort's Environmental Policies and Initiatives. | Done |
| 70. | Sponsored and completed the development of the Biodiversity Portal of website. www.biodiversity.sg | Done |
| 71. | Create In-room eco message, and place in all rooms. | In Progress |
| 72. | Provide discounts for Green Meeting packages. [Quarter 1 of 2011 Update: The package was put together, but it was not successful. The Green Meeting package is currently be re-evaluated.] | Done In Progress |
| 73. | Put up posters to turn café into a biodiversity themed | In Progress |

| <u>REDUCE, REUSE, RECYCLE</u> | | |
|-------------------------------|---|------|
| 74. | Stop using small plastic bottles in superior and deluxe rooms (REDUCE). | Done |
| 75. | Soap dispensers to be installed in nearly all rooms (REDUCE). | Done |



2. Environmental Targets Achieved

| <u>ENVIRONMENTAL MANAGEMENT, TRACKING AND MONITORING.</u> | | |
|---|--|------|
| 76. | Implement Eco Tour feedback form, and create Feedback Index to track and evaluate improvement. | Done |
| 77. | Develop Eco Test/Survey for staff. | Done |
| 78. | Create environmental targets for each department. | Done |
| 79. | Keep detailed records of groups who have attended the eco tour. | Done |

| <u>LANDSCAPING AND GARDENING</u> | | |
|----------------------------------|--|------|
| 80. | Label herbs in the “green sanctuary” (nursery). | Done |
| 81. | Plant 50 additional trees (on top of the 400 already planted). | Done |

| <u>SAFETY AND HEALTH</u> | | |
|--------------------------|---------------------------|------|
| 82. | bizSAFE level 3 certified | Done |

1. Records of Eco Tour Participants (continuation)



| Date | Group name | Number of persons |
|----------------------|--|-------------------|
| Year 2007 | Estimated unrecorded for 2007 | 180 |
| October 14, 2008 | Bukit View Secondary School | 24 |
| October 14-15, 2008 | Queenstown Sec. School (Monster Image) | 21 |
| November 17-21, 2008 | Temasek Polytechnic Students | 240 |
| December 16, 2008 | Raffles Campus | 25 |
| Year 2008 | Estimated unrecorded for 2008 | 240 |
| May 31-June 1, 2009 | Woodlands Green Secondary School | 38 |
| May 28-29 2009 | Bukit Batok Secondary School | 42 |
| September 26, 2009 | Temasek Polytechnic Students | 25 |
| December 2-3, 2009 | Temasek Polytechnic Students | 125 |
| December 9, 2009 | Temasek Polytechnic Students | 6 |
| Year 2009 | Estimate unrecorded for 2009 | 240 |
| March 24, 2010 | Temasek Polytechnic Students | 39 |
| April 23, 2010 | Compact CSR Learning Journey: Competitive Advantages from Responsible Business Strategies | 90 |
| May 27, 2010 | Nanyang Polytechnic Students | 62 |
| June 8, 2010 | Ngee Ann Polytechnic Students | 3 |
| July 20, 2010 | Students | 6 |
| July 24, 2010 | MBA students (under Dr. Aloysius) | 13 |
| July 31, 2010 | For Media group (In Chinese) | 5 |
| August 12, 2010 | Impromptu tour for Guest(s) | 1 |
| August 13, 2010 | For group of Reporters | 6 |
| August 16, 2010 | Seng Kang Secondary Teachers (6) and ComNet Communications (2) | 8 |
| August 25, 2010 | For WWF Employee | 1 |
| September 14, 2010 | Singapore Environmental Achievement Award judges and Singapore Environment Council | 12 |
| September 15, 2010 | Tour Group from India | 18 |
| September 27, 2010 | Impromptu tour for Guest(s) | 2 |
| September 29, 2010 | Environment Council's "Sustainable Development: From Design to Build to Live in" Seminar for Architects from Singapore Institute of Architects | 85 |

1. Records of Eco Tour Participants (continuation)



| Date | Group name | number |
|-------------------|---|--------|
| October 4, 2010 | Preview tour for PS21 ExCel Convention organized by National Environment Agency | 2 |
| October 6, 2010 | Sentosa Employees | 3 |
| October 8, 2010 | ComNet Communication Employees | 24 |
| October 11, 2010 | Staff Orientation | 1 |
| October 21, 2010 | Photographers | 3 |
| October 23, 2010 | National University of Singapore MBA students | 5 |
| October 25, 2010 | Nanyang Academy of Fine Arts Lecturers | 3 |
| November 1, 2010 | Marsiling Secondary School | 33 |
| November 3, 2010 | PS21 ExCel Convention Learning Journey organized by National Environment Agency | 44 |
| November 7, 2010 | Kaplan University Students | 2 |
| November 9, 2010 | Nanyang Students | 23 |
| November 10, 2010 | Teachers from Republic Poly (5), and students from (2) | 7 |
| November 16, 2010 | University Nevada Las Vegas (Singapore) Students | 5 |
| November 16, 2010 | Singapore Polytechnic Lecturers | 5 |
| November 18, 2010 | University Nevada Las Vegas (Singapore) Students | 6 |
| November 20, 2010 | University Nevada Las Vegas (Singapore) Students | 20 |
| November 25, 2010 | University Nevada Las Vegas (Singapore) Students | 7 |
| November 26, 2010 | Singapore Polytechnic Students | 39 |
| November 29, 2010 | University Nevada Las Vegas (Singapore) Students | 3 |
| November 29, 2010 | Representatives from Raffles (2), Marine Biology and Ecology Laboratory (1), and Nparks (2) | 5 |
| December 6, 2010 | University Nevada Las Vegas (Singapore) Students | 32 |
| December 14, 2010 | Xebec Employees | 3 |
| December 20, 2010 | Impromptu tour for Guest(s) | 5 |
| Year 2010 | Estimate unrecorded in 2010 | 120 |
| January 4, 2010 | EnviroFriendly | 1 |
| January 7, 2011 | Underwater World employees | 2 |
| January 24, 2011 | Compact Staff | 1 |
| January 26, 2011 | Ministry of Environment and Water Resources, Divisional Retreat | 11 |
| February 15, 2011 | University Nevada Las Vegas (Singapore) Students | 38 |

1. Records of Eco Tour Participants (continuation)



| Date | Group name | Number |
|-------------------|--|--------|
| February 19, 2011 | NUS Social Impact Club Students | 18 |
| February 25, 2011 | AIESEC Students | 2 |
| February 28, 2011 | Eco Tour for Media partners | 6 |
| March 4, 2011 | Environmentalist | 1 |
| March 6, 2011 | Khoo Teck Puat Hospital and Tzu Chi | 13 |
| March 10, 2011 | Sembawang Shipyard | 2 |
| March 15, 2011 | Science Centre | 4 |
| March 23, 2011 | Temasek Polytechnic Students | 55 |
| March 28, 2011 | Chem Search | 2 |
| April 6, 2011 | SMU Students | 20 |
| April 20, 2011 | Ngee Ann Polytechnic Students | 33 |
| April 21, 2011 | SEC volunteer event | 23 |
| April 27, 2011 | Guests | 3 |
| April 28, 2011 | Singapore Polytechnic Students | 1 |
| May 6, 2011 | Eco Tour for UWCSEA Students | 4 |
| May 10, 2011 | Singapore Polytechnic Students | 40 |
| May 11, 2011 | Singapore Polytechnic Students | 27 |
| May 18, 2011 | Singapore Polytechnic Students | 20 |
| May 19, 2011 | Singapore Polytechnic Students | 30 |
| May 20, 2011 | Nan Hua High School Students | 28 |
| May 23, 2011 | Casaraudha Women's Home | 3 |
| May 27, 2011 | Institute of Technical Education Students | 34 |
| June 11, 2011 | University Nevada Las Vegas (Singapore) Students | 29 |
| June 13, 2011 | Nanyang Polytechnic Students | 14 |
| June 13, 2011 | Singapore Management Tertiary Schools/Universities | 6 |
| June 14, 2011 | Temasek Polytechnic Students | 4 |
| June 30, 2011 | Murdoch University Students | 4 |
| July 6, 2011 | Kaplan University Students | 4 |
| July 14, 2011 | Ngee Ann Polytechnic students (Eco tour and presentation) | 19 |
| July 20, 2011 | Akzonobel Employees | 2 |
| July 23, 2011 | Society for Global Business and Development Conference Participants (Organized by SMU) | 78 |
| July 27, 2011 | University Nevada Las Vegas (Singapore) Students | 2 |
| August 16, 2011 | CarbonNeutral Company | 2 |
| August 20, 2011 | Japan Tourism Board | 3 |
| August 27, 2011 | Singapore Tourism Board | 3 |

1. Records of Eco Tour Participants (continuation)



| Date | Group name | Number |
|--------------------|---|-------------|
| September 8, 2011 | Students from Simon Fraser University in Canada | 4 |
| September 16, 2011 | Nanyang Technological University, Business Students | 3 |
| September 20, 2011 | Sentosa Employees | 2 |
| October 8, 2011 | University Nevada Las Vegas (Singapore) Students | 17 |
| October 28, 2011 | NTUC Learning Hub | 2 |
| November 1, 2011 | Mount Faber Leisure Group | 2 |
| November 3, 2011 | CSR young leaders group | 2 |
| November 4, 2011 | University Nevada Las Vegas (Singapore) Students | 40 |
| November 5, 2011 | SIMtech | 12 |
| November 9, 2011 | Singapore Environment Council (Executive Director) | 2 |
| November 10, 2011 | Ngee Ann Polytechnic Students (Clean Energy Management) | 3 |
| November 11, 2011 | Singapore Polytechnic Students | 2 |
| November 17, 2011 | Queen Margaret University | 7 |
| November 19, 2011 | MDIS students | 1 |
| November 21, 2011 | University Nevada Las Vegas (Singapore) Students | 5 |
| November 22, 2011 | Centre for Sustainable Asian Cities | 9 |
| November 24, 2011 | MDIS student | 1 |
| November 26, 2011 | National University of Singapore MBA students | 21 |
| December 1, 2011 | Singapore Polytechnic Students | 40 |
| December 7, 2011 | Nanyang Polytechnic Students | 63 |
| December 14, 2011 | Simon University of Rochester | 22 |
| January 19, 2012 | Eco consultant | 1 |
| February 1, 2012 | Raffles Design Institute Students | 3 |
| February 6, 2012 | Sealy Corporate Event | 45 |
| February 7, 2012 | Fuhua Primary School EXCO team | 11 |
| February 14, 2012 | Guests | 3 |
| February 25, 2012 | St Andrew's Autism Centre | 3 |
| March 2, 2012 | National University of Singapore Students | 32 |
| | Total | 2907 |



Paper media coverage (selection of recent media coverage)

| | |
|--|---|
| <i>"The greening of the bottom line for SMEs in Singapore" by Jaslene Pang</i> | <i>Business Times, 16 Mar 2010 (accessed via wildsingapore.com)</i> |
| <i>"Nurturing Nature Responsibly, Where leisure meets nature" (Full page advert.)</i> | <i>The Straits Times, 4 Aug 2010, Page 09</i> |
| <i>"Preserving Nature" by Mike Lee (As part of "Special: Singapore Environmental Achievement Awards 2010" section)</i> | <i>The Straits Times, 4 Aug 2010, Page 10</i> |
| <i>"Doing good pays off for companies"</i> | <i>The Straits Times, 9 Oct 2011, Page 13 (via www.sgh.com.sg)</i> |
| <i>"A helping hand for those going green in Singapore" by Yuen Sin</i> | <i>The Straits Times, 22 Apr 2011 (accessed via wildsingapore.com)</i> |
| <i>"Businesses commended for sustainable practices" by Daniel Ho</i> | <i>The Straits Times, 12 Jul 2011 (similar articles also appeared in Business Times, Lianhe Zaobao, and Channel News Asia Online)</i> |
| <i>"Purchase of 3 dinosaurs at risk" by Tan Dawn Wei</i> | <i>The Straits Times, 14 Aug 2011, Prime 3</i> |



Online Media Coverage (selection of recent media coverage)

| | |
|--|--------------------------------------|
| <i>"Local firms honoured for green business practices" by Jessica Cheam</i> | <i>Eco-business.com, 4 Aug 2010</i> |
| <i>"Singapore companies honoured for CSR efforts in inaugural awards" by Nigel Hembrow</i> | <i>Eco-business.com, 7 Oct 2010</i> |
| <i>"Singapore firms commended for green efforts" by Jenny Marusiak</i> | <i>Eco-business.com, 12 Jul 2011</i> |

Green hotel directory websites

| | |
|--|--|
| <i>Environmentally Friendly Hotels.com</i> | <i>http://www.environmentallyfriendlyhotels.com/siloso_beach_resort_3919.html</i> |
| <i>Greenty.com</i> | <i>http://www.greenty.com/singapore-eco-hotels/siloso-beach-resort-sentosa.aspx</i> |

Blogs (Selection)

| | |
|---|---|
| <i>"Trip to Siloso Beach Resort 2010"</i> | <i>Singapore Polytechnic Website (http://www.sp.edu.sg), 26 Nov 2010</i> |
| <i>"Corporate Visit to Siloso Beach Resort"</i> | <i>NUS MBA website (http://www.mba.nus.edu), 19 Feb 2011</i> |
| <i>"Eco Tour to Siloso Beach Resort"</i> | <i>Nan Huah high website (http://www.nanhuahhigh.moe.edu.sg), 20 May 2011</i> |
| <i>"SFU MBA's in Singapore: Siloso Beach Resort" by Eva</i> | <i>SFU Beedie School of Business website (http://www.afewgoodminds.com), 22 Dec 2011</i> |
| <i>"What Siloso Beach Resort can teach you about developing a Sustainable Resort Hotel"</i> | <i>Development Advisor.com (http://thedevelopmentadvisor.com)</i> |



Siloso Beach Resort Website (www.silosobeachresort.com)
– Extensive “Green Initiatives” section featuring:

| | |
|------------------------------------|---|
| <i>Slideshow</i> | <i>An introductory slideshow, briefly explaining key eco-features through pictures and short text</i> |
| <i>Projects and Eco Tours Blog</i> | <i>A regularly updated blog, featuring SBR’s environmental projects and Eco Tours</i> |
| <i>Eco-features PDF</i> | <i>In-depth PDF document that highlights SBR’s eco-features</i> |
| <i>Awards and Certifications</i> | <i>All of SBR’s environmental awards and certifications are explained in detail on the website</i> |



Magazines (Selection). Articles and advertisements in Magazines that promote SBR as an Eco-Resort

| Magazine Name | Title and Page | Date |
|---|--|-------------------------|
| FORE! | "Sentosa's Latest Alluring Retreat" | Jul to Sep 2006 |
| NewMan | "BACK TO NATURE," pg 28 | Jun-08 |
| Changi Class | "A Dream Resort" | Nov-08 |
| HRM Singapore, | "Business at the beach," pg 76-77 | Dec-08 |
| The Amicalist | "A Dream Resort" | 2-Dec-08 |
| THE PADANG | "A Dream Resort" | Jan to Feb 2009 |
| THE PADANG | "A Dream Resort" | 20-Mar-09 |
| Changi Class | "A Dream Resort" | Apr-09 |
| Singapore Business Review | "A Dream Resort" | Display to 31 May 2009 |
| Tiger Tales, | "A Dream Resort" | Jul to Aug 2009 |
| CONNECT | "A Dream Resort" | Jul to Sept 2009 |
| Singapore Business Review | "A Dream Resort" | Display to 31 July 2009 |
| The Veteran | "A Dream Resort" | Aug-09 |
| Home Team NS | "Eco-friendly resort," pg 2 | Sep to Oct 2009 |
| HRM Singapore | "A Dream Resort" | Nov-09 |
| Swagg | "A Dream Resort" | Nov-09 |
| JETSTAR ASIA | "A Dream Resort" | Dec 2009 to Jan 2010 |
| HRM Singapore | "A Dream Resort" | Dec-09 |
| Brides | "In the heart of nature" | Dec to Feb 2009 |
| Tiger Tales, | "A Dream Resort" | Jan to Feb 2010 |
| HRM Singapore | "A Dream Resort" | Jan-10 |
| JETSTAR ASIA | "A Dream Resort" | Feb to Mar 2010 |
| HRM Singapore | "Siloso Beach Resort" | Feb-10 |
| HRM Singapore | "A Dream Resort" | Apr-10 |
| HRM Singapore | "A Dream Resort" | May-10 |
| JETSTAR ASIA | "A Dream Resort" | Jun to Jul 2010 |
| HRM Singapore | "A Dream Resort" | Jun-10 |
| Select Hotels and Resort's International | "Singapore's Premier Island Resort," pg 57 | 2009-2010 Guide |
| Best of Singapore, Volume 8 | "A tropical resort like no other" pg 132-133 | Volume 8 |
| NUS Business School Global Alumni, pg 38-39 | "Refresh the Senses" | 2010 |
| Robb Report Singapore | "The Paradise Next Door" | |
| Wealth | "Barefoot Luxury" by Jolene Limuco, pg 69 | |
| Signature | "A Dream Resort" | |



Direct Contact (Events, Networking, word of mouth, etc.)

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| <p><i>SBR Eco Tours</i></p> | <p><i>The tour takes an in-depth look at SBR's environmental activities. The program typically lasts 2 hours, and can be extend up to a full day. It has been attended by over 2800 persons, and significant additional awareness of SBR's activities is created from word of mouth.</i></p> |
| <p><i>Sustainability workshops and seminars</i></p> | <p><i>Regular attendance at capacity building workshops and Seminars hosted by groups like MEWR, Singapore Compact, and Singapore Business Federation. Participation in NEA's PS21 ExCel Convention as Learning Journey Partner.</i></p> |
| <p><i>Event Sponsorships</i></p> | <p><i>Have hosted and sponsored events for various environmental groups such as Singapore Compact, Singapore Environmental Council, and WWF</i></p> |
| <p><i>In House Guests</i></p> | <p><i>On-site educational materials make guests aware of SBR's status as an Eco Resort:</i></p> <ul style="list-style-type: none"> <i>•Various panels explaining environmental issues</i> <i>•Posters of biodiversity with educational text</i> <i>•TV channels dedicated to environmental education</i> <i>•Messages to guests about conserving resources</i> |