

Jetwing

AYURVEDA PAVILIONS
NEGOMBO • SRI LANKA

GREEN DIRECTORY

© 2012, Jetwing Ayurveda Pavilions
Written and compiled by Sriyanie Miththapala

Other Jetwing Green Directories:

Jetwing Beach Hotel, Ethukala, Negombo, Sri Lanka

Jetwing Lighthouse, Dadella, Galle, Sri Lanka

Jetwing St Andrew's, Nuwara Eliya, Sri Lanka

Jetwing Vil Uyana, Rangirigama, Sigiriya, Sri Lanka

www.jetwinghotels.com

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View from the restaurant of Jetwing Ayurveda Pavilions



The Green Directories of Jetwing Hotels

Jetwing is active in many facets of Corporate Social Responsibility (CSR). The purpose of this book is to document some of our work in the sphere of environmental and community activities. We hope this will be useful to our guests, tour operators, students and the media to understand better some of the work in which we are engaged.

Some of our informed and conscious decisions are not readily apparent. For example, it may not be evident that a hotel has asked suppliers to reduce unnecessary packaging, had switched to energy efficient lights or had an active programme of always striving to reduce wastage, promptly replacing leaking taps, etc.

Thanks to Jetwing, practices such as the use of wildlife information boards and bird watching hides are becoming established in hotels in Sri Lanka. Some areas of our work may not be so obvious. An example is the effort and money spent on training local service suppliers - such as trishaw drivers - so that they became quality-accredited business partners.

We would like to thank Dr. Sriyanie Miththapala, who is engaged in a series of on-going training programmes to educate our staff on environmental best practices. She has introduced a framework of environmental audits and has documented work at our hotels in the form of Green Directories such as this. What you see here is only a snapshot in time, of a continuous process, of striving for excellence and serving the community to discharge our responsibilities as a responsible corporate citizen of Sri Lanka.

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The Jetwing Vision

To Be World Class In Everything We Do

Our values

Passion: We are passionate about what we do.
Enthusiasm and devotion are part of our DNA.

Humility: We demonstrate humility by being open-minded
and having a healthy respect for others.

Integrity: Integrity is a part of who we are.
We value honesty and say and do the right things consistently.

Tenacity: Always tenacious, we take big challenges
and persist until we succeed consistently.

The Jetwing Mission

We are a family of people and companies
committed to legendary and innovative service
leading to high stakeholder satisfaction.



Jossticks and temple flowers for fragrance

Jetwing Environmental Policy

Jetwing Hotels take all possible steps to protect and maintain a clean and healthy environment.

We are committed to:

- Conserving our natural resources by minimising our negative impacts through the implementation of routine actions and by sustainable management, as well as through education;
- Wherever possible, protecting and enhancing all ecosystems;
- Conserving energy and water;
- Minimising pollution by reducing the use of harmful substances;
- Making all efforts to mitigate and adapt to climate change;
- Reducing, reusing and recycling waste;
- Complying with relevant environmental legislation and regulations;
- Employing local people wherever possible;
- Purchasing local products and services, where possible and feasible, in accordance with our environmental purchasing policy.
- Always seeking to achieve a safe and sustainable environment for our community, future generations and ourselves.



View of Muthurajawela Marsh

Introduction

There are nearly seven billion people on earth who need food, clean water, clothing, shelter, good health and other basic amenities. All these services are obtained from the environment – from ecosystems, to be specific. Provisioning ecosystem services provide humans with goods – such as food, fuel, medicines, clothes and shelter. Supporting ecosystem services – such as the diversity of flora and fauna; primary production (the manufacture of food by green plants that sustains life on earth); pollination; soil formation; the balancing of gases in the atmosphere that provides oxygen for most life on earth; degradation of waste; cycling of essential nutrients and water – all affect human health and well-being. Ecosystems – such as mangroves - provide a physical barrier to storms and their roots serve to regulate floods, while forests make the climate even, providing regulating ecosystem services. Cultural ecosystem services provide humans with non-material benefits through spiritual enrichment, development of learning, recreation and aesthetic experience.

Ironically, although human well-being is so intimately inter-linked with ecosystems, in seeking to improve their well-being, humans are over-using, over-stressing and over-exploiting biological resources and damaging the environment. By doing so, they are destroying the very resources they need to improve the quality of their lives.

Although the use and consumption of biological resources are so critical for life, in recent decades and, indeed, during the whole of the last century, this consumption has been not only extreme and inequitable, but frequently unwarranted. Energy and water are used excessively and wasted. Global use of coal, oil and natural gas is 4.7 times higher now than in the middle of the last century. The accumulation of carbon dioxide and other gases is causing the earth to overheat with disastrous long-term consequences. Over-use of ground water is causing water tables to decrease in many countries and the quality of freshwater is being poisoned by runoff from industrial, agricultural and domestic pollutants. Our waste, notably plastic – the wonder product of the mid 20th century - is filling up arable and liveable land.

Tourism can place heavy, additional stresses on an already seriously overstretched environment by its greater consumption, waste production and pollution.

As stated in the World Wide Fund for Nature Living Planet Index 2006 “Effectively, the Earth’s regenerative capacity can no longer keep up with the demand – people are turning resources into waste faster than Nature can turn waste back into resources. Humanity is no longer living off Nature’s interest, but drawing down its capital.”

Thus, there is a very urgent need for responsible and sustainable use of biological resources that reduces, re-uses and recycles.



Jetwing Ayurveda Pavilions: wellness and the environment

Jetwing Ayurveda Pavilions is a purpose-built health resort located on the west coast of Sri Lanka, in Ethukala, Negombo.

Jetwing Ayurveda Pavilions has a village-like charm and comprises just 12 villas. The design of each villa is based on old Sri Lankan houses, with a private courtyard and verandah. Each villa also has its own private treatment area.

The gardens are filled with verdant tropical vegetation and medicinal plants.

Jetwing Ayurveda Pavilions offers treatments that are prescribed by qualified Ayurveda doctors who supervise therapists and monitor the patient's reactions and progress with daily diagnoses. Preventive and curative programmes, as well as special packages are offered.

The treatments and the tranquil ambience combine to provide relaxation for the body, mind and soul, in tune with the environment.

The Pavilions is committed not only to ensuring wellness of body and mind but also to preserving and conserving nature. The Pavilions practises responsible environmental management that reduces, reuses and recycles natural resources. To this end, sound practices of energy and water conservation, air quality and pollution management and reduction, use of environmentally friendly resources, recycling, and environmentally friendly purchasing, in keeping with existing laws and regulations, have been introduced. Regular awareness programmes for guests are carried out and the need for involving local communities in these efforts is recognised.

Key Performance Areas for Environmentally-sound Management at Jetwing Ayurveda Pavilions

Energy conservation and optimisation; Water conservation; Waste water management; Waste management; Maintenance of air quality and reduction of emissions of greenhouse gases; Prevention of chemical pollution; Erosion control and landscaping; Using environmentally-friendly products; Environmentally-friendly purchasing; Health and eco-consciousness; Corporate Social Responsibility and Biodiversity Conservation.



A doctor assessing the body type © Jetwing Hotels



An ayurvedic facial © Jetwing Hotels



Meditation © Jetwing Hotels

Ayurveda: the science of life

Ayurvedic doctors emphasise balance of mental and physical well-being, and believe that each element can influence the other. One of the fundamental aspects of ayurvedic medicine is to take this into account during diagnosis and therapy.

Ayurveda stresses a balance of three life forces or '*dosas*' as they are called: *vayu vata* (air and space: 'wind'), *pittha* (fire and water: 'bile') and *kapha* (water and earth: 'phlegm'). According to ayurveda these three *dosas* must be balanced for good health; when they are not, the body will be unhealthy.

Ayurveda uses plant-based medicines and treatments. Some animal products may also be used, for example milk and honey.

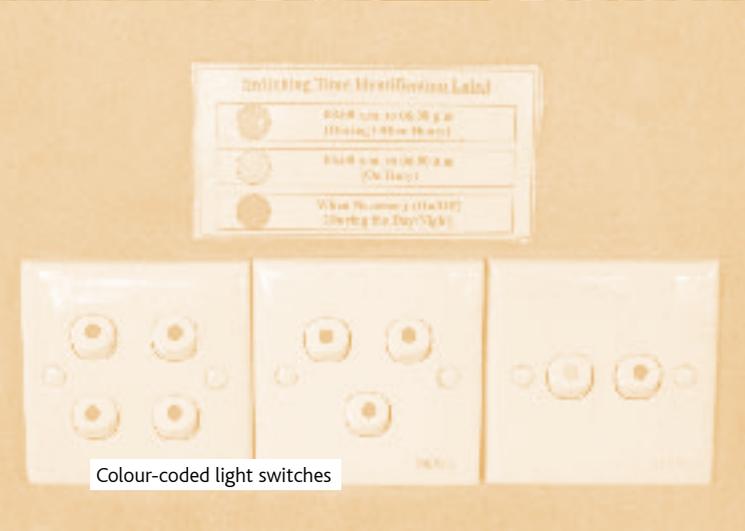
In Ayurveda, the focus is not on looking for a specific disease but instead trying to diagnose the unhealthy phenomenon occurring in a particular individual. Then, it focuses on treating the cause rather than the symptoms.

Ayurveda helps, *inter alia*, in the prevention of ageing, reducing fatigue, curing nervous disorders, improving eyesight, nourishing tissues, prolonging the life span, correcting sleep disturbances, correcting stresses and strains, as well as joint and bone disorders, improving digestion, enhancing beauty and complexion, and curing various diseases that do not respond to allopathic treatment.

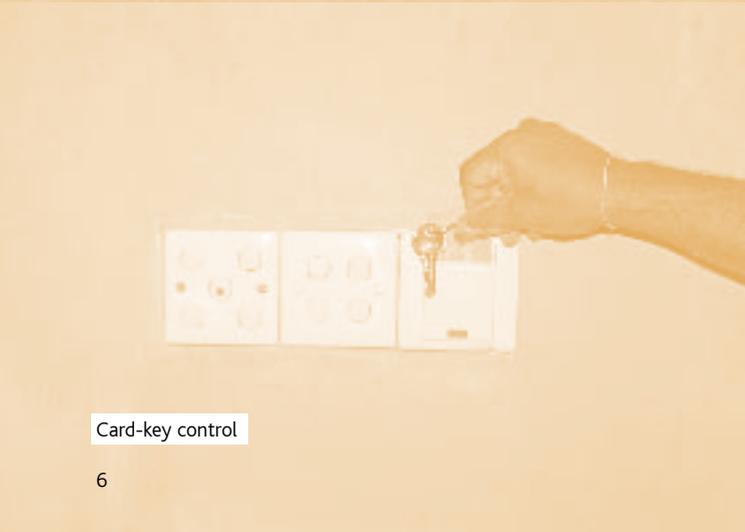
Jetwing Ayurveda Pavilions has a team of qualified and experienced doctors and therapists who effectively administer these treatments.



Solar panels for hot water



Colour-coded light switches



Card-key control

Energy Conservation

Since 1971, global use of energy has increased by 70% and is expected to continue to increase by 2% per annum in the future. Energy is obtained from various environment-related sources such as fossil fuels (coal, peat and gas), wood, wind, sun and water. The burning of fossil fuels to obtain energy releases carbon dioxide (CO₂) into the atmosphere.

As a result of excessive use of fossil fuels, during the last century, the concentration of CO₂ in the atmosphere rose by twelve fold, increasing the heat of the Earth. (See page 15.) In Sri Lanka, the net consumption of electricity doubled between 1992 and 2002. As a result of this increase, energy resources will be depleted and atmospheric pollution will increase.

Sri Lanka relies on hydro-power for its electricity, and is, therefore, dependent on the vagaries of annual monsoonal rains. When there was inadequate rain in 2001, daily power cuts - increasing up to eight hours a day - were imposed, seriously disrupting public life and the economy.

It is essential, therefore, that frugal use of power and energy becomes routine for everybody.

Energy Conservation at Jetwing Ayurveda Pavilions

- A colour code system is used to switch on/off lights on a scheduled basis and a daily shift supervisor is held responsible for this.
- Daily monitoring of usage of electricity and diesel is carried out. This is compared against occupancy levels and any irregularities are raised at daily briefings.
- A card-key system is in operation in rooms to ensure that lights and a/cs are not left on when guests are not in their room. This has resulted in a saving of 28,881.72kWh per year (assuming 70% occupancy and a 6-hour switch off period).
- Nearly ninety nine percent of the bulbs used in the hotel are energy-saving, translating to a saving of 18,460.4kWh of electricity per year (assuming 70% occupancy and a 6-hour switch off period).
- Minimum wattage is used on all lights in the hotel, to reduce electricity consumption.
- Staff are trained routinely about energy conservation.
- Preventative maintenance is carried out on a planned schedule. During these checks, temperature controls are examined to prevent over heating and over cooling, light fixtures are cleaned and equipment.
- New LED-backlight LCD televisions, which consume less power, have been installed in guest rooms. This translates to a saving of 689.85 kWh per year (assuming 3 hours of usage and 70% occupancy).
- Solar heating is used in the villas for hot water. This results in a saving of 5,475 litres of diesel and 14,600 kg of CO₂ not released into the atmosphere per annum.



Treated sewage water being used for the garden



Adding 1 litre bottles to cisterns



Promptly fixing leaks

Water Conservation

Two thirds of the earth is water but of this, most is salt water and only three percent of all the world's water is fresh water. Of this fresh water, two percent is trapped in ice, leaving only one percent of this planet's fresh water to support all life on earth.

The rate of global freshwater consumption increased six fold between the beginning and end of the 20th century. About 20% of the world's population lacks access to safe drinking water and about 50% lacks adequate sanitation. This means that about one-third of the world's population already lives in countries in areas where water consumption exceeds the renewable freshwater supply. It has been estimated that if present consumption trends continue, two thirds of the world's population will live in water-stressed conditions by the year 2025.

Not only is water scarce, but it is also polluted by sewage, fertilisers, pesticides and industrial effluents.

The tourism industry generally over-uses water resources for their hotels, swimming pools, golf courses and personal use by tourists. Therefore, water conservation becomes extremely important in hotels.

Water Conservation at Jetwing Ayurveda Pavilions

- Treated water from the Sewage Treatment Plant is used for the garden.
- Water storage tanks and taps are checked daily for leakages by a duty technician.
- Housekeeping staff have been made aware about the need for vigilance about water leaks in guest rooms.
- The staff has been trained to reduce water when rinsing dishes for the dishwasher.
- Preventative maintenance is carried out on a planned schedule. During these checks, *inter alia*, valves and level controls of water tanks are examined for leaks.
- There are water saving messages in guest bathrooms, public areas and staff bathrooms.
- One litre plastic bottles have been inserted in cisterns, resulting in an approximate saving of 18,250 litres of freshwater per year (assuming 75% occupancy and 5.5 flushes per day per room).

- Each small leak wastes a lot of water. A leak that fills up a coffee cup in 10 minutes will waste over 11,000 litres of water a year.
- A leaky toilet can waste over 83,000 litres of water in one year.



Sewage Treatment Plant at Jetwing Ayurveda Pavilions

Waste Water Management

Human development settlements – such as hotels – result in increased sewage pollution, increased wastewater (laundry and bath wastes, kitchen water etc.). In the past, such waste water has polluted seas and lakes surrounding tourist attractions, not only damaging the environment, but also posing serious threats to human health.

Many tourist facilities in the developing world lack proper sewage disposal facilities. A 1994 study of Caribbean hotels revealed that 80-90% of sewage was being discharged without proper treatment into coastal waters.

Waste Water Management at Jetwing Ayurveda Pavilions

- All waste water and sewage collected in the Hotel is directed to the Sewage Treatment Plant where it is treated to meet the Central Environment Authority Standards. The operation of this plant starts with an equalization tank where all waste water is collected and pumped into the treatment tanks with equalized flow. Then this waste water with equalized flow goes into a treatment tank where waste water is treated will be treated anaerobically. It is then sent to a clarifier. In the clarifier this treated water is filtered by a gravity settling method. This treated and filtered water is then sent to the treated water collecting tank where it is be pumped back to garden sprinkler system.
- Clarified water produced from the STP is used for watering the garden.
- Bath water is also sent to the STP.
- A technician has been dedicated to check the STP every day.
- Every six months, an external company checks the water quality, so that discharged water meets the required standards of the Central Environmental Authority.

- A city of one million people produces 500,000 tons of sewage each year.
- It has been estimated globally, that the world's cruise ships discharge 90,000 tons of raw sewage and garbage each day into the world's oceans.
- Disney World in Florida USA uses 15.2 million of wastewater for landscaping and watering golf courses. This has not only been an environmentally-sound practice, but also cost effective.

Solid Waste Management

In natural ecosystems, animal and plant waste and other organic matter are disposed of speedily by a suite of detritivores ('dirt eaters'), decomposing bacteria and fungi. Humans have seriously disrupted this balance by producing vast mounds of waste, much of which is non-degradable. Human trash is, therefore, accumulating globally at an alarming rate.

Urban and developed areas can generate an enormous amount of solid waste. In Asia, it is estimated that urban areas generate 760,000 tonnes of waste daily, and this is predicted to increase by 2025 to 1.8 million tonnes per day. Sri Lanka is estimated to generate 0.89 kg per capita per day of municipal solid waste.

Apart from looking unseemly, solid waste increases the breeding spots of many disease carriers – such as mosquitoes and rats – and therefore, increases the spread of disease. Solid waste can also wash into waterways, causing water pollution or leach into and contaminate ground water. It also generates methane, a greenhouse gas.

Solid waste management therefore, needs to ensure that the generation of waste is a) minimised, b) collected effectively (separated into non-degradable and biodegradable waste), c) treated and d) disposed of responsibly.

The key to sustainable solid waste management is, therefore, to reduce, reuse and recycle waste.

Solid Waste Management at Jetwing Ayurveda Pavilions

In order to minimise waste,

- The use of plastic has been reduced. (See also under section on Use of Environmentally Friendly Materials.) For example, guest laundry is collected and delivered in cane baskets.
- Plastic cutlery is not used.
- The use of plastic straws with cocktails or soft drinks has been reduced drastically.
- Garbage bags are now used only for kitchen wet garbage and oil from the oil traps, resulting in a saving of 1,000 garbage bags in six months.
- Office stationery is reused.

For effective separation of waste,

- Garbage and trash are separated at their sources of origin in all departments – such as the kitchen, housekeeping and maintenance. In these areas, there are colour-coded garbage bins that separately hold glass and plastic, paper and cardboard, polythene and plastic and wet garbage.
- All staff have been trained and are monitored in the separation of garbage.
- Guests are requested to bring back picnic boxes and plastic water bottles so that they can be disposed of properly.

For treatment and disposal of solid waste,

- Garden waste is composted.
- Wet garbage is sent to a piggery.
- Plastics, glass, metal and paper are sold for recycling and reusing. Income from the sales are credited to the Staff Welfare Society.

- REDUCE! In New York City alone, one less grocery bag per person per year would reduce waste by five million pounds and save 250,000 USD in disposal costs.
- REUSE! Recycling and reusing the material in tin cans reduces related energy use by 74%; air pollution by 85%; solid waste by 95%; and water pollution by 76%.
- RECYCLE! Recycling helps reduce greenhouse gas emissions. Every ton of mixed paper recycled can save the energy equivalent of 185 gallons of fuel.

- In the U.S., New York City alone throws out enough garbage each day to fill the Empire State Building.
- Every year, Americans throw away enough paper and plastic cups, forks and spoons to circle the equator 300 times.
- Every hour, British households throw away enough trash to fill the Royal Albert Hall.

- The average cruise ship in the Wider Caribbean Region (from Florida to French Guyana) carries 600 crew members and 1,400 passengers and generates 7,000 kg of garbage every day.
- Trekking tourists in the mountainous areas of Nepal and Peru have left so much trash behind that now certain trails have been dubbed 'The Coca-cola Trail' and 'The Toilet Paper Trail'.
- Globally, 28 billion bottles and jars are discarded every year.



View of the pool area

Responding to climate change, air quality management and reduction of air pollution

Emissions of carbon dioxide (CO₂), nitrous oxide and methane (collectively called greenhouse gases) have increased since the time of the industrial revolution. These gases function much like glass panes in a greenhouse, allowing light in, but preventing heat from escaping, warming the earth. During the last century, the concentration of CO₂ in the atmosphere rose by twelvefold, resulting in global warming. Humans excessively use coal, oil and petrol; factories spew out enormous quantities of CO₂ into the atmosphere; forests (that serve to soak up CO₂) are decimated. Every year, about 23 billion metric tonnes of CO₂ are emitted into the atmosphere. The result of these emissions and the resultant increased greenhouse effect is a measurable warming of the earth. The last century recorded the largest increase in global temperature, with the 90s as the warmest decade in a century, and 2005 was the hottest of all.

As a result of this warming, profound changes are occurring in global weather patterns and resulting in climate change. Global warming is, *inter alia*, causing glaciers to melt, with an associated sea level rise, increasing extreme weather events (such as intense rainstorms and cyclones, floods, increased heat and drought), as well as causing changes in the world's water availability. All these changes have overwhelmingly negative effects both on human and ecosystem well-being.

Climate change, therefore, is an extremely grave environmental issue with over-arching and long-term consequences.

Effective and prompt response to the impacts of climate change has, therefore, become imperative. One way to do this would be to mitigate the effects of climate change, i.e., reduce carbon emissions. But, mitigation alone will not be enough. Even if greenhouse gas emissions are reduced drastically, the current effects of climate change will be felt for several decades more. Therefore, a second strategy for dealing with climate change – adaptation – also becomes essential. Adaptation, simply, is accepting that climate change – and natural disasters – will occur, and being prepared.

Meanwhile, the ozone layer, which protects the earth from harmful radiation from the sun, is being destroyed by certain air pollutants: Chlorofluorocarbons (CFCs). Again, the effect of ozone depletion is acutely damaging, particularly to human health. CFCs are used in the manufacture of aerosol sprays, blowing agents for foams and packing materials, as solvents, and as refrigerants. Reducing emissions of CFCs is also, therefore, essential for wise management of the environment.

Responding to climate change, air quality management and reduction of air pollution at Jetwing Ayurveda Pavilions

- The use of aerosols for mosquito control has been drastically reduced and used only in emergencies.
- Every year, emission tests are carried out for all the hotel vehicles.
- Vehicles are serviced on a regular schedule to ensure optimum performance and minimum emissions.
- Natural air fresheners – mainly flowers – are used instead of chemical air fresheners.
- Many of the chemicals used in the hotel are environmentally friendly and non-hazardous and cleaning agents that are used are reduced in strength.
- The Pest Control Service uses non-persistent, biodegradable chemicals.
- Incineration is never used as a means of garbage disposal.
- Picnic boxes are made of paper, not styrofoam.
- New purchases of refrigerators are all energy-star appliances that are CFC free.

Responding to climate change at Jetwing Ayurveda Pavilions: Mitigation

- Many energy conservation activities are in place. (See Section on Energy Conservation.)
- There is an active effort to establish carbon offsets – i.e., planned planting of trees that absorb carbon dioxide (i.e., are carbon sinks). Guests are encouraged to participate in the Jetwing Eternal Earth Project (see next page) and also to plant suitable trees in the premises.

Responding to climate change at Jetwing Ayurveda Pavilions: Adaptation

- Water Conservation is practised. (See section under Water Conservation.)
- Planned reduction, reusing and recycling of solid waste and waste water has been established by the Management. Staff training for this purpose has been carried out and is repeated monthly. (See relevant sections.)

Overall reduction of greenhouse gas emissions as a result of actions taken at Jetwing Ayurveda Pavilions

Per Occupancy	
Monthly carbon footprint	2.55 tonnes
Annual carbon footprint	30.6 tonnes
Per guest carbon footprint	7.65kg per guest per month



The verdant garden

Jetwing Eternal Earth Programme (JEEP)

The Jetwing Eternal Earth Programme (JEEP) is the umbrella term used for all community and nature-based projects undertaken as a responsible tourism initiative by Jetwing. JEEP is split into the following components:

- **Corporate Social Responsibility:** Ongoing projects carried out assist the communities surrounding all Jetwing hotels. 'Trees for Life', one of our most prominent CSR initiatives is described below in more detail.
- **Sustainability at Jetwing Hotels:** Sustainable measures of practice implemented to 'green' Jetwing Hotels ensure that all hotels attain high standards of environmental custodianship in both front-end and back-end processes. This is done via the introduction of the Green Directory under the supervision of an independent environmental consultant. Monthly internal audits are also carried out by each hotel to monitor and check on performance.
- **Eco-projects:** Initiatives undertaken by Jetwing in the field of conservation and raising awareness on the environment. For example, the Jetwing Research Initiative (JRI) provides the logistics to support the projects undertaken by researchers as we believe this helps the tourism industry to develop partnerships with scientists and conservationists to protect Sri Lanka's biodiversity. JRI has supported over the years scientific studies on primates of Sri Lanka, Sri Lanka's dragonflies and the Sri Lankan leopard at the Yala National Park.
- **Humanitarian projects:** Consists of all the short-run measures undertaken at each Jetwing hotel to assist the neighbouring communities. Examples include beach cleanups, donations to rural schools and hospitals, for social construction projects, purchasing of equipment, etc.

For more information on JEEP and some of the other projects carried out, you can visit www.jetwingeternalearthprogramme.com

Trees for Life

Trees for Life is an afforestation programme undertaken adjacent to St. Anne's Church, Talawila in northwestern Sri Lanka that may be replicated/adapted for many climatic zones, as well as at a small-scale. By carefully, selecting tree species which grow only in Sri Lanka's dry zone, Trees for Life seeks to establish, over a period of time, a forested area that aims to enhance biodiversity in what was previously bare land.

Jetwing will use this afforestation model, the process of its establishment and its outcome to raise awareness, targeting the younger generation. Each Jetwing Hotel has two foster schools in their respective areas and conducts educational and awareness programmes for the children on good Earth Saving Practices (ESPs). We have also now taken onboard three new schools from the Kalpitiya Peninsula for the Trees for Life programme. We believe that school children are key players who will influence and educate others to reduce the impacts of climate change.

The first phase of the Trees for Life programme which ran from 2008 – 2011 resulted in over 3,000 trees being planted in a model reforestation project undertaken at Hunas Falls Hotel. On the 20th January 2012, the Trees for Life programme was re-launched at St. Anne's Church in Talawila in the Kalpitiya Peninsula, where in a period of just over two months (as at 31st March 2012), over two hundred trees have been planted from pledge-makers across all Jetwing Hotels.

At Jetwing, the opportunity for a visitor to offset their carbon emissions exists. A guest could invest in doing so at the price of 10 USD per tree. The selected tree will be planted at the Talawila site within 30 days and plotted on a map with a tree number that coincides with the name of the guest and the date of planting. A photograph showing the progress of the tree will be e-mailed to the guest annually.

Trees for Life involves and encourages hotel guests, staff and the local communities in learning, understanding their level of responsibility and the contribution necessary to minimize the impact of global warming and climate change.

Web site : www.eternalearth.net



Using compost made in the Hotel for the organic garden



Natural air fresheners are used at the Hotel



Diluting cleaning chemicals before use

Prevention of Chemical Pollution

Pesticides, herbicides and fungicides are all poisons designed to destroy pests, weeds and fungi respectively. When these poisons are washed off to waterways or leach into ground water, they cause serious water pollution, with very damaging effects for both human health and the environment. Some pesticides are known to be carcinogens, while others cause reproductive defects and damage vital human organs. Persistent chemicals – such as DDT and Hexachlorobenzene (HCB), by definition chemicals that last without breaking down for a long time – as well as relatively short acting chemicals (such as N-Methyl Carbamates), have been and are being used as pesticides. When these chemicals are washed off or accumulate, animals and plants which are not target species but are beneficial to humans are also poisoned. This disrupts the ecological balance in food webs and chains - which, in turn, is detrimental to the functioning of ecosystems and thus, the various services they provide to humans.

Fertilisers used to boost agricultural productivity are as detrimental because they add excess nitrates and phosphates to soil and water. In the last 40 years, nitrogen and phosphorus from sewage and excess fertiliser use has doubled and tripled respectively in the soil, poisoning both soil and water. Excess fertilisers that wash into waterways, cause eutrophication – a process whereby excess nutrients in the water stimulate excessive growth of algae (called algal blooms). These algal blooms block the sunlight from reaching below, thus causing the death of organisms. Increased decomposition in the water reduces the amount of oxygen dissolved in the water, killing off aquatic plants and animals. This, in turn, not only affects natural ecosystem functioning, but also reduces the services that the system provides to humans: clean water, fish and crustaceans, for example.

Measures taken to prevent chemical pollution at Jetwing Ayurveda Pavilions

- Compost from the hotel's compost pits are used as fertiliser in the organic garden.
- The use of fertiliser has been stopped.
- Pesticides, fungicides and weedicides are not used in the garden.
- Cleaning agents are used reduced in strength and used only if they are certified as biodegradable and environment-friendly.
- Natural air fresheners – such as fresh flowers – are used instead of chemical air fresheners.
- The Pest control service uses synthetic pyrethroids (natural pesticides found in plants of the Chrysanthemum family).



Cane products



Ayurveda uses natural products from plants and animals



Herbal toiletries

Using Environmentally-friendly Materials

Plastic, the boon of the mid 20th century, is proving to be the bane of the 21st century. Plastic may be light-weight, low cost and water-proof, but it is an ecological and waste management nightmare. It takes only 2-3 weeks for a banana peel to breakdown in the soil but at least 100-1000 years for a shopping bag to do so.

Plastic not only causes waste management problems (non-degradable waste inevitably piles up) but also ecological disasters. It is reported that, every year, plastic bags kill about 100,000 whales, sea turtles, and other marine animals (many of which are endangered), often by choking them. Plastic bags resemble edible squid and jellyfish.

Polyethylene Terephthalate (PET) which is used to replace glass for containers because it is strong, cheap, unbreakable and lightweight, also does not degrade and accumulates in the environment.

Plastic and its 'relatives' are not friends of the environment, and their use must be reduced drastically, if not banned totally. Instead, the use of environmentally-friendly products should be encouraged in the process of responsible environmental management.

Using environmentally-friendly materials at Jetwing Ayurveda Pavilions

- Laundry is collected and delivered in linen bags.
- The use of plastic straws has been reduced drastically.
- Cocktail stirrers are made out of wood.
- Plastic butter containers, plastic cutlery and plastic flowers are not used.
- The use of aerosols has been reduced drastically.
- Shampoo, conditioner and soaps are now all herbal products.
- Shampoo and conditioner bottles, ashtrays etc are ceramic, not plastic.
- Fruit platters are presented in baskets made of natural products.

- Prior to 2002, Bangladeshis used 19 million plastic bags daily. However, after the Government learned that floods had been worsened because plastic bags clogged Dacca's drainage system, plastic bags were banned in Bangladesh.



Soap in biodegradable packing



Reusable plastic crates are used by suppliers



Biodegradable packing

Environmentally-friendly Purchasing

The waste that humans accumulate is damaging the environment. (See section on Solid Waste Management.) Certain products that we purchase may heavily use power and energy, thereby draining already depleted natural resources. In order to reduce this damage, we have to ensure that the products we buy a) generate waste that is mostly biodegradable, b) are energy and power saving and c) do not add to the degradation of air quality by adding CO₂ and CFCs into the atmosphere.

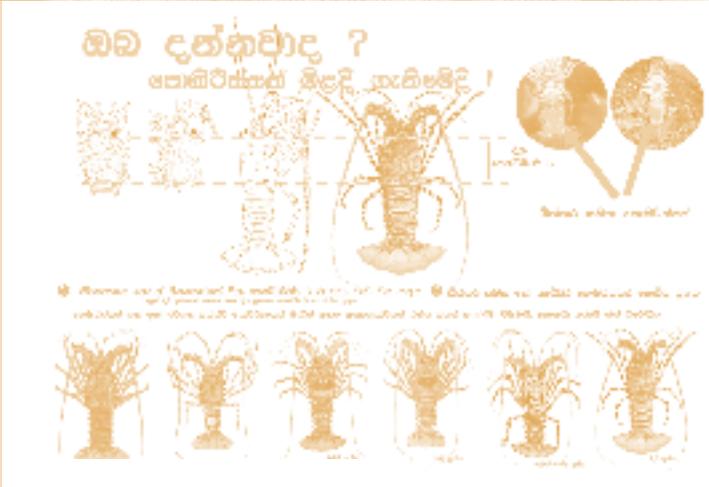
In addition, transporting produce and food products from far away adds to generation of more greenhouse gases. Hotels, which purchase products in bulk and transport these long distances, need to be acutely conscious of the above. To this end, environmentally-friendly purchasing is an important and vital tool of environmental management in hotels.

Environmentally-friendly Purchasing at Jetwing Ayurveda Pavilions

- Most suppliers deliver purchases in environmentally-friendly wrapping.
 - Reusable crates are used in purchasing vegetables and fruits.
 - Wherever possible, the Hotel purchases local goods.
 - Local suppliers who use environmentally-friendly packaging are used preferentially.
 - A letter was sent out by the management of Hotel to all local suppliers asking them to change their packaging to environmentally-friendly packaging. Of 14 such suppliers, three could not change because of requirements for hygiene. Eight of the rest changed their packaging to environmentally-friendly packaging.
-
- A Kiwi fruit flown from New Zealand to Britain emits five times its own weight in greenhouse gases,
 - Each year, Australia throws away more than 1.7 million tonnes of packaging.
 - To encourage companies to use environmentally- friendly materials in packaging many governments are now adopting extended producer responsibility (EPR) laws that require manufacturers to take back products at the end of their working life. More than 30 countries now have EPR laws.
 - Many companies are now manufacturing goods with parts that can be either recycled or reused. For example, 70-90% of weight of Xerox brand machines returned to the parent company can be rebuilt.



An individually catered meal



Poster about lobsters © Nadeera Weerasinghe



Venison is not legal in Sri Lanka (c) Gehan de Silva Wijeyeratne

Health and Eco-consciousness

While in many parts of the world, infectious diseases such as diarrhoea, malaria, tuberculosis and HIV/AIDS pose serious problems, in other parts of the world the so-called 'diseases of affluence' – cancer, diabetes and heart disease – are on the increase. Although in part, these diseases are on the increase because human life expectancies have increased due to better living conditions, they have also increased due to certain lifestyles that include poor eating habits among other factors. Eating animal products high in saturated fat and cholesterol is linked to heart disease. In North America and Europe, more than 30% of cancers are associated with diet.

In addition, for the first time in recorded history, the number of overweight people is starting to equal the number underweight. This spread of obesity is no longer confined to rich countries, but is linked to all the diseases of affluence.

Being conscious of what you eat in terms of your health has become extremely important in today's world.

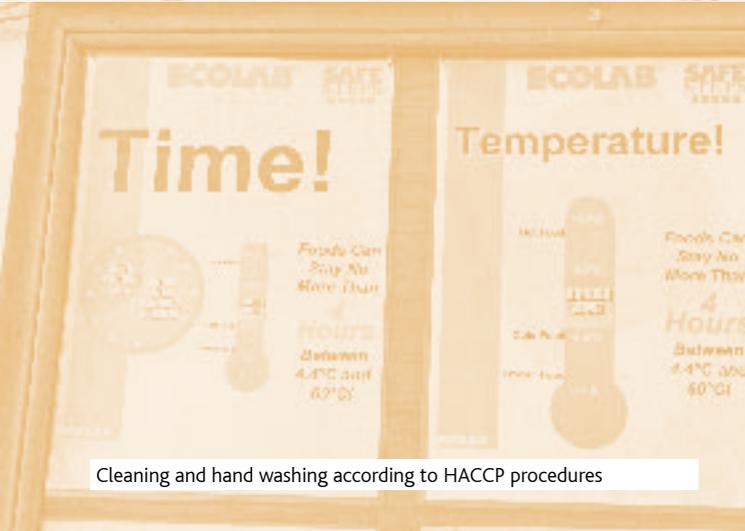
Meanwhile, some people also crave luxury foods that are rare and exotic. In addition to being grossly expensive, the increased demand for these foods has led to over-exploitation of many species. When species become threatened, often their international trade is either prohibited or regulated strictly and national laws prevent their harvest. Thus, it is important to be conscious and aware of what you may legally eat in a given country.

Health and eco-consciousness at Jetwing Ayurveda Pavilions

- The Hotel individually caters Ayurvedic meals according to the body constitution and on the doctor's advice for clients obtaining treatments.
 - Wherever possible, the hotel serves organically grown vegetables from the hotel garden.
 - Herbal porridges, fresh fruits and traditional, healthy, Sri Lankan meals are also provided.
 - Meats of protected species are not served in the Hotel.
 - Kitchen staff are trained to identify specimens (such as immature and egg-bearing lobsters) that are illegal to purchase.
 - The Hotel is HACCP certified in food safety standards. (See overleaf.)
- More than 300 million people in the world are obese, and of them, 15 million live in developing countries.
- It is against the law to eat venison, turtle and dolphin flesh in Sri Lanka.
- Harvest of lobsters is not allowed during the breeding season, when female lobsters are bearing eggs. It is only allowed for lobsters with a head and chest length larger than 7".



Colour-coded dish cloths



Cleaning and hand washing according to HACCP procedures



Maintenance schedules for equipment

The HACCP programme at Jetwing Ayurveda Pavilions

The Hazard Analysis Critical Control Points (HACCP) programme is a systematic approach to identifying and controlling hazards related to the safe cooking and presentation of food.

The first HACCP programme was developed by the Pillsbury Company in response to a request by NASA to provide a safe method of food testing that tested critical points of the entire food production process, and was a preventative control system rather than a sampling control system. The process that Pillsbury developed controlled a) the quality of raw materials, b) the processing system, c) the environment in which the process occurred, d) the personnel involved in the process, and e) the storage and distribution systems.

This process is now practised widely in the hotel industry and is recommended by the joint FAO/WHO food standards programme and Codex Alimentarius Commission UK as well as by the Sri Lanka Standards Institution.

The International Organization for Standardisation (ISO) 22000 (which is a worldwide federation of national standard bodies) awards its ISO standards to any organisation that rigorously follows a HACCP programme.

The Pavilions has readily embraced the concept and practise of HACCP. This is approved in accordance with the requirements of SLS 1266:2005 concerning the products/processes and facilities described in the authorized schedule.

The seven principles of HACCP

Principle 1: Conduct a hazard analysis.

Principle 2: Identify critical control points.

Principle 3: Establish critical limits for each critical control point.

Principle 4: Establish critical control point monitoring requirements.

Principle 5: Establish corrective actions.

Principle 6: Establish record keeping procedures.

Principle 7: Establish procedures for ensuring the HACCP system is working.



A guest planting a seedling in the organic garden.



Bitter Gourd being grown near a villa



Limes harvested from the organic garden

Landscaping and Organic Gardening

Because tourism is the world's fastest growing industry, its sheer speed and scale has had a serious impact on the environment. Where tourist infrastructure development (e.g. hotels, marinas, transport, waste treatment facilities, groynes, golf courses, beach access and parking, etc.) has been careless, without reference to existing environmental laws, many forms of environmental damage – such as erosion, pollution, habitat destruction (clearing of forests, filling of wetlands) have and still ensue, damaging the services that natural ecosystems provide to humans.

Erosion not only causes severe ecological problems but also economic ones. As the world saw so clearly in December 2004, facilities sited on beaches are extremely susceptible to extreme weather events and the effects of accelerated sea level rise.

The erosion of beaches and consequent loss of recreational areas due to the construction of tourist facilities on the coast has led a number of countries to adopt coastal laws. In Sri Lanka a second generation Coastal Zone Management Plan exists, where set backs of no-build zones are recommended according to the vulnerability of the site.

The recent global Millennium Ecosystem Assessment has revealed that pollution, habitat destruction and Invasive Alien Species (IAS) are three of five major forces that damage ecosystem services. (IAS are introduced species that do not stay confined to the area into which they were introduced, compete vigorously with native species, become established in natural ecosystems, and have the potential of eradicating native species.)

Pollution in the form of pesticides and fertilisers can poison waters. Since 1960, the Millennium Ecosystem that the amount of nitrogen found in terrestrial ecosystems has doubled and phosphorus amounts tripled. Therefore, cultivation without chemicals has now become urgently important.

It is imperative, therefore, that hotels ensure that their built infrastructure minimises damage to the environment, that their garden landscaping is carried out with conscious efforts to minimise damage from IAS, minimise chemical pollution and to maximise ecosystem services from the environment. It is also essential to initiate organic gardening.

Landscaping and Organic Gardening at Jetwing Ayurveda Pavilions

- Invasive species or potentially invasive species have been replaced with native species.
- A flourishing organic garden was flooded and ruined in January 2010. This is currently being replanted.



Guests on a nature tour



A Purple Heron in Muthurajawela Marsh



Plain Tiger seen on the premises

Conservation Education and Biodiversity Conservation

At the United Nations Millennium Summit held in 2000, the world's leaders acknowledged the enormity of the challenge of mitigating environment-related problems. In the same year, the then UN Secretary General Kofi Annan called for the first-ever international scientific assessment of the health of the world's ecosystems, the Millennium Ecosystem Assessment.

The results of this assessment five years later (involving nearly 2,000 experts from 95 countries) were alarming. Of 24 ecosystems assessed, 15, or 60%, are being degraded. The services to humans from those ecosystems – such as fisheries, supply of freshwater, water purification, flood control, air quality and climate regulation and pest control – have also been damaged. The five major drivers of ecosystem degradation were identified as a) over-exploitation, b) invasive alien species, c) habitat destruction and change, d) pollution and e) climate change. All these threats severely affect the well-being of humans, including the collapse of the fisheries industry, the higher incidence of existing diseases, the emergence of new diseases and the increase of natural disasters. Worst of all, this degradation is worsening living conditions for the world's poor.

Thus, the creation of awareness about the present state of the planet and what individuals can do about it, as well as conservation education, has become essential facets of good environmental management.

Conservation Education and Biodiversity Conservation at Jetwing Ayurveda Pavilions

- Nature tours – promoting biodiversity conservation – are conducted as needed.
- Tree planting is carried out in the hotel premises to celebrate special days like World Tourism Day, World Environmental Day etc.
- Jetwing Ayurveda Pavilions, like other Jetwing hotels, supports conservation activities by providing board and lodging for researchers, students and academics.



Schoolchildren planting a tree in Talawila - the site for the JEEP project



Encouraging schoolchildren to grow vegetable plots in their school garden



Schoolchildren at the JEEP re-launch

Corporate Social Responsibility: Involvement in Community Development

The development of tourism can lead to social problems when local communities are excluded from that development. When jobs in both the service and support sectors are given to non-locals and products are purchased from out of town, then local communities begin to feel displaced, local livelihoods suffer and community resentment against a hotel can accumulate.

To this end, contributions to community development and improving economic linkage with local livelihoods is essential.

There is a general perception that the private sector is exploitative. In the early 20th century, corporate social responsibility by the private sector merely meant large donations to religious organisations. It was only in the 1990s and the turn of this century, that there was a growing sense that businesses had to face up to their social obligations. In the 1990s, a model of CSR that practised stakeholder involvement began to take hold in Sri Lanka's private sector.

Presently many companies now ensure that their CSR portfolio encompasses a wide range of issues, including responsible environmental management and community development at which Jetwing Hotels have been at the forefront.

Corporate Social Responsibility at Jetwing Ayurveda Pavilions

- Purchases are made mostly through local vendors.
- Taxi drivers are taken on excursions to help them improve their livelihoods.
- Donations are given to temples and churches.



Future plans for environmental management

Jetwing Ayurveda Pavilions – as an environmentally responsible corporate citizen – plans not only to maintain the environmental standards set down in this Green Directory, but also to expand their green initiatives.

Several policy decisions will bring about further changes. Any electrical item that needs replacement – such as heaters and refrigerators – will be energy-saving and energy efficient. The daily monitoring of electricity consumption and comparison against occupancy, highlighting any discrepancies, coupled with these policy decisions, will ensure frugal use of energy and its continuing conservation.

In addition, solar PV units are proposed in the long-term to reduce dependency on the national grid.

In keeping with policy decisions regarding the purchase of electrical equipment, any cisterns that need replacement, will also be water saving models.

Jetwing Ayurveda Pavilions will continue its routine in house training of staff in environmental management. Once a year, an external audit of its green initiatives will be carried out to ensure that high environmental standards are maintained.



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A view of sunset from the hotel

Photocredits

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