

**TIMES
EVOKE**

A WALK IN THE PARK

When we hear the word 'park', many of us think of a neat public garden with clipped lawns, bright swings and welcoming benches. But there are other parks too — imagine sprawling expanses carpeting thousands of acres, holding rumbling rivers, puffing volcanos, icy mountains and steaming springs, all home to Earth's most astonishing beings. These are 'National Parks', areas especially set aside by a country's government for the preservation of nature and species. Among the earliest was the USA's Yellowstone National Park, created in 1872, soon becoming home to multiple beings, including the beleaguered bison, pushed to near-extinction by colonial settlers. America's greatest idea began gaining popularity — New Zealand established the volcano-studded Tongariro Park in 1887, Virunga National Park emerged in Congo in 1925 while India's Hailey or Jim Corbett National Park came about in 1936.

There are over 6,000 such parks worldwide now. Protected from human activities like building, farming and hunting, these preserve wildlife and biodiversity. Allowing rivers, grasslands and mangroves to function unimpeded, they conserve ecosystems, habitat connectivity and planetary technologies, filtering water, producing oxygen and sequestering carbon. When managed equitably, they enhance development, including for vulnerable communities, through processes like ecotourism and biotechnology. They also offer visitors unparalleled gains — the World Economic Forum estimates the economic impact of such parks on people's mental health amounts to \$6 trillion worldwide annually. This comes from the joyous awe these parks offer us — as we gaze at their landscapes and creatures great and small, we realise we are part of an extraordinary panorama of life, beautiful, grand and full of love.

National parks also represent the best of us. Their growth — UNEP reports commendable progress since 2010, with 22 million sq kms of land protected globally — shows humanity's efforts to save these treasures, often despite poverty and strife. There are many miles to go — Earth still has only 8% of land protected and connected while one-third of key biodiversity areas (KBAs) lack any coverage. As Times Evoke's global experts emphasise, expanding such parks is key, particularly as safeguards against the intertwined climate and extinction catastrophes. Join Times Evoke in exploring such special areas — and feel the joy of taking a walk in this park.

'India's wildlife, decimated by hunting and forest exploitation, found succour in national parks'

K. Ullas Karanth is a wildlife conservationist and ecologist. Speaking to Srijana Mitra Das at Times Evoke, Karanth discusses the past — and future — of national parks in India:

How did national park areas begin in India?

This journey goes back to before India's Independence. Two stages were involved — in the late 19th century, India was seeing a massive destruction of forests. There had already been discussions about whether the colonial government should set aside some land for ecological reasons, watershed protection being one.



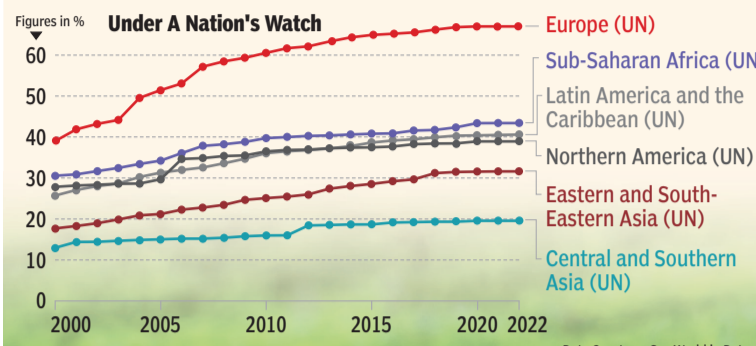
Then came news of people clearing forests on a huge scale, raising concerns about the ability to sustain the colonial military, railways, etc., all of which drew such resources. This discourse became prominent and finally, the colonial government set aside around a quarter of the country as forest reservations — that provided the land base for creating national parks later. With the focus being on high forests and timber, however, these lands were mainly in the Western Ghats, Central Provinces, parts of the Terai, etc. Very little land in other areas was conserved and thus got degraded.

About wildlife, initial concerns started being voiced around the 1920s. These came against a backdrop of hunting expeditions by royals and colonials for sport as well as bounties offered on killing tigers and other animals. This was decimating Indian wildlife — Frederick W. Champion, a forest officer, Jim Corbett and others argued for regulation to protect remaining species. Laws for animal protection were brought about and in 1936, the first national park, initially called Hailey, later named after Corbett, was established in then-Uttar Pradesh.

The destruction of forests continued though as timber was the backbone of the colonial economy. Similarly, hunting carried on and by Independence, there was very little wildlife left. Conservationists were extremely worried and in 1952, the National Wildlife Advisory Board, headed by an erstwhile royal, was formed. This created some game sanctuaries, small areas where ordinary people were barred from hunting. But there was no special staff to protect wildlife and

A CHALLENGING BALANCE

The share of land given to terrestrial Key Biodiversity Areas (KBAs) which are protected has grown in many regions globally between 2000 to 2022 — but it is the lowest in South Asia which has a much higher human population than other places



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The real impetus for national parks came in the mid-1960s when conservationists like Duleep Matthai expressed grave concern at how sharply Indian wildlife was declining. There was a demand for stronger laws and the government then appointed competent officers to draft these. The Wildlife Protection Act emerged in 1972 and Rules followed in 1974 — these recognised wildlife sanctuaries and national parks, the latter receiving the highest level of protection. Commercial forestry and all hunting were banned in these areas. In 1976, this sphere was brought under the Concurrent list, including the Centre in policy-making.

AN INDIAN JOURNEY

officers literally sacrificed their lives to secure India's parks. Officers like Kailash Sankhala, Shyam Sunder, S. Deb Roy, etc. had to combat the powerful hunting lobby and often, their own colleagues to secure space for wildlife. The government also stayed strong on this course and compensated states which followed wildlife protection laws.

Circumstances which followed wildlife protection laws. Today, our economy is moving from an agro-pastoral kind to one which can support manufacturing, services and varied activities. People in biologically rich areas are more willing to move. Many seek better education, healthcare, electricity, roads, etc. By providing these benefits, we can make communities better off while protecting wildlife. We could

do India's national parks share similarities with others worldwide? Not really because what we have across South Asia in terms of land and other resources needed to sustain wildlife is a fraction of what once existed — today, most tracts in the subcontinent are under

cultivation but in Africa, Latin America or North America, vast expanses are still under forests. The area given for protection is far bigger, reaching 40% of land in many places. Our human population density is 300 to 400 people per square kilometre, explaining this difference.

But the upside is, we have a growing economy now which is accommodating people in urban, semi-urban and peri-urban activities — so, the pressure to clear forests for agriculture is reducing.

Which species have benefitted from national parks in India?

The rhinoceros is a good example. Strong government action was taken to protect the last few rhinos in Kaziranga — without that, we'd have lost the species. Lions have really benefitted from the Gir forest being protected. Tigers have gained and so have a whole suite of species which share tiger habitat. Similarly, elephants benefitted as have other species associated with these charismatic beings. The brown antlered deer of Manipur has a single population left of the whole species — this is now located in one park.

How are human communities living around national parks faring?

That is perhaps the most important challenge. Around 50 years ago, when the economic growth rate was low, most people could only rely on agriculture and animal husbandry. Those land users near national parks meant conflicts with wildlife which also eats crops and can be predators. The idea of relocating people aimed to prevent such conflicts. I've been involved in this process from the 1980s and it was often very hard because finding enough good-quality agricultural land to resettle people was difficult.

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TOGETHER: A rhino & friends in Kaziranga



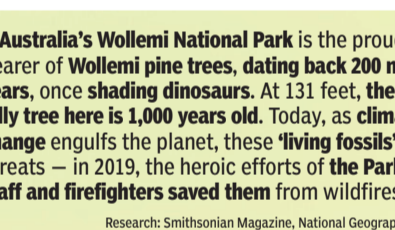
MEET THE KING: A lion living safely in Gir

What challenges were faced in this process?

The law was strong but there was no force to implement it. The forest department's mandate was also to log and earn revenue. The economy was very underdeveloped then and forest revenue played a significant role. People cooked with wood, mostly from forests, while millions of cattle had to be grazed. The dependence on forests was huge. Protecting wildlife under those circumstances was a tremendous challenge — but the forest department rose to the occasion. Many



the Victoria amazonica is a water lily — while its flowers blossom only with the setting sun, its leaves grow up to 10 feet in diameter. Their 26-foot-long submerged stalks rival the length of the green anacondas these plants share their habitat with. Found in Brazil's Pantanal National Park, these massive leaves are also astonishingly buoyant — single amazonica leaves have borne weights between 112 to 226 kgs



Australia's Wollemi National Park is the proud bearer of Wollemi pine trees, dating back 200 million years, once shading dinosaurs. At 131 feet, the King Billy tree here is 1,000 years old. Today, as climate change engulfs the planet, these 'living fossils' face threats — in 2019, the heroic efforts of the Park staff and firefighters saved them from wildfires



National parks are home to wondrous animals, birds — and Earth's most extraordinary plants. Foremost among these is General Sherman, the largest tree on Earth at 275 feet. Located in the Giants Grove in California's Sequoia National Park, General Sherman, aged 2,200 years, is iconic — while it towers over all else, the Giant Sequoias are so big, early European settlers literally made their cabins in their trunks

'South Africa's national parks protect wildlife and ecosystems — they face the pressures of land and inequality'

Jane Carruthers is emeritus professor of environmental history at the University of South Africa. Speaking to Times Evoke, she outlines the roots and development of South Africa's protected parks:

The origins of South Africa's national parks lie in the development of America's Yellowstone. Our first park was made in the colony of Natal in the 1890s, there being four British colonies in South Africa then. Natal had a majestic mountain range called the Drakensberg, which has waterfalls and stunning views and resembled Yellowstone. At the time, it was recognised that South Africa's savanna was seeing the disappearance of wildlife because of increased hunting and population pressure, coming also from opening the country up to white settlement. Precolonial societies had hunted — but settler hunting involved firearms and an industrial economy which was decimating elephants for ivory, meat and their value as trophies. Land was being increasingly allocated to settlers and farms, further pressuring wildlife.

Recognising this, many places seen as vulnerable, with herds of wildlife so attractive to explorers, became game reserves. Their aim was to protect animals for hunting, just as in many places in India. These came up in three colonies, mostly located in places settlers were not keen on because these had endemic diseases like malaria, horse sickness and so on. By 1910, when the Union came about, there was less and less open land left — and the reduction of wildlife was starkly evident. In 1896, rinderpest had decimated



TALES OF OUR IVORY: Elephants were once mercilessly hunted in South Africa for their teeth and heads prized as trophies — their numbers have grown back only with protected parks

wildlife and domestic stock. So, in the early 1900s, the idea of making protected areas caught on in South Africa, driven by the need to conserve diminishing herds.

In the mid-1920s, James Stevenson Hamilton, a game ranger in the Sabi Reserve in Mpumalanga, started an initiative to make the Reserve a National Park. The concern was that if it was only a provincial game reserve, the province could abolish it anytime — but if it went through Parliament, it would be more secure. So, a long campaign was led by Hamilton and some allies who managed to get this through Parliament, culminating in the establishment of the Kruger National Park. There are 19 protected National Parks now, managed by the South Africa National Parks (SANParks) organisation.

Kruger was our first park which really spoke to the national psyche. We had Drakensberg but, more a land of savanna, we were not really mountainous country. So, Kruger felt new — it had a board to manage it but no bureaucratic structure and not much public involvement as it was remote

and few people could get there. There was also no expertise about being a game ranger — you only had to know how to use a gun and arrest a poacher. Academic zoologists were busy studying species like frogs and weren't interested in wildlife then. So, Kruger's game rangers, mostly white men with African staff, mainly stopped poaching and allowed herds to multiply. Importantly though, lions, crocodiles, wild dogs and hyena, anything that preyed on antelope, were not protected — they were called 'vermin' and exterminated.

Over the 20th century, which I write about in my book 'National Park Science', this situation changed. The budget was still kept low by a somewhat reluctant government but a system of national parks spread across the country, particularly from the 1960s onwards when these became an international movement. Parks were created in marine areas, desert zones, etc., aiming to protect something of each biome. The bureaucracy of these also grew. And in the 1970s, with the evolution of conservation science, a scientific attitude came

to prevail. So, the national parks were now run for wildlife, with a systems approach, keen on the surprises ecology posed.

There were still plenty of challenges, including finding enough land, money and expertise and getting the public on board. But gradually, species and ecosystems in South Africa began to benefit. The latter were those that actually didn't attract a lot of tourists — not many people want to go and look at arid parts of the Karoo, for instance. There are no lions or other big animals there. But those landscapes really benefitted from preservation as have marine ecosystems in the country.

Species which benefitted are those which do attract tourism — antelope are prominent here and have grown into many millions now. Elephants have also gained — there are close to half a million elephants in southern Africa and often, there are concerns about managing these numbers. Rhinos, once on the brink of extinction, returned. This holds its own challenges since rhino horn is hugely valuable and poachers are determined to get at them. Little creatures also got a breather in such parks — pangolin and aardwolf, ant-eating wolves of the Karoo, are examples.

But human pressures have been present. South Africa doesn't have the heavily used forested areas of India. When Kruger began, it was far away and full of disease. Africans



HORNS OF A DILEMMA: Whose land is this?

there didn't use it much. They planted crops in the summer and moved out, returning in winter. Yet, there was resistance to national parks from settlers and Africans as these created a fence between them and a productive landscape full of game. There was also opposition from mining companies and other business interests as South Africa industrialised. When the population was less, these strains were smaller — today we have 60 million people, a number that's doubled since 1994. So, you can imagine the pressures on land.

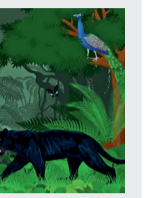
This has been handled in various ways. In Kruger, a formal title to the land was returned to the evicted community the Makuleke in the north. These groups remain within the park, helping with conservation work and also benefit from money coming via tourism, etc. We have a fairly aggressive land restitution program and there are land claims on many national parks but at the moment, these usually get mired in bureaucracy — yet, that is a ticking time bomb.

Of course these are not rich agricultural areas with productive soil that's good for profitable farming. SANParks has got some accolades but some criticism too about fending off potential land invasions. Feelings often run high and there have been violent protests at the gates of Kruger National Park. These are all part of the political upheaval South Africa has gone through and is still experiencing, with huge poverty and massive inequalities in both income and education.

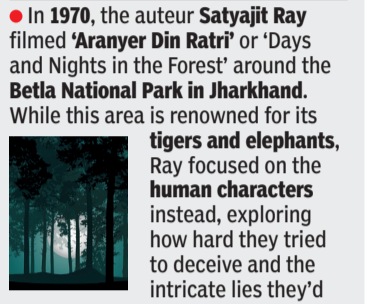
Yet, national parks are economic drivers for South Africa. Millions go to see the Table Mountain and then head to a national park. Ecotourism contributes billions of rands to South Africa's GDP — before the pandemic, it generated about 7%, returning to 3% of GDP now. They also offer employment and if well managed, they bring international credibility by joining us to this global movement. South Africa is a signatory to the Convention on Biological Diversity — it is committed to protecting these 'witness areas', which hold much of Earth's history and where a future which includes climate change can be monitored.

ART IN THE PARK

National parks have long inspired artists. Apparently taken with Pench in Madhya Pradesh, Rudyard Kipling wrote 'The Jungle Book' in 1894, which comprised characters like Shere Khan, the fierce tiger, Baloo, the fun-loving bear and Kaa, the wily python. Mowgli, a little boy, grows up among them, protected by the black panther, Bagheera — who may indeed have prowled through Pench



In 1970, the auteur Satyajit Ray filmed 'Araney Din Ratri' or 'Days and Nights in the Forest' around the Beta National Park in Jharkhand. While this area is renowned for its



tigers and elephants, Ray focused on the human characters instead, exploring how hard they tried to deceive and the intricate lies they'd weave, contrasting social decay with the purity and honesty of nature

The art of the Warli indigenous people is living — many Warlis reside in the Sanjay Gandhi National Park in Mumbai. Even in a megacity, they make their iconic paintings which celebrate animals, birds, the sun and rivers in geometric shapes and natural colours, conveying the beauty of living peacefully with nature



Research: Encyclopaedia Britannica, Smithsonian Magazine, National Geographic, BBC, The Times of India

develop win-win solutions but this should be implemented by development agencies across government, conservation bodies, NGOs and other organisations who know such areas and communities well.

Madhya Pradesh has done a good job at relocating thousands of such families in recent years. This should be a public-private partnership where the forest department is one part of the process but not the only agency responsible for this.

What has been a memorable experience in your years of work in India's national parks?

The most fulfilling moments came from what I could bring to our parks like Nagarhole by way of cutting-edge science, developing new techniques for counting tigers, using cameras and statistical models. These tangible applications also helped to improve the status of our nation's wildlife.

READERS WRITE

Dear Times Evoke, I am a regular TE reader and find every TE article unique. TE presents significant topics like climate change in such a novel way. James Mallet's interview (23rd September) gave food for thought about how climate change even influences the evolution of butterflies. This makes us realise how important conserving ecosystems has become. — Sayani Sinharay, University of Calcutta, MSc in Genetics

I love TE's meticulously researched articles which really evoke my memories. I've spent time in the northeast and James Mallet's butterfly research fascinated me. Learning about pepper moths has also enriched me. I hope butterflies adapt against climate change now. We readers expect many such fascinating discussions in Times Evoke in years to come. — Suchintya Sur, Pink City Jaipur

James Mallet offered readers vivid insights into the world of butterflies. Times Evoke has been doing an excellent job in exploring new subjects and interviewing famed experts, enlarging the horizons of knowledge of TE readers. Thank you, TOI. — CV Aravind, Bengaluru

Although fascinated by butterflies since childhood, we knew so little about their existence. James Mallet gave us a peep into this special realm. My heartfelt gratitude to Times Evoke for featuring this extremely learned scholar par excellence. We love reading TE for such knowledge. — Samiul Hassan Quadri, Bikaner

TE, the feature on butterflies was breath-taking! The article looked lovely and I was amazed to learn how butterflies mimic each other's colours! This is natural selection at work. It was a thrill to discover! — Aditya Kumar, Gurugram

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ZEBRA CROSSING: A herd in the Kruger Park