

WASTE MANAGEMENT AND RECYCLING

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WHY IT'S IMPORTANT

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<u>The world is experiencing a growing mountain of solid waste</u> - more than 3.5 million tonnes per day in 2010 predicted by the World Bank to rise to six million tonnes per day by 2025.¹ At current rates of waste, rural India alone will need 100 acres of landfill space one metre high, every day.² A hotel guest can produce one kilogram of waste a day clocking up thousands of tonnes of waste in each destination annually.³ Landfill sites produce methane, a potent greenhouse gas and waste diminishing natural resources which have already clocked up energy, water and greenhouse gases in the making. Burning waste, burying or dumping it threatens human health and is harming wildlife and soiling the pristine wilderness guests visit to experience.

SAY NO TO WASTE AND SINGLE USE PLASTIC

- Only about 9% of all plastic ever made has likely been recycled.⁴ The vast majority of the 8.3 billion metric tons of plastic already produced is accumulating in landfill and the natural environment. Approximately 150 million tonnes of it has already made its way into the oceans with <u>plastic</u> <u>projected to outweigh fish by 2050</u>.⁵
- <u>About one-third of the world's food gets lost or wasted</u>⁶ contributing to unnecessary biodiversity loss through pressures on land.
- <u>Annual e-waste alone amounts to almost 50 million metric tonnes</u>. Only 20% of this is formally recycled wasting valuable natural resources.⁷

Demonstrate your green credentials and be part of the solution. Help to move the world away from a linear model of consumption to a circular economy where resources aren't wasted and materials are reused. Managing your waste properly will enhance your image, reduce your carbon footprint and make your business more profitable.



Dumping and burning waste is bad for health, wildlife and business

...rubbish set to pollute waterways when the rains arrive

WHAT YOU CAN DO

Easy Wins

- Segregate waste into biodegradable, recyclable and nonrecyclable waste and label bins clearly.
- Explore local waste collection and recycling options and arrange for regular local collection by a scrap merchant / kabadiwala.
- Compost appropriate garden and food waste.
- Separate waste streams and store separately for recycling and disposal.
- Encourage guests and staff to recycle through notices and briefings.
- Install litter bins in the grounds.
- Donate computers and electronic waste still in safe working order and other appropriate items such as furniture, used linen, paint, soap and toiletries to your local community, school or NGOs.

Going for Gold

- Secure support set up a green team from each facility operation to provide support and input for waste reduction activities.
- Conduct a waste assessment/audit to identify what can be recycled, reduced, re-used, recovered or refused.
- Develop a waste reduction plan setting priorities and annual goals.
- Educate employees on their waste reduction responsibilities, set targets and review annually.
- Make a commitment to cut down or cut out single use plastic.
- Cut down on packaging and encourage your suppliers to do the same.
- Spread awareness amongst guests and local community.
- Catalyse local clean-up drives, opportunities for collaborative waste management and micro-enterprises for reusing materials.

See full list of tips in Resources.









3 weeks



Aluminium cans 80-200 years

Tetrapak 500 years











Nappies 500-800 years

Glass bottles 1000+years

Plastic bottles 450 years

Plastic straws 200 years

Styrofoam cup 500-forever

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EXAMPLES OF GOOD PRACTICE

WASTE MANAGEMENT AND AWARENESS



The best performers have a green team to set targets, monitor progress and spread awareness and good practice across the lodge or resort. Pictured here, Green team at Evolve Back Coorg.



A range of lodges encourage guests to recycle through guest literature pictured here a briefing for the colour coded bins in bedrooms at Svasara Jungle Lodge. Read case study.

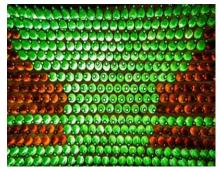


Providing bins in grounds to avoid litter is good practice. The Golden Tusk pictured here provides separate bins in its grounds biodegradable for and nonbiodegradable waste.



Guests at Dhole's Den are encouraged to recycle and take waste home. 100% of waste is segregated and appropriate materials composted or sold for scrap.

WASTE SEGREGATION



Tigergarh Wildlife Resort has created a wall of used beer bottles in the dining hall to raise awareness of the need to recycle as part of its positive waste management practices. Read case study.



Golden Tusk uses notices to The encourage guests to avoid food waste.



Evolve Back Kabini uses colour codina to segregate kitchen waste into six different streams: paper, plastic, food waste, metal tins/cans, silver foil, metal waste. Read case study.





Spice Village, Thekkady segregates its dry recyclable waste into five different streams - paper, plastic, glass, tin and ceramics. Read case study.



Waste at Banjaar Tola - Taj Safaris is segregated into wet and dry waste with four bins in use in the kitchen (wet waste, paper, plastic and tin). Dry nonbiodegradable waste is stored separately and removed periodically by a local scrap merchant. An information board on hazardous waste is placed at the lodge entrance.



Svasara Jungle Lodge asks its guests to segregate waste into three streams with colour coded bins in guest rooms for food waste, recyclable waste and nonrecyclable waste.



Evolve Back Kabini has a four-tier housekeeping waste segregation system.



The Fern Gir Forest Resort segregates its kitchen waste into clearly labelled bins for recyclable and non-recyclable waste. <u>Read case study</u>.



Dry waste segregation at Treehouse Hideaway.



Spice Village, Thekkady has bins to segregate rubbish in its grounds.

GOING PLASTIC FREE



Bandhav Vilas uses colour coded rubbish bins in its grounds.



Reverse osmosis is used by many lodges to clean water and reduce or replace plastic bottles. Pictured here, drinking water station filled with RO treated water and refillable metal bottles provided to all guests at Pugdundee Safari Lodges. 100,000 plastic bottles have been saved over four seasons. <u>Read case study</u>.



Evolve Back Kabini provides reverse osmosis filtered water in every guest room and recycled glass bottles of water on departure.



An award-winning in-house bottling plant at Spice Village Thekkady is saving approx. 36,000 plastic bottles a year.



Tigergarh Wildlife Resort buys in bulk to cut down on plastic and packaging using refillable decanters for 100% organic and biodegradable soaps in their bathrooms. Cling film is no longer used. Reverse osmosis filtered water is provided in guest rooms to avoid the use of plastic bottles.



Jaagir Lodge is almost plastic free and uses metal sippers, stainless steel bottles for water, wooden toothbrushes and combs, glass storage jars for tea and coffee kits and reusable boxes for tiffin and breakfast for safaris and bottles for liquid.



Pugdundee Safaris lodges organise plastic free safaris using steel bottles and plant based food containers, part of their broader single use plastic free strategy.



Plastic free toothbrushes and cotton buds are used by a range of lodges to cut back on plastic, pictured here at Pugdundee Safaris Lodges ...



... glass containers instead of sachets for guest coffee, tea and sugar...



and plant based containers.



A range of lodges use refillable ceramic toiletry bottles instead of plastic. Jim's Jungle Retreat, pictured here makes its own soaps on site and wraps them in leaves, part of its policy to become single plastic use free.



Traditional Bauhinia leaf plates used by Kipling Camp for their annual Forest Creation workshops.



A taste of traditional food served in traditional, food wrap at Tiger Tops Tharu Lodge.



Composting is good practice for disposing of appropriate vegetable, fruit and garden waste – and adds fertility to the soil. Pictured here composting at Evolve Back Kabini. They also have a piggery and a biogas unit (see below).





Vegetable and fruit waste is composted with leaves at Forsyth Lodge for use in their organic kitchen garden. The area is fenced to keep out wild boar. Leaf litter is also used as a top layer for the garden to help retain moisture and to leach nutrients into the soil.



Composting at Fern Gir Forest Resort.



Covered compost at Flame of the Forest Safari Lodge to keep out pests.



Vermicomposting at Tiger's Den Resort uses worms to turn biodegradable waste into a rich manure.



Spice Village, Thekkady harnesses the power of vermicomposting using worms to transform an average of 100-150 kg food waste each day into rich compost for their organic garden and the land.



Jaagir Lodge in Dudwa has installed a Foodie Model F-25 composter. This microorganism based 24-hour machine has a daily waste processing capacity of 25 kg breaking down organic waste into compost with a volume reduction of 85-90%. The system processes all types of organic waste such as curry, roti, bread, eggshells, chicken, fish and mutton bones, fruit peels and garden waste etc for re-use as fertiliser in the grounds.



Sasan Gir has a weighing area for wet waste for composting and to monitor its performance and help reduce waste.



Sasan Gir uses a Bioneer composter which processes their kitchen and garden waste. The machine can process up to 100 kg of waste a day and takes 24 hours to process. The compost is used as soil enriching fertiliser in their grounds which include a large kitchen garden.



Aahana The Corbett Wilderness combines biogas and composting to dispose of all its biodegradable waste. The gas generated is used in the staff cafetaria while the residual waste is used to speed up composting. Compost is used for its extensive kitchen garden.



A biogas unit at Evolve Back Kabini is used alongside composting and piggery for disposing of food waste helping to power cooking.



Khem Villas uses manure from its on-site dairy and food waste to power the biogas unit at Khem Villas providing a source of energy for cooking.



Vermicomposting using worm power at Kipling Camp.



Natural food recyclers - a range of lodges recycle appropriate food waste to local farmers. Pigs are a more carbon efficient method of disposing of biodegrable waste than composting.



Charcoal briquettes are made from lantana, an invasive weed, a local enterprise training initiative by the Singinawa Foundation and Kanha Lodge Association.

RECYCLING AND RE-USING



Evolve Back Kabini offer daily paper bag making classes turning waste into an opportunity to engage guests and share their expertise.



Spice Village, Thekkady transforms newspapers and magazines into guest stationery, leaf letters and manuals at the resort's paper making centre which produces 200 handmade papers a day. Guests can participate in papermaking.



Tigergarh Wildlife Resort's NGO, CATS Foundation is training local women to make mats out of recycled sarees and bags out of old clothes. The resort uses old tyres as planters as part of its work to reuse, reduce and recycle.



A range of lodges have used recycled wood and building materials for furniture and construction. Pictured here furniture made from recycled wood and railway sleepers at Kanha Earth Lodge.



The Teak House at Svasara Lodge used recycled teak and white Allahabad roof tiles from old dismantled buildings in its construction.



Flame of the Forest Safari Lodge has used recycled tiles as rustic lampshades.



Clean-up drive in the surrounding area at Evolve Back, Kabini, one of many lodges helping to reduce rubbish in the local environment.

CLEAN UP DRIVES



Lodge staff at Singinawa Jungle Lodge take part in clean-up drives especially along the Tannaur and Banjar river flows to prevent plastic and litter entering waterways.



Students at Fateh Public School, a school in Ranthambhore funded by Khem Villas' Foundation, are educated about the impact of litter and the need to avoid it. Pictured here, students litter clearing in the park. Photo: Padmini Singh



Kipling Camp has spearheaded a Kanha waste management committee in the Mocha-Khatia area and has distributed green dustbins made of used metal oil tins around Khatia village for rubbish collection.



Waterwoods Lodge & Resorts coordinated a team of 90 volunteers in 2019 for a three day local clean up collecting three tons of trash from the banks of the Kabini. The 2018 clean-up collected 3.2 tons of river trash and old fishing nets with the help of 50 volunteers from surrounding resorts.



Nature walk and clean up in the forest with local children organised by Pashan Garh – Taj Safaris.

RESOURCES

Case Studies

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Spice Village, Thekkady, Periyar An Imaginative Approach to the 5 Rs and Harnessing Worm Power



Furniture made from recycled pine packing cases.

An award-winning on-site bottling plant using water treated by micro filters, reverse osmosis and biodynamisation and reusable glass bottles is saving 36,000 plastic water bottles each year. A Local Area Network for inter-office communication is in place to reduce printing and paper wastage.

Litter bins in the grounds are designed to segregate waste and keep grounds litter free. Waste sorting facilities segregate nonbiodegradable waste into paper, plastic, glass, tin and



Litter bins in the grounds.

ceramics. Newspapers and magazines are transformed into guest stationery, leaf letters and manuals at the resort's paper making centre produces which 200 handmade papers a day. Waste pineapple crowns are used as tenacity a enhancing agent which increases the binding quality.

Other waste streams are sold as scrap to an authorised scrap merchant. Plastics are recycled for use as non-food plastics. Glass, tin, china and glass are sold to bulk purchasers in the industry.

Spice Village takes an imaginative and proactive approach to the 5 Rs – Refuse, Reduce, Reuse, Recycle, Recover. With a pioneering approach to reusing old materials, pine packing cases sourced from the nearest port 25 years ago were artfully remade into furniture. Excess upholstery material is made into shopping bags. Two bags per household have been distributed to 550 local families and promoted in food and beverage outlets to cut down on local plastic waste.



Reusable glass bottles filled on site at the resort's bottling plant.



Waste segregation at the resort.



Turning paper waste into an opportunity for guests.



Guest stationery and literature using paper made on site.



Biogas unit.

Vermi-composting with the Esinia species of earthworm purchased from a local NGO is also used to convert cooked food waste, meat trimmings and fresh vegetable cuttings into a rich fertiliser for the property's two-acre vegetable and herb gardens in a 45-day process. Two people are employed for the system's upkeep which processes an average of 100-150 kg of food waste each day. Waste is spread out in tanks, 78 in total

A biogas plant at the property converts biodegradable waste into methane used for cooking. The remaining slurry diluted with water (1:20 ratio) provides fertiliser for the vegetable garden.



Vermi-composting operation transforms 100-150kg of food waste per day into compost.

each holding 20 kg, and covered with a mixture of cow dung and dry leaves. Once the tanks are 75% full, the food waste is left to bio-compost for five days and 5-10 kg of earthworm culture is added to each tank topped off with a moist jute bag spread on the surface to multiply the worms. Compost harvesting starts from day twenty delivering an amazingly rich fertiliser thanks to worm power.



Thriving certified organic vegetable garden fertilised with rich compost from recycled kitchen waste.

Evolve Back Kabini, Nagarhole Creative Guest Recycling Workshops and Cutting Down on Waste



Bags made on site from recycled paper.

Daily paper bag making classes are just one of the initiatives Evolve Back is taking to cut down on waste turning it into an opportunity to engage guests and share its expertise. The bags used at the resort are part of their No to Plastic approach.

A reverse osmosis installation is provided in every room for safe drinking water and new and recycled glass bottles are used instead of plastic. Refillable ceramic shampoo, conditioner and moisturiser bottles cut down on plastic waste.



Reverse osmosis provides drinking water in every guest room.



Glass bottles are used in the restaurant.



Guests are provided with recycled glass bottles on departure.



Partitioned bags used by housekeeping.

Kitchen waste segregation at Evolve Back

Kabini and Coorg.

Waste is measured on a monthly basis. A rigorous system is used for recycling waste using colour coded four partition handbags in housekeeping.



Colour coded labelled bins.

Colour Waste Plastic Food waste Retail tims Sitiver foil Neat waste

Kitchen waste is segregated into paper (yellow), plastic (blue), food waste (green), metal tin/cans (red), silver (silver foil) and meat waste (white).

Food waste is disposed of through composting, a piggery and a biogas unit which helps to power cooking.



Biogas unit.

Good practice is spread to surrounding villages with clean up drives to remove plastic and other waste.



Village clean up



Composting.

Pugdundee Safaris Saying No to Plastic

Kings Lodge, Bandhavgarh Pench Tree Lodge, Pench Denwa Backwater Escape, Satpura



Water refill stations are complemented by reusable steel flasks.

Tree House Hideaway, Bandhavgarh Ken River Lodge, Panna Kanha Earth Lodge, Kanha

Pugdundee has adopted a 100% singleuse plastic-free policy across its six lodges and runs an anti-plastic campaign to encourage the local community and suppliers not to use plastic. 100,000 plastic bottles have been saved over four seasons years by replacing them with reusable steel bottles given to guests on arrival with water stations on hand for refilling with filtered water served in restaurants. Water is purified using reverse osmosis. This initiative has been extended into the community

with over 200 steel bottles donated to school children in 2017 around Bandhavgarh combined with education about the environment and plastic waste.



Refillable glass toiletry bottles.

Refillable glass-made dispensers for guest toiletries supply organic, non-polluting products. Bamboo toothbrushes and cotton buds have replaced plastic varieties. Bags are made from recycled newspaper. Picnic meals are plastic free using cutlery plant-based bamboo and food packaging. Tetra packs have been replaced with sippers containing fresh lemonade or iced tea.



Bamboo cotton buds and toothbrushes.



Plastic free picnicking.



Plant based food containers.





Glass containers for guest coffee, tea and sugar.





No to plastic bags.



Tetra packs out; sippers with freshly made drinks in.



The no to plastic initiative is part of Pugdundee's broader waste management programme. Their Farm to Table approach utilises their own fresh home grown produce and local food instead of relying on exotic or tinned produce – beneficial for health and the local economy. Tetrapaks have been completely done away with. Kitchen waste is segregated into dry and wet waste, with separate bins provided in guest rooms for the same. Non-biodegradable waste (plastic, paper, glass, tin etc) is segregated and collected weekly by a local scrap merchant (kabadiwala). Appropriate kitchen and garden waste is composted. Workshops are held for staff on the importance of the five Rs – refuse, reduce, reuse, recycle,

Segregation of dry waste at Treehouse Hideaway.

recover.

Lodge construction has utilised recycled timber alongside timber sourced from government approved forestry sources. Furniture is made from recycled wood and railway sleepers.



Furniture made from waste wood and recycled railway sleepers at Kanha Earth Lodge.

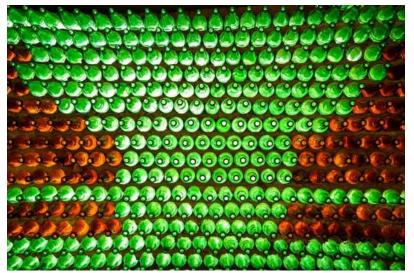


Leaf composting at Kanha Earth Lodge.



Anti-plastic campaign at King's Lodge distributing steel water bottles to local schoolchildren.

Tigergarh Wildlife Resort, Bandhavgarh Refusing, Reducing, Recycling, Recovering and Reusing in Action



Wall of used beer bottles in the dining hall.

A wall of used beer bottles in the dining hall, symbolises Tigergarh Wildlife Resort's commitment to cutting down and recycling waste. The resort uses green dustbins for wet organic waste and blue for dry. Backstage, dry waste is segregated further; plastic, glass, rubber, metals and electronic waste are sent to Umaria's scrap dealer on a monthly basis.

Biodegradable kitchen waste is composted mixed with an equal amount of leaf and garden waste and some cow-dung for good measure to enhance nutrient quality. Helped along with a weekly turn of a shovel, the compost is ready in 12-14 weeks for

fertilising the garden. Non compostable kitchen waste is given to locals with piggeries for efficient disposal.

The resort has stopped using materials such as cling film and aluminium foil to reduce waste further. Reverse osmosis treated drinking water and refillable containers for organic, biodegradable, herbal toiletries are used in guest rooms to cut down on plastic packaging.

Furniture has made good use of recycled wood. Old tyres have found a use as planters for flowers. The owner's NGO, CAT Foundation (Conservation, Art and Training) has created new self-employment opportunities for local women through workshops teaching local Bulk buying and refillable containers to women how to make bags from old clothes and rugs from reused saris.



cut down on waste.

The foundation is also sharing its knowledge on composting and animal husbandry to improve soil fertility and reduce pesticide use with local farmers.



Making bags and rugs from recycled clothes and saris.



Planter made from reused tyre

Furniture from recycled wood.

Svasara Jungle Lodge, Tadoba Segregating Waste and Saying Goodbye to Plastic



Svasara Jungle Lodge encourages its guests to segregate waste into three streams – food, recyclable and non-recyclable - through briefing and colour coded bins.



... complemented by colour coded bins.

Kitchen waste is segregated into food (wet) and dry waste streams.

Guest briefing on recycling in guest rooms ...



Reusable thermoses for water

To cut down on plastic waste, thermoses with safe drinking water purified by reserve osmosis are provided in all guest rooms and on safari. Water in plastic bottles is sold at a Kitchen waste segregation. premium to discourage use.

plastic Replacing 30ml toiletry bottles with refillable table-top and wall-

mounted dispensers for toiletries is a second initiative which has cut down plastic waste dramatically.

The lodge also actively seeks out eco-friendly alternatives elsewhere and uses:

- Bamboo cocktail stirrers
- Steel cutlery instead of plastic for picnics •
- Bamboo baskets for laundry
- Paper drinking straws instead of plastic. •





Refillable ceramic bottles for toiletries.

The Fern Gir Forest Resort, Gir Segregating Waste and Creative Plastic Bottle Reuse



Guest room dustbins.

An active programme of staff training and guest briefing is part of The Fern Gir Forest Resort's proactive approach to managing waste and recycling.

Separate dustbins are provided in guest rooms, sitting, dining and parking areas to segregate wet and dry waste. Non-biodegradable waste is further segregated (plastics, paper, glass and tins etc) and collected by a local kabadiwala (scrap merchant).

Kitchen waste is segregated and measured on a daily basis. Food quantities are adjusted according to the number of guests. Appropriate food waste is given to villagers as cattle feed and composted.



Kitchen waste segregation.



Composting.

The resort has made a Christmas tree and several planters using plastic bottles. Recycled paper is turned into handicrafts. Lodge staff help to keep the surrounding area clean.



Pen holder from recycled paper.

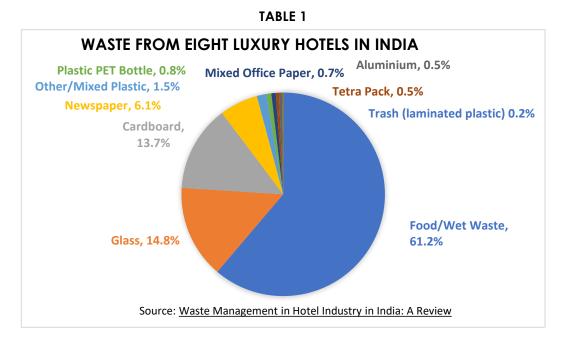


Cleaning up the local area.

TIPS FOR GOOD PRACTICE

Know What Your Rubbish Is

Segregating and analysing waste is the key to understanding what can be refused, reduced, reused, recycled or recovered (five Rs; six including respect for waste workers). Each resort's waste profile is different. Table 1 represents the average waste from eight luxury hotels in India.



Waste Segregation

- Segregate waste into food and organic waste; dry recyclable waste and nonrecyclable waste - clean and separated waste can have a recycling value which is reduced or lost if waste is mixed and soiled.
- Explore local recycling options and segregate dry waste into separate streams to facilitate recycling or safe disposal.
- Provide separate bins to facilitate waste segregation.
- Label collection bins clearly.

Waste Management, Training and Awareness



Image: Waste Warriors.

- Step 1: Secure support set up a green team from each facility operation (housekeeping, kitchen, grounds, purchasing) to provide support and input for waste reduction activities.
- Step 2: **Conduct a waste assessment/audit** to identify waste volumes, review existing waste management practices and costs, identify per capita waste (eg for food in high and low season) and which parts of the waste stream could be refused, recycled, reduced, reused or re-used.
- Step 3: **Develop a waste reduction plan** setting priorities and goals based on the audit and considering the environmental impact of frequently used products.
- Step 4: Implement the programme
 - Educate employees on their waste reduction responsibilities, monitor during peak and low season, evaluate and fine-tune waste reduction, reuse and recycling efforts.
 - Educate your guests on recycling through briefing and notices.
 - Spread awareness about waste and recycling amongst local authorities, community and schools.
 - Review and set new targets annually for different waste streams.

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Start practicing solid waste management yourself – at home and in your workplace - and then at a community level. Practising it yourself enables you to understand the problems and communicate solutions to educate others.

Reducing Waste and Recycling

- Select or work with suppliers to reduce packaging.
- Repair or mend broken items.
- Find new uses for old or discarded materials.
- Pool resources and explore cooperative recycling and waste disposal with other lodges, NGOs such as <u>Waste Warriors</u> or the local community.
- Catalyse opportunities for micro-enterprises for upcycling and reusing materials.
- Donate used items to the local community, schools and NGOs where appropriate to do so such as used linen, furnishings, clothing, paints, computer and electrical items in safe working order.



Cleaning up Litter

- Implement regular cleanliness drives on and at least ten metres around your property.
- Extend your cleanliness drives to the local area and help to raise awareness amongst the local community on litter and solid waste management.
- Join millions globally participate annually in World Clean Up Day.

Kitchen and Food

- Develop a food and kitchen hygiene policy to ensure proper segregation of waste inside the kitchen and appropriate processing of food waste to natural compost.
- Separate wet from dry waste to enable the maximum possible to be recycled.
- Monitor how much food you are wasting (per meal, guest or category of food) and adjust ordering/servings accordingly.
- Allow staff to consume food left over or donate surplus to local communities/NGOs if safe to do so.
- Convert all food and horticultural waste into natural compost to be used within your premises. There are options for all scales, landscapes and weather conditions.



- Use or give away appropriate food waste for animal feed (eg pigs, goats and chickens) if safe and legally permitted to do so.
- Cut down or cut out plastic and aluminium wraps and packaging for kitchen use where possible.
- Go plastic free on safaris and picnics; use compostable or reusable food containers, plates, glassware and cutlery.
- Cut down on tinned goods and tetra-paks where possible.

Garden and Weeds

- Compost organic waste from the garden such as leaves and cuttings with appropriate food waste to produce natural compost.
- Catalyse innovative local enterprise uses for lantana, an invasive weed, and other organic waste materials.
- Install labelled litter bins in your grounds if appropriate.

A small number of lodges use biogas units to process some of their biodegradable waste producing gas for cooking alongside LPG.

Drinks

- Discourage visitors from using plastic bottled water; offer or show alternative solutions.
- Use reverse osmosis (RO) and provide drinking stations and/or reusable bottles for guests.
- Use glass bottled water in the restaurant and/or offer RO treated water instead.
- Provide portable drinking water bottles (eg steel) for guests for use on safari.
- Only provide straws where needed (eg for differently abled) and use reusable varieties (eg bamboo, stainless steel, or glass).
- Consider replacing drinks in tetra packs with fresh, home-made alternatives.
- Use glass jars for coffee and sugar etc in guest rooms instead of sachets.

Plastic

- Avoid single-use plastic.
- Say no to plastic bottles and straws (see drinks above).
- Use refillable ceramic or glass containers for guest toiletries.
- Use plastic free toothbrushes and cotton buds.
- Offer paper or cloth bags instead of plastic some PUG-rated lodges are making their own from recycled newspaper and recycled linen.
- Find new uses for plastic such as plant pots, local construction as appropriate, or encourage local enterprise upcycling eg making plastic film into crocheted bags, packing tape into shopping bags.

Textiles

- Find new uses for old textiles such as bags.
- Give used linen, blankets and fabrics to the local community or NGOs.

E Waste

- Donate computers and electronic items in safe working condition to local community, schools or NGOs.
- Recycle or ensure safe disposal of items such as CFL bulbs.
- Find and use your nearest authorised e-waste centre or collector.

Paper

- Don't print unless necessary.
- Encourage paperless payments and send paperwork, invoices and receipts by email where possible.
- Print on both sides of the paper and recycle.
- Upcycle or use recycled or sustainably sourced paper; some PUG-rated lodges are making their own stationery and bags from recycled paper.
- Collect wet and dry waste separately to maximise paper recycling.



Furniture

- Donate old furniture to your local school, community or NGOs.
- Use recycled wood for furniture or vintage furniture.

Bathroom

- Use refillable ceramic or glass containers for guest toiletries.
- Use bamboo toothbrushes and cotton buds instead of plastic.
- Donate used soap and toiletries to staff, NGOs, schools or local community.



Photo Ricky Patel.

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Biomedical, Chemical and Other Hazardous Waste (see also e-waste above)

- Chemicals such as paints, kerosene and solvents should be kept in closed bins with labelling and kept out of reach of children, away from flammable substances or waterways and disposed of at designated hazardous waste management sites.
- Dispose of medical waste at centralised biomedical waste facilities.
- Dispose of sanitary waste at designated hazardous waste management sites
- Dispose of batteries through authorised centres or collectors.
- Use natural products, environmentally friendly chemicals, and biodegradable soaps and detergents.



Overspilling dump. Photo: Waste Warriors

What to Avoid

- Burning waste causes pollution; burning plastic spreads toxic fumes.
- Tipping toxic or polluting waste into waterways is harmful for people and wildlife.
- Open dumping is bad for wildlife, public health and unsightly for guests.
- Burying waste merely hides the problem and creates unnecessary pollution.
- Tipping cooking oil down the sink without a grease trap can interfere with your water treatment system and cause pollution.

Information included may not be appropriate to every situation, destination and country and is intended for general guidance only and may be subject to change.

Take only memories, leave nothing but footprints

USEFUL ORGANISATIONS

Waste Warriors

An Indian not for profit organisation which spreads awareness and implements solid waste systems in Dehradun, Dharamsala and Corbett, and offers training and consultancy to reduce waste and event waste management. See their website for more details, publications and awareness material shared.

www.wastewarriors.org

Nav Anubhuti Welfare Society

Nav Anubhuti is an NGO with a national-level presence under the Societies Registration Act, XXI of 1860. The Society is empanelled with the Confederation of Indian Industry, Niti Ayog, and IPEN and participates actively in developmental activities in the fields of Sustainable Development, Waste Management, Drinking Water, Sanitation, Renewable Energy, Road Safety, Health, Education, Training & Capacity Building, Skill-Upgradation Programmes, etc. http://navanubhuti.org/

USEFUL PUBLICATIONS AND RESOURCES

- <u>Solid Waste Management in Rural Areas: A Step-by-Step Guide for Gram Panchayat</u>, R Ramesh P SivaRam, Centre for Rural Infrastructure National Institute of Rural Development & Panchayati Raj, January 2017
- <u>Making Waste Work: A Toolkit</u> Community Waste Management in Low and Middle Income Countries, Zoe Lenkiewicz and Mike Webster, October 2017, Waste Aid UK, CIWEM Step by Step Guides
 - How to measure your waste
 - How to convert organic waste into biogas
 - How to transform woody waste into fuel briquettes
 - How to turn organic waste into compost
 - How to turn organic waste into compost using worms
 - How to prepare plastic to sell to market
 - How to turn mixed plastic waste and bottles into ecobricks,
 - How to transform plastic waste into paving tiles
 - How to croquet film plastic into bags and mats
 - How to collect waste safely and efficiently
 - How to design and operate a basic waste disposal site
- See Waste Warriors above

REFERENCES

¹ What a Waste: A Global Review of Solid Waste Management (World Bank, 2012), D Hoornweg, & P Bhada-Tata

² Waste Warriors presentation <u>Collective Action by Tourism Partners around Protected Areas for Sustainable Solid Waste</u> Management

³ <u>Waste Management in Hotel Industry in India: A Review</u>, Afsanehsadat Omidiani, Seyed Mohsen Hashemi Hezaveh, International Journal of Scientific and Research Publications, Volume 6, Issue 9, September 2016

⁴ A whopping 91% of plastic isn't recycled, National Geographic, 20 December 2018

⁵ The New Plastics Economy Rethinking the future of plastics, World Economic Forum 2016

⁶ <u>Global Food Losses and Food Waste</u>, Food and Agriculture Organisation of the United Nations, Rome 2011. See also <u>http://www.fao.org/food-loss-and-food-waste/flw-data</u>)

⁷ UN Environment Assembly <u>https://www.unep.org/news-and-stories/press-release/un-report-time-seize-opportunity-tackle-challenge-e-waste</u>

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> TOFTigers is a global business-to-business nature travel charity with a mission to improve the ecological and economic sustainability of wildlands and wildlife across Asia. Well-planned and well-managed responsible tourism is a force for good bringing economic benefits to rural areas, restoring habitat, supporting conservation and local communities, changing poachers into protectors and giving visitors inspiring experiences of nature. We work with the travel trade, destinations, accommodation providers, governmental and conservation organisations to make this happen through training, advocacy, certification, promoting best practice and partnership working.

Our certification programmes place local communities, nature and environmental sustainability at the heart of business operations. They are a symbol of assurance for travellers and the travel trade that the places they select stay at have been reviewed by to environmental experts and exceed a minimum standard on a journey towards best practice. The PUG certification is recognised by the United Nation's Global Sustainable Tourism Council (GSTC) and is aimed solely at nature focused accommodation. The Footprint certification has a broader client base that is not wholly nature focused and encompasses accommodation providers in rural, natural or more urban landscapes.

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