Jetwing St. Andrew's

Nuwara Eliya - Sri Lanka

GREEN DIRECTORY

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Other Jetwing Green Directories:
Jetwing Lighthouse Hotel & Spa, Galle, Sri Lanka
Jetwing Hunas Falls Hotel, Elkaduwa, Sri Lanka
Jetwing Beach Hotel, Ethtukala, Negombo, Sri Lanka
Jetwing Vil Uyana, Rangirigama, Sigiriya, Sri Lanka
Jetwing Tropical Villas, Moragolla, Sri Lanka

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View of Jetwing St. Andrew's

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.

Tea plantation near Nuwara Eliya

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 implementing 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 wastes;
- 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.

Sambur (*Cervus unicolor*) in Horton Plains National Park.

Introduction

There are six 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 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.

Front view of Jetwing St. Andrew's Golf Wing.

Jetwing St. Andrew's
Nuwara Eliya, Sri Lanka

Towering over 1,884 meters above sea level and cradled amidst the mist-covered mountains of the central hill massif of Sri Lanka, lies Jetwing St. Andrew's Hotel in Nuwara Eliya. The history of the much respected and admired St. Andrew's Hotel dates back well over 100 years.

Jetwing St. Andrew's is said to be part of land gifted by the king, around 1875, to a faithful servant of the crown. A house was built on this land, later identified as a Scott's Club. A German national by the name of Mr. Humbert has been running the club, which was converted - during the early 1900's - to a hotel. During World War I, he was interned by then British Government. In 1918, the hotel was bought by a syndicate headed by Mr. Arthur Ephraums. Many additions, including a two storey wing to the west, a large dining room and pantry, large kitchen, store room and servants quarters were established during this time. In 1919, Mr. J. H. De Zilwa, a young cousin of Mr. Ephraums, was appointed as Manager of the newly expanded and refurbished hotel and in 1933, took over as proprietor. Despite various offers for amalgamation, he continued to run it independently.

By the mid 1970s, he and his wife decided to sell the hotel and follow their progeny to Australia. In 1976, Mr. G. E. B. Milhuisen, a hotel owner and agent for Vingressor Tours, bought the hotel. He needed a hotel in Nuwara Eliya to cater to tourists but was willing to maintain the spirit of St. Andrew's and the De Zilwa tradition – to refurbish rather than to demolish and rebuild.

In 1986, Mr. Milhuisen went into partnership with Mr. Herbert Cooray, also a hotel owner and Director of the Jetwing group of hotels. St. Andrew's thus became a part of the Jetwing group.

Over 100 years of proud history continues, and presently, Jetwing St. Andrew's Hotel has 52 rooms with seven deluxe rooms, five suites and 40 superior rooms. All rooms are equipped with hot and cold water, bath/ shower, 220v to 240v electric power, telephone, individual heaters and shaver sockets, Tea/coffee making facilities, in-room safes and mini bars are provided in all suites, while hair dryers are provided in the Golf Wing.

There is a saloon for billiards and snooker. It is said that the billiards table and cues are over 123 years old and were imported from C. Larzzurus and company from India. The billiard table is probably the oldest and best preserved of it's kind in Sri Lanka. The floor around public area is also 125 years and is evidence of a bygone era. Great emphasis is given to maintain these antique items in their original condition.

The hotel boasts of a salubrious climate, with delightful cool, crisp days and cold, cozy nights. The mist-laden mornings, the winding roads and the spectacular vistas add to this special ambience. Horton Plains National Park, Baker's Falls and Hakgala Gardens are few of many places of interest within easy motorable distance from Jetwing St. Andrew's.

Compact florescent bulb in garden fitting

Blue flame maintained in kitchen to optimise gas use

Colour-coded light switches

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 (CO_2) into the atmosphere.

As a result of excessive use of fossil fuels, during the last century, the concentration of CO_2 in the atmosphere rose by twelve fold, increasing the heat of the Earth (see page 14). 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 heavily on hydo-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 St. Andrew's

- 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 heaters are not left on when guests are not in their room. Where the card key cannot be connected to the heater, a notice is placed to remind guests to turn off the heater.
- Currently, 71% of the bulbs used in the hotel are energy-saving, translating to a saving of 57,509 kilowatt hours of electricity per year. Further replacement will take place when bulbs fuse and it is estimated that 88% of all bulbs will be energy saving when this is done, translating to a saving of 67,827 kilowatt hours of electricity per year.
- Minimum wattage is used on all lights in the hotel, to reduce electricity consumption. Unnecessary light fittings that are only decorative have been removed, translating to a saving of 1,4571 kilowatt hours of electricity use per year for the hotel.
- Staff are trained routinely about energy conservation.
- Energy loss through cold rooms has been reduced through the installation of freezer curtains and opening is monitored by use schedules that are examined routinely by the Chef.
- 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 serviced.
- Despite the installation of seven motors for the Sewage Treatment Plant and TVs in 52 rooms, the increase in the use of electricity has been marginal given the stringent conservation measures in place, and close monitoring of use to keep within expected targets.

Treated sewage water being used for the garden

Conserving water while rinsing dishes

Maintenance staff fixing a leak

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 overuses 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 St. Andrew's

- Treated water from the Sewage Treatment Plant is used for the garden and farm.
- About 90% of the water that is used in the Hotel is reused after treatment by the Plant.
- 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.
- 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.

- *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.*
- *If you leave the water running while brushing your teeth you will waste nearly 19 litres of water - that is enough to fill 13 cans of soda.*
- *If you leave the water running while washing the dishes you waste up to 114 litres of water - enough to wash a car.*
- *Water consumption in hotels is usually 500–800 litres per guest per day.*

Treated sewage water ready for use

Sewage Treatment Plant at Jetwing St. Andrew's

Reed bed tanks for STP for more aeration and filtering of treated water

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 St. Andrew's

- Sewage and waste water is directed to a collecting tank through a specially designed drainage system. In this tank, waste material is degraded partially by aerobic bacteria with the help of an aerated pump. After this, the water is pumped to the main waste treatment plant. Here the sludge is aerated mechanically, so that bacterial growth is enhanced. The treated water from the aeration tank is transferred to a sedimentation plant. In here, water is separated from sludge. The water is then pumped to a collection overhead tank, from where it is distributed for use in the garden. The sediment is sent to a collecting tank with a sand base, where it is sun-dried thoroughly, before use as manure for the garden.
- Sludge produced from the sedimentation tanks is dried and used as fertiliser.
- Water produced from the Sewage Treatment Plant (STP) is used for watering the garden, including the lawns and farm.
- 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.*

Garden waste being collected for composting

Colour coded waste bins at Jetwing St. Andrew's

Garden waste being collected for composting

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 0.89kg 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 St. Andrew's

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 discontinued. The hotel no longer purchases straws.
- Plastic shopping bags are no longer used in the hotel.
- Garbage bags are now used only for oil from the oil traps.
- Office stationery is reused and leave application forms are only printed for executives.

- *The average cruise ship in the Wider Caribbean Region (from Florida to French Guyana) carries 600 crew members and 1,400 passengers and generates 7,000kg of garbage every day.*
- *Every hour, British households throw away enough trash to fill the Royal Albert Hall.*

Main solid waste collection site for the hotel, with colour-coded chambers.

For effective separation of waste,

- Garbage and trash are separated at their sources of origin in all departments - such as the kitchen, restaurant and bar, housekeeping, Linen Room, maintenance, stores and guest rooms. In these areas, there are colour-coded garbage bins that separately hold glass and plastic, paper and cardboard, polythene and plastic and wet garbage.
- Housekeeping staff have correspondingly colour-coded bags for waste disposal.
- 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 could be disposed of properly.

For treatment and disposal of solid waste,

- Garden waste is composted.
- Plastics, glass, metal and paper are sold for recycling and reusing.
- Wet garbage will be composted.

- *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.*

- *At full capacity, Jetwing St. Andrew's generates about 100kg of garbage per day (both wet and dry). Of this, only 10kg of dry waste items which cannot be recycled or reused is sent to the municipal council to their land fill site. The rest is sold to an outside supplier for recycling.*

Side view of the entrance to Jetwing St. Andrew's and of the Golf Wing.

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

Emissions of carbon dioxide (CO_2), 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 CO_2 in the atmosphere rose by twelvefold, resulting in global warming. Humans excessively use coal, oil and petrol; factories spew out enormous quantities of CO_2 into the atmosphere; forests (that serve to soak up CO_2) are decimated. Every year, about 23 billion metric tonnes of CO_2 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. For Jetwing St. Andrew's, which is located in the cool hill country of Sri Lanka, changes in weather patterns will have profound impacts.

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.

Golf Wing and Tea terrace of Jetwing St. Andrew's.

Responding to climate change, air quality management and reduction of air pollution at Jetwing St. Andrew's

- The use of aerosols has been stopped.
- Every year, emission tests are carried out for all the hotel vehicles.
- Vehicles and the Boiler 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 biodegradable chemicals.

Responding to climate change at Jetwing St. Andrew's: 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 St. Andrew's: Adaptation

- Water Conservation is practised. (See section under Water conservation.)
- Planned reduction, reusing and recycling of solid waste and waste water has been put into place by the Management. Staff training for this purpose has been carried out and is repeated monthly. (See relevant sections.)
- Organic gardening has been commenced. (See section on Landscaping.)

Overall reduction of greenhouse gas emissions as a result of actions taken at Jetwing St. Andrew's

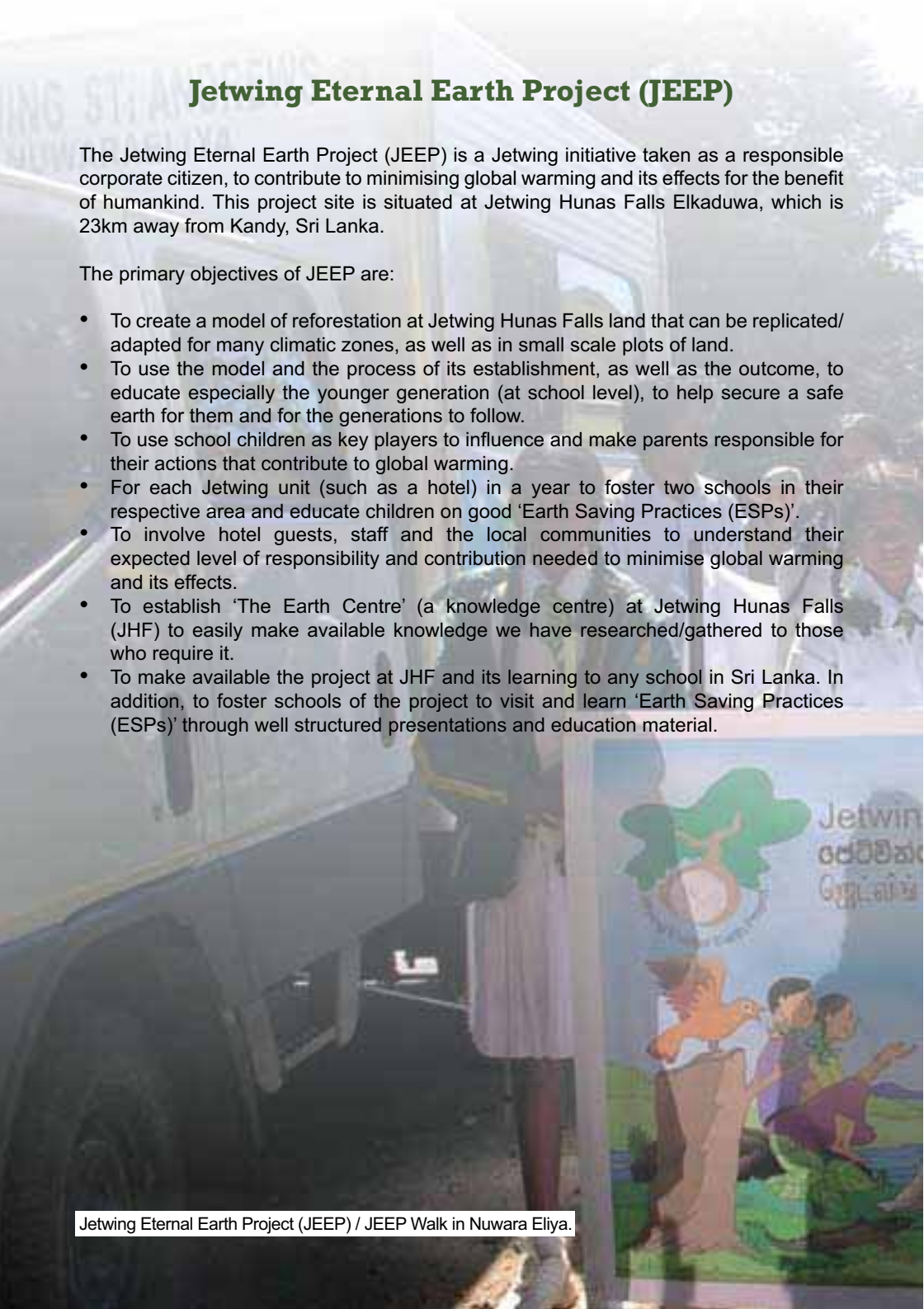
Per Occupancy	
Carbon footprint per guest stay	18.43 million tons
Reduction of CO_2 per guest stay from current initiatives	4.53 million tons
Reduction of CO_2 per guest stay from proposed initiatives	9.70 million tons
Total reduction per guest stay	1.43 million tons
Percentage reduction per guest stay	61.96%

Jetwing Eternal Earth Project (JEEP)

The Jetwing Eternal Earth Project (JEEP) is a Jetwing initiative taken as a responsible corporate citizen, to contribute to minimising global warming and its effects for the benefit of humankind. This project site is situated at Jetwing Hunas Falls Elkaduwa, which is 23km away from Kandy, Sri Lanka.

The primary objectives of JEEP are:

- To create a model of reforestation at Jetwing Hunas Falls land that can be replicated/ adapted for many climatic zones, as well as in small scale plots of land.
- To use the model and the process of its establishment, as well as the outcome, to educate especially the younger generation (at school level), to help secure a safe earth for them and for the generations to follow.
- To use school children as key players to influence and make parents responsible for their actions that contribute to global warming.
- For each Jetwing unit (such as a hotel) in a year to foster two schools in their respective area and educate children on good 'Earth Saving Practices (ESPs)'.
- To involve hotel guests, staff and the local communities to understand their expected level of responsibility and contribution needed to minimise global warming and its effects.
- To establish 'The Earth Centre' (a knowledge centre) at Jetwing Hunas Falls (JHF) to easily make available knowledge we have researched/gathered to those who require it.
- To make available the project at JHF and its learning to any school in Sri Lanka. In addition, to foster schools of the project to visit and learn 'Earth Saving Practices (ESPs)' through well structured presentations and education material.

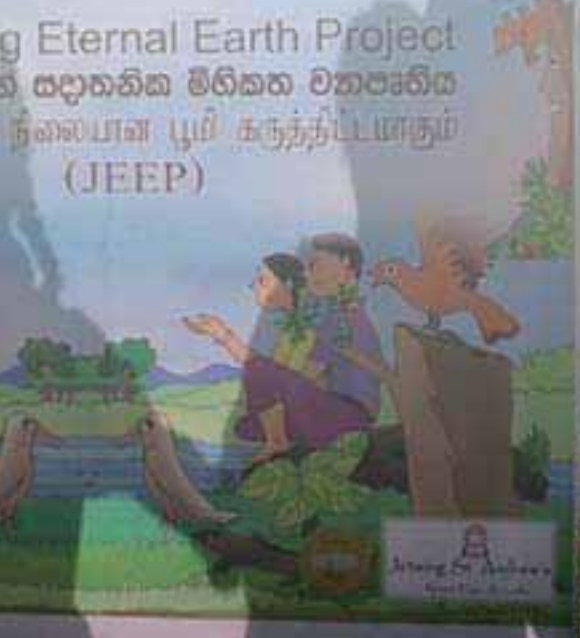


Jetwing Eternal Earth Project (JEEP) / JEEP Walk in Nuwara Eliya.

The secondary objectives of JEEP:

- To be associated with Sri Lanka Tourism's 'Earth Lung' initiative as a responsible tourism partner.
- To engage in researching/learning and helping/educating to mitigate carbon emissions due to tourism related activities.
- Though the 'Pilot forest' will be located at Jetwing Hunas Falls, to spread the project to all Jetwing units(including Jetwing vehicles) and unify the whole company in a concerted effort to contribute selflessly towards its goal.
- To guide local communities to educate themselves to obtain livelihoods through analog afforestation or forest gardening systems, as well as to make them learn good ESPs such as scientific waste disposal, minimising carbon emissions, preventing harmful land-clearing, preventing soil erosion and understanding the importance and sustenance of biodiversity.
- To serve as an extension of Jetwing Green Directories for community education.
- To use community involvement of the project to harness their relationship with the tourism industry and to make it a catalyst to create awareness among local communities about the value of the tourism industry to this country. This can also be used to enhance the value of Sri Lanka as a Great Green Destination of the world to her visitors.
- Where possible, to establish composting of biodegradable garbage and to use this process and products in plant nurseries at hotels and in foster schools. This is to teach hotel staff and school children to understand why solid waste management is essential and how to practise it .
- To give composting bins to children who successfully operate nurseries.
- To establish a model biogas plant at Jetwing Hunas Falls , that can be replicated at other locations.

Web site : www.eternalearth.net



Using compost made in the Hotel for the St. Andrew's Rose Garden

Biodegradable chemicals are used at St. Andrew's

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 Hexochlorobenzene (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 St. Andrew's

- Compost from the hotel's compost pits are used as fertiliser in the Hotel premises.
- The use of fertiliser has been reduced drastically and the ultimate aim is to switch completely to organic farming.
- Pesticides, fungicides and weedicides are no longer 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) for spraying.

Plastic-free fruit basket

Organically grown vegetables from the garden

Refillable shampoo and conditioner containers

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 St. Andrew's

- Laundry is collected and delivered in linen bags.
- The use of plastic straws has been stopped.
- Cocktail stirrers are made out of wood.
- Plastic butter containers, plastic cutlery and plastic flowers are not used.
- Plastic shopping bags are no longer used in the Hotel.
- Some of the vegetables used in the kitchen are organically grown in the hotel garden.
- The use of aerosols has been stopped.
- The hotel shop does not sell products made from threatened or protected species.
- 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.*

Coffee in biodegradable packing

Reusable plastic crates are used by suppliers

Toilet paper in 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 CO_2 and CFCs into the atmosphere.

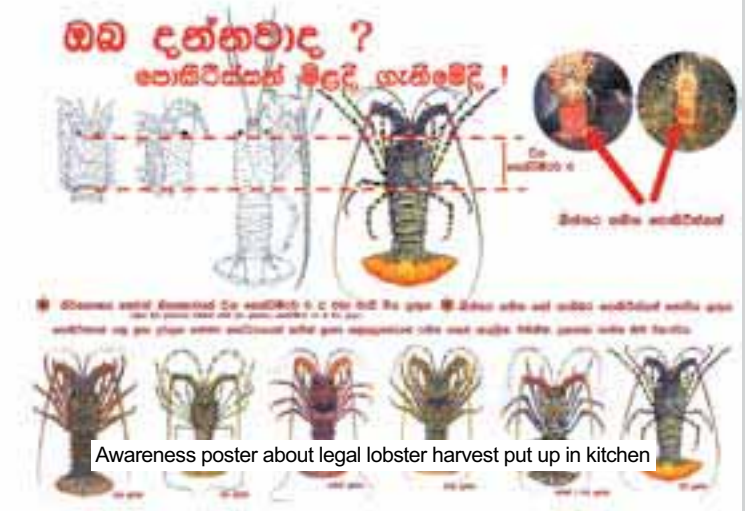
In addition, transporting produce and food products from far away adds to generation of more greenhouse gases. Hotels, which purchase products in bulk and transport these long distances, need to be acutely conscious of the above. To this end, environmentally-friendly purchasing is an important and vital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

Environmentally-friendly Purchasing at Jetwing St. Andrew's

- 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 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.*

Healthy herbal porridge served for breakfast



Awareness poster about legal lobster harvest put up in kitchen

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 St. Andrew's

- Healthy alternatives are provided at meals.
- 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.*
- *In China 5% of the population as a whole, and 20% of the urban population is classified as obese.*

- *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".*

Chemical free insect trap

Cleaning and hand washing facilities according to HACCP procedures

Maintenance schedules for equipment

The HACCP programme at Jetwing St. Andrew's

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.

Jetwing St. Andrews has readily embraced the concept and practise of HACCP.

Cleaning St. Andrew's drive

Harvesting organically grown vegetables from St. Andrew's garden

Potato harvest at St. Andrew's

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.

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 St. Andrew's

- The Hotel has an old-English style garden, with pristine lawns and beautifully maintained flowers beds.
- Because many of the trees in the premises are introduced, an effort is ongoing to under-plant these trees with native species.
- Invasive Alien Species are controlled, as it is not practical to eradicate them.
- Horticultural flower varieties are being grown for use in the hotel. Flowers are no longer bought, translating to a saving of 31,680 rupees per annum.
- A wetland was designed and developed to attract birds, butterflies and dragonflies. Currently, over 25 species of birds (including migratory species and four endemics), 12 species of butterflies and four species of dragonflies have been observed visiting the wetland.
- During 2009, the garden produced 3,915kg of vegetables for use in the kitchen.
- An organic garden has been commenced in about 0.5ha.

Rhino-horned lizard (*Ceratophora stoddattii)*

Yellow-eared Bulbul (*Pycnonotus penicillatus)*

Bear monkey *(Trachypithecus vetulus monticola)*

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 St. Andrew's

- The hotel has a resident naturalist, who interacts with the guests and staff to create awareness about biodiversity conservation and environmental management.
- The Hotel premises are home to 57 species of birds, of which nine are migrants and four are endemic to Sri Lanka. It is also visited by 16 species of butterflies, six species of mammals, including Brown mongooses. There are 42 species of flora in the Hotel garden.
- Nature tours – promoting biodiversity conservation – are important features of the services listed. These tours include treks in a cloud forest and visits to Horton Plains National Park.
- The Naturalist carries out routine briefings about environmental awareness to the staff.
- Jetwing St. Andrew's, like other Jetwing hotels, supports conservation activities by providing board and lodging for researchers, students and academics.

- *It is estimated that rainforests are being cut down at the rate of about 100 acres per minute. Forests are carbon sinks that soak up atmospheric carbon dioxide. This means that not only are valuable ecosystems services - essential for human well-being - lost but climate change impacts are also worsened.*

Model Wetland at Jetwing St. Andrew's.

Jetwing St. Andrew's Model Wetland and Interpretation Room

In May 2002, the resident naturalist transformed this commercially valuable piece of land in order to establish a haven for flora and fauna. Many of these species are endemic while others have been introduced over the last 200 years.

The wetland reserve was excavated to create a series of ponds of different depths and surface areas. A number of native plants were introduced to the site to speed up the process of colonisation by wildlife. Within six months, a number of endemic plants and animals had populated this newly created habitat.

Jetwing Hotels is a leader in nature-based tourism in Sri Lanka. It hopes that this wetland area will serve as a role model to demonstrate that even small sites such as this, if managed correctly, can serve as important sanctuaries for Sri Lanka's biodiversity.

Over 33 species of plants can be found in this wetland alone, eight of which were introduced by the British (one of which is the Arum Lily Zantedeschia aethiopica). Many of the indigenous specimens were collected by the Naturalist from sites where urban development was threatening their immediate habitat. These specimens were taken back to his nursery, where he cultivated them prior to their introduction into the wetland. The early introduction of these specimens encouraged the rapid regeneration of this wetland habitat.

The wetland area supports four endemic reptile species including the Black-lipped lizard (Calotes nigrilabis) and one of the harmless Roughside snake species. Amphibians are more numerous, with a total of ten species being sighted frequently. For example, 'the Horse-rider' (Polypedates eques), a small tree frog easily identified by hourglass markings on its back, is often seen on Arum lilies.

Amongst the 12 identified species of butterflies in the wetland, the striking Common Bluebottle (Graphium sarpendon) is a common sight, especially on bright, sunny days. They are easily distinguishable by aquamarine flashes on 2-inch long blue/black wings.

Dragonflies and damselflies - including the Common Bluetail (Ischura sengalensis) - are of particular importance in the wetland. Intensive horticultural activity (such as the production of tea, vegetables and cut flowers) around Nuwara Eliya often results in the misuse of insecticides. Further enhancement of this wetland environment will encourage increased habitation by dragonflies and damselflies and thus help to preserve locally endangered species.

Over 25 species of bird can be seen in the wetland. One of the resident species is the Ashy Prinia (*Prinia socialis*). This small, insect-eating bird actively feeds in low vegetation, hopping from stem to stem and flicking its tail. Aside from resident species, there are many frequent visitors from surrounding habitats (for example, from the nearby Cloud Forest) and some from further a field such as migrants from India.

Computer donation to a school in Kotmale

School children being shown the organic garden

Art competition for school children held on World Environment Day.

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 St. Andrew's

Training includes:

- Awareness was created among schoolchildren about the importance of wetlands.
- On the job training was given to National Apprentice and Industrial Training Authority trainees in their respective fields of expertise.

Other community development includes:

- *Shramadana* carried out by the Staff to clean up St. Andrew's Drive.
- An Arts and Crafts Exhibition presented by the Jetwing St. Andrew's associates targeting the in-house guests, as well as the public and highlighting the talents of these associates..
- A Poster competition for school children held on World Environmental Day.
- A computer donated to a school in Kotmale.
- JEEP activities carried out, including a walk and celebration of JEEP day.
- Improving hospitality standards for Nuwara Eliya as a tourist destination.
- Involving local tourism stakeholders in key discussions/project preparation.
- Participating in many national level tourism projects and contributing to sustainable development.
- Maintaining strong links with National Parks/Schools/Religious places of worship and creating a learning environment for all stakeholders.

Arum Lily (*Zantedeschia aethiopica)*.

Future plans for environmental management

Jetwing St. Andrew's - 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. Although currently 71% of all bulbs are energy saving, in the future, any fused bulb will be replaced with an energy saving bulb, translating to further energy conservation. 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.

A gassifier - that will convert organic materials into a useable fuel – is proposed for the Hotel. The biofuel derived from this proposed gassifier will be used to drive the water boiler, reducing dependency on diesel for operation.

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

Jetwing St. Andrew's 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.

View of Horton Plains National Park.

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View of Baker's Fall area at Horton Plains National Park.

Photocredits

All Nadeera Weearasinghe/Jetwing St. Andrew's except as noted.

Jetwing St. Andrew's

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