



SUSTAINABLE FASHIONS TRUTH OUTLINED

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Fast fashion is notorious for its rapid production cycles, low-cost garments, and disposable trends. While many brands claim they are becoming greener, the fundamental structure of the industry raises serious questions: Can fast fashion ever be truly sustainable? Or is it an oxymoron?

Fast fashion's impact on Environmental, Social, and Governance (ESG) factors is significant. Let's break it down.

A. Environmental Impact: The Dirty Side of Fast Fashion

Fast fashion is one of the most polluting industries, with severe consequences for climate change, water use, and waste.

Carbon Emissions: The fashion industry accounts for up to 10% of global carbon emissions, more than international flights and maritime shipping combined.

Water Consumption: Producing just one cotton T-shirt requires about 2,700 liters of water – enough for one person to drink for 2.5 years.

Chemical Pollution: The textile industry is responsible for 20% of global wastewater pollution, largely from toxic dyes and finishing treatments.

Waste Crisis: With microtrends changing every few weeks, an estimated 92 million tons of textile waste end up in landfills each year.

Reality Check: *Can fast fashion brands truly reduce their*

environmental footprint while producing millions of garments at high speed?

Brand Example: Unlike most fast fashion brands, Patagonia follows a repair and reuse model, encouraging customers to keep their clothing for longer and offering free repairs to minimize waste.



How much sustainable are you, wikipedia

B. Social Impact: Exploitation in the Supply Chain

Fast fashion's business model thrives on cheap labour and weak labour regulations in developing countries.

Low Wages: Many garment workers in Bangladesh, India, and Vietnam earn below the living wage, despite working excessive hours.

Unsafe Working Conditions: The 2013 Rana Plaza disaster in Bangladesh, where 1,134 workers died in a garment factory collapse, exposed the dark side of fast fashion supply chains.

Child Labor & Modern Slavery: Reports have linked fast fashion brands to forced labor, particularly in regions like Xinjiang, China, where Uyghur workers are allegedly used in cotton production.

Reality Check: *Can brands ensure ethical working conditions while still pushing for ultra-low prices?*

Brand Example: Everlane – Everlane promotes “Radical Transparency”, openly sharing its factory conditions, worker wages, and supply chain costs. However, critics argue that true ethical manufacturing is still difficult to verify.

C. Governance Challenges

Many brands are now marketing “sustainable” collections, but are these claims legitimate?



Naturally dyed, is it, HV's record

Greenwashing Allegations:

Brands like H&M and Zara promote eco-friendly lines, yet only a tiny fraction of their products meet real sustainability standards.

Lack of Transparency: While some companies publish sustainability reports, many do not disclose full supply chain details or production processes.

Limited Circularity: Recycling initiatives exist, but only 1% of used clothing is truly recycled into new garments. Most end up in landfills or downcycled.

Reality Check: Is "conscious fashion" a marketing tool rather than a meaningful shift in business practices?

Brand Example: H&M Conscious Collection – H&M claims its Conscious Collection uses sustainable materials, but investigations have shown misleading claims about the percentage of recycled fabrics used.

The Illusion of Sustainable Fast Fashion

A. "Green" Collections: A Drop in the Ocean?

Brands like H&M's "Conscious Collection" and Zara's "Join Life" line claim to use sustainable materials. However, only 5-10% of total production is sustainable, while the remaining 90% follows the same old practices.

Brand Example: Adidas and Parley for the Oceans – Adidas produces sneakers using ocean plastic waste in partnership with Parley. However, critics argue that the underlying issue of overproduction remains unresolved.

B. "Buy Less, Buy Better" vs. "More Trends, More Sales"

Luxury brands promote long-lasting quality, while fast fashion relies on high volume, low quality. The model thrives on pushing consumers to buy more, contradicting sustainability principles.

C. Rental, Resale & Recycling: Real Solutions or PR Gimmicks?

Some brands now offer rental services (e.g., H&M Rental) and

VULTURES & RIVERS SIGNIFICANT

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Anand Mishra

As Ed Mc Crea sought retirement from this e-journal after having served since the start, some new editors have joined us as featuring on last page.

Welcome and hope you all shall do the best to educate the world on how to be better sustainable in living daily life. That is the core agenda. Two of them feature in this edition with own narratives.

Vultures' plight is not over across India's landscape as revealed again through two photo-features in this edition.

TWSI was in lead while the species faced a catastrophic decline (late 90s). Robert Risebrow, Munir Virani, Vibhu Prakash and others were facilitated by Harsh Vardhan to run a global campaign to decipher causes of their widespread mortalities.

The Peregrine Fund led to finally deliver: Diclofenac drug caused their death. Years were consumed to put a ban on its sale, production did not stop: drug companies at a meeting in New Delhi demanded millions of Rupees to meet the damage-cost to develop new drugs! I believe the nation started behaving better with wild species after this lesson.

TWSI has come out with a publication on Butterfly Ecosystem, available over Amazon.

I like to much appreciate role played by our Volunteers, assisted by experts in the field.

My business happily played its role to sponsor it.



What I wore, was it sustainable, wikipedia

second-hand marketplaces (e.g., Zalando Pre-Owned).

But these models still represent a tiny fraction of sales and do not slow down mass production.

What Would True Sustainability Look Like?

For fast fashion to be truly sustainable, it would require a fundamental shift in the business model, including:

Slower production cycles – Focusing on timeless pieces instead of microtrends.

Living wages & ethical labor – Transparent, fair wages and safe working conditions.

Closed-loop recycling – Fully circular systems where old clothes become new clothes.

Stricter regulations & accountability – Enforceable sustainability standards and penalties for green washing.

Brand Example: Nudie Jeans – Offers free lifetime repairs, second-hand sales, and organic cotton production, proving that slow fashion can work.

Can It Be Sustainable?

The Verdict: Not under its current model. Sustainability and fast fashion fundamentally clash because:

Ethical supply chains & environmental responsibility require

higher costs, which contradicts the low-price appeal of fast fashion.

Alternative Approach: Brands must shift from “more sales, more trends” to “fewer, better products”. Until then, “sustainable fast fashion” remains a contradiction.

WHAT IS SUSTAINABILITY?

Sustainability has origin from the latin “sustinere” which means hold upright, bear, undergo, etc. In modern usage it generally refers to a state in which the environment, economy and society will continue to exist over a long period of time. Many definitions emphasize the environmental dimension.

This can include addressing key environmental problems, including climate change and biodiversity loss. A related concept is that of sustainable development, and the terms are often used to mean the same thing. It would be desirable to find ways that separate economic growth from harming the environment. This means using fewer resources per unit of output even while growing the economy. This decoupling reduces the environmental impact of economic growth, such as pollution. Doing this is difficult.

It is challenging to measure sustainability as the concept is complex, contextual, and dynamic. Indicators have been developed to cover the environment, society, or the economy but there is no fixed definition. The metrics are evolving and include indicators, benchmarks and audits.

MEET THE CHAMBAL RIVER

THE LAST HOPE OF THREATENED SPECIES

By Dr. Oishimaya Sen Nag

Dr. Oishimaya Sen Nag (PhD Biochemistry) is a conservation story teller and editor from Kolkata, India. She travels across India's wild landscapes, documenting conservation stories with a special focus on the role of local communities and Indian culture in conservation.

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Indian skimmers flying by with illegal sand mining in the background, Oishimaya

If you have ever visited the Chambal River, you will know it is unlike any other river you have ever seen. Its raw beauty, steep ravines, and unique residents make it a river worth knowing. The river is associated with many age-old legends, mysteries, and even a curse. It was also once home to the notorious dacoits of Chambal. It is said that such dark associations and the rugged terrain along its banks kept people away from this river for a long time, which allowed the wildlife to thrive. Times are changing, and so is the river's fate. Hence, saving this river, the last stronghold of many species on the brink, like the Gharials, Indian skimmers, Ganges river dolphins, and Red-crowned roof turtles, is the need of the day.

Mysterious Past: The Chambal River traces its headwaters to the Vindhya Mountain Range, from where it flows for 960 km to join the Yamuna River. Its journey takes it through the three Indian states of

Madhya Pradesh, Rajasthan, and Uttar Pradesh, and a part of it is now protected as the National Chambal Sanctuary. The sanctuary, founded in 1979, covers a 425 km stretch of the river and is managed by the three states.

For a long time, the Chambal River was left alone across a large section of its length. Settlements and industries were slow to grow along its banks, which are sliced by deep gullies and ravines. While the river's rough geography was a significant deterrent to the growth of civilization, some also attribute the cause to the stories of bloodshed and curses linked to the river. According to local folklore, an ancient king conducted mass sacrifices of animals along its banks, and the blood flowing out would turn the river red.

It is also said that an Indian queen, Draupadi, was publicly humiliated along the banks of this river when she cursed the river for being a mute

spectator to her insult. She cursed that anyone who drank the river's waters would never have their quest for revenge satisfied. Later on, the Chambal's inhospitable ravines served as the perfect hiding dens of blood thirsty dacoits who looted and killed many unfortunate travellers who happened to pass by. However, while all these happened, the wildlife of the river and ravines thrived with minimal human disturbance.

Gharials matter: Today, every time you take a boat ride in the National Chambal Sanctuary, expect to be astounded by the abundance of life the river supports.

Look out for the sand bars on the river where you will witness Gharials and Mugger crocodiles basking in the sun. The Gharial, a critically endangered species and the world's most threatened crocodilian, is known to be highly sensitive to its environment. It has disappeared from most major rivers



A tagged juvenile Gharial, Oishimaya

of the subcontinent, where it is endemic, primarily due to high levels of anthropogenic disturbance.

The Chambal remains its last hope, housing over 80% of the global Gharial population. Males of this fish-eating species have a bulbous protrusion near the tip of their snouts, whose "pot-like" appearance gives the species its name, as "*ghara*" in the local language refers to an earthen pot.

Muggers: While Gharials are not known to attack humans, the presence of a large number of Muggers adds to the dangerous aura of the Chambal. The Muggers are freshwater crocodiles with a Vulnerable status on the IUCN Red List. They have, however, fared better than the Gharials and have a more widespread distribution. They also have a broader diet base and might occasionally attack an unsuspecting human who accidentally enters the waters near them.

Other less formidable reptilians of the Chambal include eight species of freshwater turtles. If you are fortunate, you might see some of the most threatened among them - the critically endangered Red-crowned

roof turtles and three-striped roof turtles enjoying the winter sun above a rocky or sandy perch on the river.

Indian Skimmer: The many Indian skimmers, nesting in their hollowed-out nests on the sandbars of the Chambal, are also a fascinating sight. These black-and-white birds have striking orange bills with yellow tips and orange legs. Their lower beaks are longer, allowing them to skim out fish from the river by flying close to the water's surface, hence the name.

Like the Gharials, the Chambal also remains one of the last breeding grounds of this endangered bird species. Many other species of resident and migratory birds call the river and its ravines, sandbanks, and scrublands home, including Black-bellied terns, Lesser whistling ducks, Ruddy shelducks, Great thick-knees, Pied kingfishers, and more.

Dolphin: Some rare but thoroughly enjoyable sightings in the Chambal are Ganges river dolphins frolicking in its waters and mischievous Smooth-coated otters going about their busy lives.

While boating on the river, also look

out for Hyenas, Foxes, Jungle cats, Monitor lizards, Jackals, and other species in the treacherous ravines that border the banks of the river. Egyptian vultures, Bonelli's eagles, and other raptors may be seen on their nests in the upper reaches of these ravines.

While the Chambal still hosts incredible biodiversity, changing times have taken a toll on one of India's most pristine riverine ecosystems. One of the major issues linked to the river is sand mining. Illegal sand mining empties the river of its much-valued sand, which is vital for maintaining the river's ecology and supporting the nesting of many riverine species.

Damned future: Damming of the river is another significant threat. Several dams already exist on the river, and proposals for future ones have already been drafted. In several incidents in the past, the sudden release of dam water has led to the drowning of nests and hatchlings of Indian skimmers and other species that build their nests on the river's sandbars.

Rising pollution is another major issue with industries, infrastructure, and human settlements coming up



A Mugger crocodile in the Chambal, Oishimaya

along the river and releasing toxic contaminants into its waters. Of course, climate change will also have an ever-increasing impact on this riverine ecosystem in the coming decades, leading to altered water levels and sand temperatures that are bound to affect the life cycle

of the riverine species adversely.

For thousands of years, unique geography and a gory history protected the Chambal and its rich diversity. Today, however, the river needs urgent, stronger legal protection and conservation

strategies based on science, traditional knowledge, and community support to save it.

Hope: Let us ensure that the Chambal—India's last untamed river—flows wild and free into the future.



The ravines of the Chambal River, Oishimaya

REWA ROCKY PLATEAU: A PREFERRED HABITAT FOR VULTURES-EAGLES

By Nitish Agrawal

Nitish Agrawal is a self taught naturalist, wildlife photographer and independent vulture conservationist working closely with local communities in the Rewa region of Madhya Pradesh; monitoring, documenting vulture populations and their behaviour, and founded The Last Vulture, to offer walking safaris. The Last Vulture is designed to turn awareness into direct experiences that inspire lasting conservation action.
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Such scenes are getting rare for Vultures, Nitish Agrawal

This Vindhyan plateau records a 100% Vulture nesting success in 14 km long ravines though only 4 km is surveyed so far, lot more to be explored; 2025 count revealed 450 resident Vultures and over 100 migratory Vultures.

Nesting is one of the most crucial events in a bird's life, welcoming the next generation of their species. These nesting seasons vary with different species of birds. Every nest has its characteristic specific to the species. Long-billed vultures are one such bird that makes nests in the crevices on the face of rocky mountains and cliffs (as also at old monuments as described by Sonika



Nesting over the Vindhyan ledges, Nitish Agrawal



Parenting, Nitish Agrawal

Kushwaha in a separate piece being carried in this edition of ConservationTimes).

In the white tiger land of India, Rewa, there resides an unknown colony of vultures of 3 resident species. These species are the Long-billed Vulture, the Red-headed Vulture and the Egyptian Vulture. This colony has nests, juveniles and a healthy population of breeding adult vultures. The landscape is unique, with ravines supporting at least 16 waterfalls.

The Rewa area in Madhya Pradesh is characterized by plateaus and hills, primarily part of the Vindhya Range. This Range is a complex system of hills, highlands, and plateaus that define the geography of this part of Central India.

Unique nesting: These ravines are preferred places for vultures to nest. This ravine system extends up to 14km, starting from the

mesmerising Purva waterfall. These ravines hold multiple nesting colonies of Long-billed vultures, Egyptian vultures and Bonelli's eagle.

It is quite interesting to study and infer that vultures in these regions are thriving. This signifies that the requirements, for example, water, safe nesting space, and ample food are available that vultures need to grow.

The nest location influences the success of nesting and the materials used to build are influenced by the location of these birds' nests. In this region, they build nests using three key materials, which are found within the ravines. First is a vine (*Tinomisium petiolare*) growing close to the waterfall, secondly a shrub called bushweed and third is wild grass.

The nest location is carefully identified by the birds, in these

crevices where a rock stands prominently. This rock holds the nest integrity, making it secure in such steep valleys. The vines are used to build the base. The bushweed's fresh twigs with leaves are used to lay the structure, and grass is used as a cushion.

Juvenile success: This location is convincing as observers here can witness the nest below their eye level. This makes it easier to understand and observe the activities inside the nest. As the chick grows, it kicks the nest down by its legs, and only a few traces of nest material remain. The juvenile vultures slowly begin to spread their wings, watching their parents leave the nest and soaring to learn step by step.

The juveniles then venture out of the nest to take short flights in the valley. The juveniles can be seen following their parents to nearby



Nesting material (grass) being carried by a Vulture, Nitish Agrawal

scavenging areas, waterholes, roosting spots and to distant locations as well. Parents teach the juveniles and acclimate them to the known locations for food and water. Often, these juveniles struggle to land near their nest as they are learning about the path for a smooth landing. These juveniles sometimes slip, choose very low spots in the valley and wait for the next thermal to assist their soaring.

Benefits here: This habitat plays a crucial role for vultures as they reap the benefit of food and water security. These sites are close to nesting, which ensures minimal effort and more scavenging, critically influencing the survival chances of vulture juveniles and adults.

After observing at least 25 nests in this valley during 2025, a 100% nesting success rate was registered, which is the highest since 2021. The ravine is 14 km long, and vultures are nesting on both faces of the straight cliffs. We have so far

surveyed only 4 km of the valley; the remaining 10 km holds a lot more potential. This year's count shows promising results, with 450 resident vulture individuals and over 100 migratory vulture individuals.

This nesting site is critically important as climate change is making the situation challenging for vultures. The water resources are shrinking. To ensure the success of these vultures, food and water

availability should be monitored, and precautionary measures should be implemented if the situation deviates from expectations.

Who to do it: It is critical to monitor these natural habitats, as these species are threatened to such an extent that every individual counts.

These habitats are nature's gift which needs to be preserved to ensure human, wildlife and survival of this planet.



Ravine system, Nitish Agrawal

MY HOME, A CROWDED WORLD!

By Rosamma Thomas

Rosamma Thomas is a freelance journalist and editor based in Kerala.

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The writer is a veteran environmentalist who has defended ecosystem all through her writing career (lastly at the Times of India) and continues to be a strong advocate for human values, will welcome any assignment for writing if suggested to her.

The last issue of Conservation Time carried a report on leopards. “Their silent service goes unnoticed: controlling disease vectors, balancing prey populations, offering nature's pest control without ever sending a bill. However, what is their reward for being stealthy and a silent predator? A slow, choking death as the Leopard's world shrinks by the hour.” This is true not just of leopards, but of all species that are not human.

Fireflies....?: Fireflies can hardly be seen these days – I get so excited at the sight of a firefly now, as a 50-year-old, that I make the sign of the cross and thank God for the beauteous sight.

As a child, each time I visited the rubber plantation of my uncle in Punalur, Kerala, I would see more fireflies than I could count.



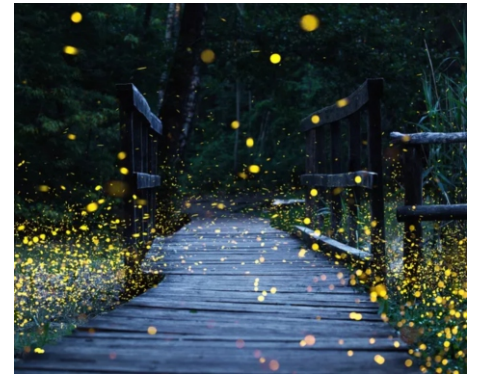
Fireflies, wikimedia

Fireflies live as larvae in forest litter and rotting wood – spaces that allow wood to rot and forest litter to gather no longer exist in large-enough patches in areas of human habitation. Also, there are no longer spaces that are not lit by artificial light – light pollution confuses these creatures that carry their own light. Pesticides too have caused a wave of killings.

I currently live in a house surrounded by a small wild patch in Pala town, Kottayam district, Kerala. I tidy the house myself, with no domestic help (labour is expensive in Kerala, and I am currently unemployed), and keeping the inside of the house tidy is task enough for me – I occasionally pull out some unruly grass, but otherwise let the outside of the house run wild.

Nature's return: It surprises me how easily nature rebounds – there are frogs aplenty in the yard, and they are a sign that the ecosystem is relatively healthy.

Frogs are especially sensitive, they use their skin like lungs, and are early warning mechanisms for the ecosystem.



Twinkle, twinkle, little star...

Fallen leaves in my yard return to the soil, and there is now a healthy population of earthworms; there are also a host of other worms that I do not recognize.

I sometimes hear the leaves rustle even though I can see nothing, and I know a snake has just retreated, to be out of my way.

I have seen the shed skin of snakes, and I know they are about – and feel rather secure in this space. (Moulting occurs when the snake grows and the old skin must be shed to make way for the larger body; it is also a time when the snake is weak and vulnerable.) There are several families of mongooses, and little ones scurry after pausing a while to check who is around.

Insects around: I see snails and slugs, and other creepie crawlies I do not recognize. The glass on the windows is lined with their slime trails.

They eat decaying plants and fungi, and their presence inside the house is not often welcomed – they like damp and cluttered spaces, and it is assumed that any interior they enter is untidy; but in the rains in Kerala, it is not uncommon for homes to receive slug guests.

Then there are spiders, and cockroaches and mice. Mosquitoes and ants and termites – and yet, there are people who ask if I live alone.

BATS SAVE BOOKS

David H. Davis, MS

Wildlife Biologist at the US Department of Wildlife Biology

One in the heart of the University of Coimbra, one of the oldest educational institutions in Europe, is the Joanina Library, a veritable treasure trove of knowledge and baroque architecture.

This unique library is not only an impressive place with its sumptuous design, but also with an unusual method of protecting the books: a colony of bats has been living inside the library for over two centuries!

At night, the bats emerge from the massive carved wooden shelves and begin to fly among the old books, feeding on insects that might damage the fragile pages of the historic volumes.

These little book guardians play an essential role in preserving valuable collections by naturally eliminating pests without the use of chemicals that could harm sensitive materials.

Cleaning droppings: To protect the library's wooden furniture and surfaces from bat droppings, staff cover the reading tables with special leather at the end of each day. In the morning, the library is carefully cleaned and life goes on in this sanctuary of learning.

The Joanina Library houses approximately 60,000 volumes.

Thanks to bats, these literary treasures are preserved in excellent condition, and this unusual collaboration between man and nature continues to fascinate visitors from around the world.

Pipistrelle bats: In Coimbra, a colony of Common pipistrelle bats makes their home behind the bookshelves of the university's Joanina Library, emerging at nightfall to consume flies and gnats and other pests before swooping out the library windows and across the hilltop college town in search of water.

Want to see the bats for yourself?



Pipistrelle bat in flight, wikipedia

The best chance at glimpsing them in action comes at nightfall: Stand on the steps just outside the library's dense teakwood door, and wait for them to emerge and wing their way across the cobbled town square and into the hills.

Another library: Some 125 miles to the south, just northwest of Lisbon, another colony of indoor-outdoor bats is in residence at the 300-year-old Library at the National Palace of Mafra.

Dating this colony is also difficult, but Hugo Rebelo, a bat biologist at the Center for Research on Biodiversity and Genetic Resources of the University of Porto, imagines some have been here for centuries.

Come nightfall, they swoop among the monastic-royal library's collection of incunabula (books printed prior to 1501 A.D.) — which includes a copy of the "Nuremberg Chronicle" — and other notable works like the first "Encyclopédie" of Diderot et D'Alembert.

Worth visiting: Catching a glimpse of the bats here can also be difficult.

The library closes before nightfall, which is when the winged creatures make their nightly migration between the stacks and the palace's gardens.

But the library pays tribute with a small glass case showcasing the taxidermied remains of three former winged residents.

ORCHHA: BLEND OF VULTURES & HERITAGE CONSERVATION

By Sonika Kushwaha and Akhilesh Kumar

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Vultures picking up nest material in Orchha

What caused decline of Vultures in India as nineties folded up. Science recorded, after 95% population had been lost, Diclofenac, a pain-killer drug was responsible! What after that? The writer hits at the root cause: forest authorities paying less priority, is it?

In India, the nine vulture species use different habitats for survival and to

avoid inter-specific competition. These natural habitats include large old trees, rocky cliffs and sometimes man-made structures like water tanks, electricity towers and forts. The unique habitats and perhaps the only type in India are the century old monuments of Orchha in Niwari district of Madhya Pradesh.

Severe decline: The critically endangered Long-billed vultures (*Gyps indicus*) and the endangered

Egyptian vultures (*Neophron percnopterus*) are nesting and breeding in these monuments for decades. The monuments are being monitored since 2008 to record the breeding and their success rate. Nine monuments were occupied during 2008 by the breeding vulture pairs. Unfortunately this number has declined to just 2 monuments during 2025. What a decline!

Orchha is a town of historic significance and has incredible

value at the national and international level with reverence to its architectural, religious and healthy ecosystem. Orchha was also the capital of the Bundela kingdom. The monuments depict the combination of Indo-Islamic architecture that was constructed in the 16th and 17th centuries. .

These monuments are so constructed that due to their height and designs, they offer safe, undisturbed, and non-approachable space for vulture nesting.

Over the years, vultures slowly started leaving various nest sites in Orcha monuments. Jehangir Mahal, Laxmi Narayan Temple, Phool Bagshish Mahal, Raja Ram Mandir, Toopchi ki Hawaeli, Ramnagar Gate and Suparishaav ka Mahal are some of the memorials that have been deserted by the breeding vulture pairs mainly due to the renovation works during the long breeding period (Mid-September to May-June).

Nesting material: Besides providing the nesting space, the monuments are also rich sources of nesting material for the breeding pairs. The nest of a vulture is a big structure, often comprising of 1000s of sticks and soft grasses to provide cushioning for the egg. Therefore the availability of nesting material from the monuments turns out to an additional feature in saving the time and energy of the parent vultures. A large variety of native plant materials grow on the monuments' during the monsoon period that is followed by the commencement of nest construction by the Long-billed vultures.

Orchha also fulfils another important requirement by the vultures, i.e., availability of the water near the nesting site. The Betwa river flows in central and northern India, and is a tributary of the Yamuna. It has been observed that before taking off, the vultures gather at the nearest water body in flocks to quench their thirst.



At long last, information panels are erected to convey how Vultures are important at Orchha munuments

Orchha was therefore a beautiful combination of all the basic requirements that was needed for a flourishing vulture colony until it was disturbed due to the human activities undertaken to promote tourism. Tourism directly and indirectly started having a negative effect on breeding of Long-billed Vultures since 2013. The number of shooting sets for advertisements, movies and web series has adverse effects on the vultures particularly during the breeding period.

Parental loss: There is reduction in parental attendance at nests due to increase in human presence and therefore reduced parental care that is known to negatively affect growth of the nestlings. This is also recorded due to the renovation of the monuments during the breeding time. The preparations during the “*Namaste Orchha*” festival turned to be the deadly blow out to the vulture population in Orchha in December 2019.

There has been always a dearth of coordination between the various departments including the Forest and Archaeological Departments in Orchha. Although with the efforts of conservationists it was agreed that the spatial and chronological

restrictions should be undertaken to protect vultures during the sensitive period of breeding, the ground scenario is always on the contrary. Several studies have been undertaken on the behavioural responses of vultures as to how, when or what type of human activities may be disturbing the breeding vulture population so as to optimize the management and conservation actions.

Who to do: The reduced number of nests in monuments of Orchha reflects the need of immediate Government inter disciplinary coordination to save the breeding sites of vultures for their long term conservation.

On one hand significant amounts are spent on *ex-situ* conservation of vultures (captive breeding, GIS studies and vulture census) and on the other hand *in-situ* conservation receives inadequate attention and resources.

These monuments are rendering an irreplaceable habitat for the Long-billed vultures, and Egyptian vultures.

Any disturbance to these sites is not merely a heritage management issue-it is a vulture conservation crisis.

Ministry's role: The Ministry of Environment, Forest and Climate Change (MoEFCC) must mediate and direct the Archaeological Survey of India (ASI) to strictly follow the Wildlife Protection Act, 1972, especially with respect to breeding seasons of Critically Endangered species.



Vulture conservation education at school level at Orchha

FINNISH “WONDERLAND” REINDEER & SAUNA DELIGHTS

By Karen Bryant

The writer is based in Britain and has been voyaging for a long time to distant wildlife parks to experience conservation and contribute to it.

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A Sami artist entertains Karen and Derek to a Joik performance in Lapland Hut, Karen's source

Over the years my husband Derek and I have been fortunate to visit many wonderful countries but as climate change causes freak weather conditions and political unrest looking for new destinations is challenging.

So this time we decided on Finland. Curious to see why it is the happiest place to live for the 8th consecutive year. We discovered “Lapland” is not a country but a region that spans Finland, Sweden, Norway and a small part of Russia. The Finnish part is known for its vast wilderness, indigenous Sámi culture, the Santa Claus Village and the Northern Lights.

Northern Lights: Seeing the Northern Lights was on my bucket list so this meant going in winter. I searched the internet for suitable accommodation and excursions eventually deciding on a few days in Helsinki then 3 nights in a glass igloo in Lapland.

The Finnish people are friendly and keen to introduce visitors to their

country and culture. Recycling and sustainability are taken very seriously and we were told the tap water is fresher and purer than bottled water from all the snow that melts into their rivers so single-use plastic bottles frowned upon. Our apartment in Helsinki had separate bins in the kitchen to ensure all guests recycled glass, metal, plastic, food waste, etc. There were instructions to locate the recycling room in the basement.

It was also the first time we have never had a physical key to access a property – instead a code was sent to our mobile phone. We were impressed to see a branch of “Revolve” (a second-hand clothing and accessories shop) among the Duty Free shops at Helsinki International airport to encourage international travellers to recycle fashion rather than buy new.

On the menu: Concerned to see Reindeer (and even Bear during the hunting season) on the menu we were assured that reindeer

outnumber the people and the species was not at risk and encouraged to try it. It was lean, healthy and delicious – however we declined to try bear which apparently has quite a strong flavour and an acquired taste.

After a few enjoyable days in the Finnish capital we took a short flight up to Rovaniemi and after a 20-min road trip arrived at our igloo. The area was so beautiful,



Derek with reindeer

peaceful and often the only noise were woodpeckers in the many trees. It was truly magical with such pure air - we immediately regretted only booking 3 nights. Trying to get some sleep was difficult as we did not want to miss the Aurora but also wanted to wake early to catch the beautiful sunrises. (Guests can ask Lodges to wake them during the night if the Aurora occurs).

There are lots of exciting activities to choose from all year round including fishing, bird-watching, hiking, Northern Lights Hunting on e-fatbikes or ATV's but we had selected some sedate ones.

Reindeer economy: Our first morning we visited a Reindeer farm. They might look adorable but require a lot of looking after and the life of a reindeer herder is very intensive. We hand-fed them lichen while learning how important they are to the indigenous Sami people and provide many benefits as the whole reindeer is used so nothing wasted. The high quality hide is treated with tree bark and used to make clothes, shoes and blankets (the one on our bed confirming this) while antlers and bones are used in every day products.

Reindeer are ruminants with 4 different stomach compartments for different digestive functions to allow fermentation of food which is regurgitated for further digestion.



The Aurora lights up the night sky, Karen Bryant

They are herbivores and eat a diet of shrubs, ferns, fungi, herbs but lichen (also known as reindeer moss) is their primary winter food. Their eyes change colour with the seasons but whilst they are not good at detecting colour they have a good sense of smell which helps them find food in the snow. They vary in size and colour depending on the region. Reindeer are the only species where females grow antlers as well as males. Their fur is water-resistant and keeps their bodies warm but their 4-toed feet are exposed to cold air. So they rely on "oleic acid" in the bone marrow (reindeer equivalent of antifreeze) to help warm them via the veins. It is amazing how well the species has adapted to harsh Arctic conditions.

Sauna: After lunch we visited a local handicraft workshop and learnt about the local way of life and had the opportunity to make some jewellery and artwork with a former teacher and her husband before being entertained with lots of wonderful stories over refreshments in their delightful home. Then we returned to camp and before dinner there was time for our first (but not last) sauna which Derek particularly enjoyed as it eased his aches and pains. Saunas are important in Finnish culture and regarded as the most important room in the home where everyone is equal. It certainly was a nice way to relax during the dark evenings.

We were lucky enough to have sightings of the Northern Lights again so after very little sleep set off the following morning for a Husky Dog Cart ride through the forest which operates on the roads when the snow is not deep enough for the sleds. It was such fun dashing through the forests and we had to hold on tight especially around the corners. Back at camp the huskies enjoyed a well-earned bowl of water before we fed them some treats before having a warming drink ourselves around a welcome fire before doing a tour of the kennels and maternity ward where

expectant mothers and new pups all eager to get involved.

On our last evening we had dinner in a Lappish Hut and were honoured to be entertained to a Joik performance by an indigenous Sami artist who had driven about six hours to reach our camp from his remote home. After a short rest in his car he then had to drive back afterwards so he could tend his reindeer in the morning. Just another example of these amazing Finnish people.

Well armed: Another interesting fact - despite being smaller and overshadowed by its neighbours, Finland has a large army which is apparently bigger than the UK's - perhaps not surprising given the long border it shares with Russia. A recent poll revealed 78% of Finnish adults (but only 71% of 18-25) would be prepared to fight for their country compared to a much lower percentage in the UK which was around 38%. We did not realize when this photo was taken at the exact point of the Arctic Circle in Santa's village of the secret beneath us. It was only watching an episode of "Scandinavia with Simon Reeve" on the BBC; we were stunned to learn below us there is a nuclear bunker! Sad but true.



Karen and Derek Bryant standing in front of the spot that marks the Arctic Circle, Karen source

TETE-A-TETE WITH MARTIN

“My Head For A Tree”

By: Dr. Oishimaya Sen Nag

Dr. Oishimaya Sen Nag (PhD Biochemistry) is a conservation storyteller and editor from Kolkata, India. She travels across India's wild landscapes, documenting conservation stories with a special focus on the role of local communities and Indian culture in conservation. She visited London to meet Martin Goodman during August 2025, so this piece.

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When I first came to learn about the book "My Head for a Tree" by Dr. Martin Goodman from Harsh Vardhan, I was overjoyed.

As an ardent admirer of the Bishnoi concept of conservation, I wasted no time ordering my copy of the book from Amazon and received it at my home in Kolkata, India. Very soon, I also had the golden opportunity to meet the author of this book at his residence in London.

Beheading for trees: Dr. Goodman first came to learn about the Bishnois from Harsh. Fascinated by their tales spanning a period of over five centuries, Dr. Goodman visited India to spend time with the Bishnois and write a book on this community. The author has penned these incredible stories of the Bishnois very beautifully in this book.

His autograph: So, when I was visiting London in mid-July of this year to meet my husband, who works there as a software engineer, Harsh helped me connect with Dr. Goodman, and we decided to meet. I carried the book with me. I had to get his signature on it!

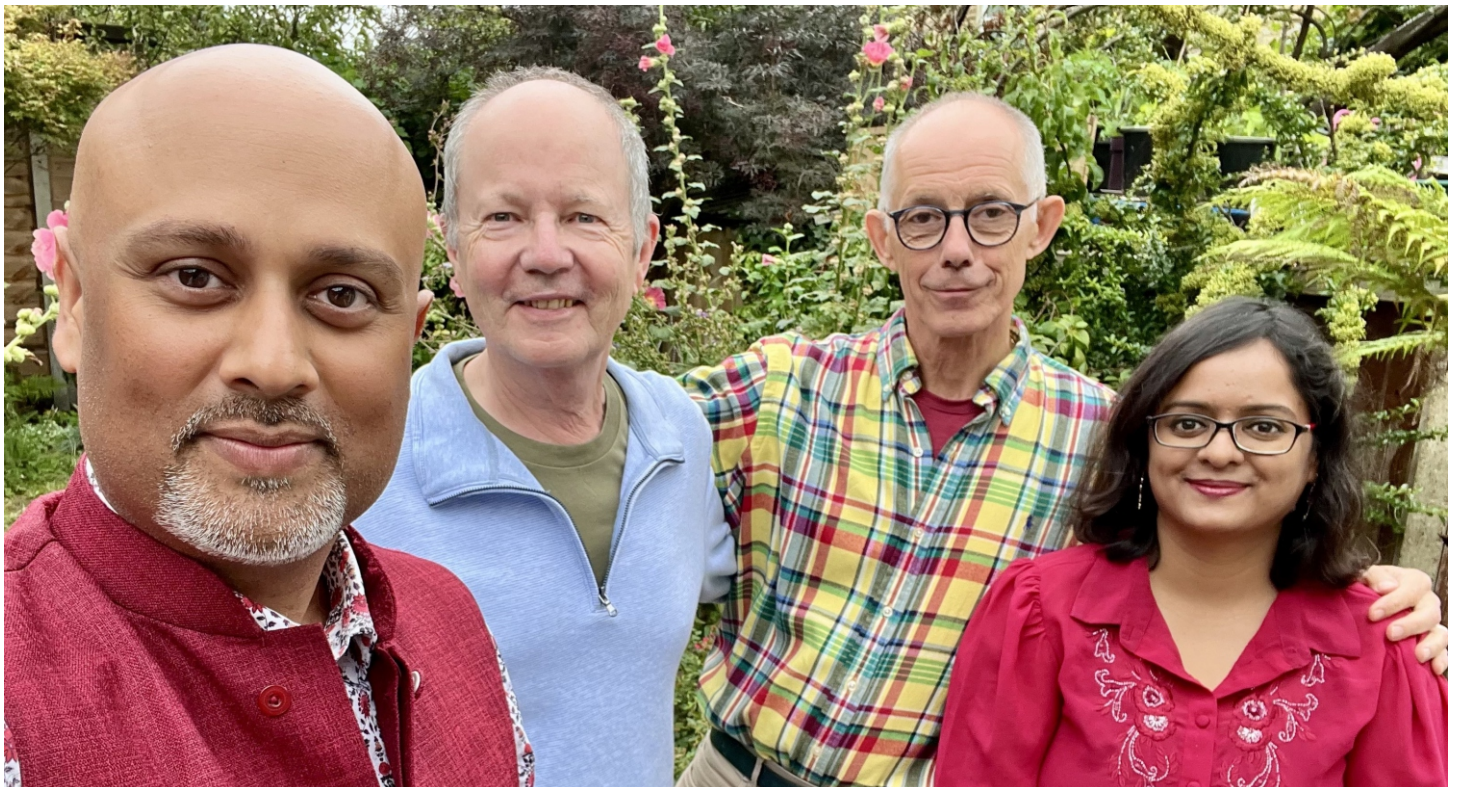
London is a city that I find really charming - the rich history, the dramatic skies, the Thames running through it, and faces from all over the world gathering there for a new chance in life or just to enjoy all that it offers - the city never fails to entice me. It was my fifth visit to the city this time.

Acceptance of wildlife outside protected areas was low in the United Kingdom. People had hunted down the apex predators like wolves, bears, and lynxes to extinction or near-extinction.

India better: The situation is much better in India, although it is losing ground fast. In a country of over 1.4 billion people, people's acceptance of wildlife, stemming from an age-old culture of conservation, is vital to ensuring a secure future for India's wildlife.

When my husband and I met the author and James Thornton, a globally renowned environmental lawyer, at their residence in London, we were happy to learn that they appreciated the Indian culture that promotes our co-existence with other species. Both of them had extensively travelled across the world and were fascinated by how people in India live in close contact with tigers, leopards, and lions around their villages and towns. Such a level of acceptance was unthinkable in most other parts of the globe.

Inspirational: "My Head for a Tree" reminds us of the community that continues to show us how to coexist with other species. It serves to inspire us through its portrayal of the Bishnoi way of life, which encourages us to adapt to the ways of Nature rather than the other way around. It is definitely a book that is a must-read for all.



Arijit Nag, James Thornton, Martin Goodman and Oishimaya Sen Nag in Britain during August 25

TEACHERS' AND YOUTH LEADERS' CORNER

A GOOD PLAN FOR TEACHING CLIMATE CHANGE

By Ed McCrea

Editor-emeritus at Conservation Times

Email: emccrea@eecg.org



Ed J. McCrea awarding Satya Bhan Singh in Jaipur, Naman Vardhan

A climate lesson plan typically explores the differences between weather and climate, the factors influencing climate, and the impacts of climate change. These plans often incorporate data analysis, model building, and discussions about mitigation and adaptation strategies.

Here is a more detailed breakdown of what a climate lesson plan might include. By incorporating these elements, educators can create engaging and informative climate lessons that empower students to understand and address this critical global issue.

1. First, set measurable objectives that will guide lesson development and be used to evaluate student learning.

2. Core Concepts

Weather vs. Climate:

Distinguish between short-term atmospheric conditions (weather) and long-term patterns (climate).

Climate Factors:

Explore the elements that shape climate, such as temperature, precipitation, wind, and geographic

features.

Climate Change:

Introduce the concept of human-caused climate change and its potential impacts.

Greenhouse Effect:

Explain how greenhouse gases trap heat and contribute to warming.

Climate Modeling:

Introduce the concept of climate models and how they are used to project future trends.

3. Activities and Resources

Data Analysis:

Have students analyze weather data (temperature, precipitation, etc.) to identify patterns and trends.

Model Building:

Use simulations or physical models to demonstrate climate processes like the greenhouse effect.

Climate Zones:

Explore different climate zones around the world and the factors that differentiate them.

Impacts of Climate Change:

Discuss the effects of climate change on ecosystems, human populations, and extreme weather events.

Mitigation & Adaptation:

Examine strategies to reduce greenhouse gas emissions (mitigation) and adapt to a changing climate (adaptation).

Case Studies:

Analyze specific examples of climate change impacts or successful mitigation/adaptation efforts.

Multimedia Resources:

Utilize videos, interactive simulations, and online tools to enhance learning.

Local Connections:

Connect climate concepts to students' local environment and experiences.

Guest Speakers:

Invite experts in climate science or related fields to share their knowledge.

Citizen Science Projects:

Engage students in real-world data collection and analysis.

4. Example Lesson Plan Structure:

A lesson plan might follow this structure--

Introduction:

Engage students with a question, scenario, or interesting fact about climate.

Exploration:

Provide opportunities for students to explore the concepts through activities, readings, or videos.

Explanation:

Guide students to understand the key concepts and vocabulary related to climate and climate change.

Elaboration:

Extend students' understanding through more complex activities, case studies, or projects.

Evaluation:

Assess student learning through quizzes, presentations, or other projects.

David Rankin, US based Artist, sends his art for Conservation Times



Painted Storks



A Tiger cub

“I perceive the world around me through a type of mental water color filter. I see a wet reflection on a street, the fractured glint of sunlight on water, sunlight off the surface of a peacock's neck or grasses in a field and I instantly try to visualize how I would recreate that effect on paper... with the fewest possible strokes. If you study my paintings closely you will see that what may appear as complex detail from a distance, is in fact created from very simple brushstrokes using the natural impressionistic roughness of the painting surface to create the illusion of detail and form.” – David Rankin, Cleveland, US based Artist, sends his art for Conservation Times. Grateful thanks to him -- Editors

Welcome to live along with
Butterflies, Birds, under a Green Canopy



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EDITORS FOR CONSERVATION TIMES



Anderson, Hartley

Hartley Anderson is a Sydney, Australia resident who, after more than fifty years in sales and marketing roles, has decided it was time to pursue leisure activities. His recent and new activity which is relevant to conservation is beekeeping. He has a strong interest in India.



Bhatnagar, Nandita

Nandita Bhatnagar is a Clinical Biochemist with a passion for writing. Her articles have been published in local newspapers in the Bay Area. She also authors and narrates her stories for a monthly audio magazine "Suhava" published through Rotary Club of Maharashtra for blind school children.



Goodman, Martin

Martin Goodman is an award-winning writer and publisher based in the UK. His book *Client Earth* told the tale of eco-lawyers on their global battle to save the planet from environmental collapse. He is Emeritus Professor of Creative Writing at the University of Hull.



McCrea, Edward

Retired as Chairman of Editorial Board (July 25), serving as Editor-emeritus

Ed McCrea is President of Environmental Education and Conservation Global, a US nonprofit conservation organization. Over the last fifty 50 years, he has worked in environmental education and biodiversity conservation at the local, state, national, and international levels.



Dr. Oishimaya Sen Nag

Oishimaya Sen Nag is a conservation storyteller, editor, and science communicator based in India. She serves as the Senior Editor of WorldAtlas.com and is also associated with the Bombay Natural History Society. Her current focus is writing about lesser-known species and community-led conservation.



Pandey, Binita

Binita Pandey is a researcher in entomology with a keen interest in insect taxonomy, behavior, conservation, and plant preference of pests. She has conducted a Bumblebee research project in Nepal. She is the founder and manager of the Nepal Pollinator Network.



Patil, Amit

Amit is an eco-lover based in Dallas, Texas. Believing that a traveler always starts out in his backyard, Amit traveled extensively across India. He kept his passion for nature alive after moving to North America and has traveled extensively around the continent.



Sharma, Manoj

Manoj Sharma worked for the Indian Statistical Service for 10 years and then immigrated to the USA to pursue graduate studies in statistics. Currently he is the Director of Biostatistics at Grail Inc., supporting the company vision of "Detect cancer early, when it can be cured".



Sharma, Satish

Authored 11 books on forest, wildlife management and biodiversity, specialized in ethnobotany and ethnozoology, did PhDs on Plant life of Weaver Bird (1991) and Study of Biodiversity and Ethnobiology of Phulwari WL Sanctuary (2007), former Forest Officer, based at Udaipur.



Sudin

Sudin is based in Denmark, into regenerative farming and nature education project. A postgraduate in Forestry Management, he holds a Permaculture Design Certificate and has experience across silviculture, natural-resource-based-rural-livelihoods domains in India. He believes in the resilience of a biodiverse ecosystem.



Thomas, Rosamma

Rosamma Thomas is a freelance journalist based in Maharashtra, India. She has worked in radio and print journalism. She has only ever lived in cities, despite being a wild creature at heart. She has supported by writing on a unique cause like House Sparrow ex situ breeding initiatives.



Vardhan, Mamta
Co-ordinating Editor

Mamta holds a PhD in Environmental Science and Policy. She has several years of experience working with rural communities in India and East Africa on issues that lie on the intersection of rural livelihoods and natural resources management. Mamta is currently based in Edmonton, Canada where she works as a Research Officer with the provincial Government.