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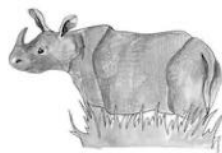
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## EDITORIAL

### A rich and diverse menu

Once in a while, there is an issue of the *PA Update* that stands out for the sheer width, depth and diversity of things that are covered in its pages. It offers a glimpse for what we have in this country, of what is going on, of the many unexpected flips and twists that are, in turn, a reminder of how little we know of what happens here.

From environmental and forest clearances to a mega project in Great Nicobar Island to increasing hangul numbers and sighting of a Snow leopard in Kashmir at the other end of the country; from the continued dominance of the tiger in our imaginations where wildlife issues and reporting is concerned to stories on neglected species like the dugong, the pangolin and the Slender loris; from the threat to sea-cucumbers because of illegal trade to the heart-warming stories of increasing Greater adjutant numbers in Bihar and citizen efforts to protect the Amur falcons in Manipur; a clutch of stories of individual tigers turning dangerous across different parts of the country; another of their expanding paw-print; of Tamil Nadu declaring a number of new protected areas even as Corbett TR authorities come under the scanner for illegal tree cutting; of super-star cricketers felicitating the foot-soldiers of conservation; of the continued move to relocate communities from PAs and of Sanjay Gandhi National Park contributing over Rs. 60,000 crores in ecosystem services annually... all this and much more for just a two month period of this *PA Update*, which in any case only represents a fraction of the larger universe of news and developments on wildlife and conservation.

One can easily visualise the wild oscillations of a needle in the mind that might have the job of identifying a theme or a geography or an issue to focus upon. How does one decide what is more interesting and/or more important? How does one make sense of

this universe? Is it even possible to make sense of it? How, in any case, can one understanding or narrative be the definitive narrative of the idea of wildlife conservation?

Is felicitation of wildlife conservationists news because of the work they do, or because they are felicitated by super-stars? Why in any case do we know so little of their field conditions and the challenging lives they lead? If the forests of SGNP are valued at 1000s of crores, how come we don't see that value in the forests of Great Nicobar? How have we accepted that the cutting of pristine topical forests in an island ecosystem can be compensated with tree plantation in semi-arid Haryana? Do we deal with tiger-human conflict by eliminating the tiger, compensating people or moving them out to make more space for the big cat? Will it work in the larger scheme of things to declare more protected areas even as everything else is being ravaged in the name of development and growth?

We all make our choices, of course, but these should be made in the clear understanding and knowledge of the larger complex landscape that we occupy. We have to recognise that our choices and positions on conservation are just one piece of a complex matrix of ideas, understandings and world views; that we will be doing injustice to the diversity and richness that we seek to conserve if our approaches don't mirror that world.

This is not rocket science as the oft used cliché goes... it is, very simply, the central message from the ground and from the assemblage of stories that have come together in this issue of the *PA Update*.



## NEWS FROM INDIAN STATES

### ANDAMAN & NICOBAR ISLANDS

#### **Great Nicobar project granted environmental and stage-1 forest clearance**

The mega-infrastructure project for Great Nicobar Island that includes a Rs. 35000 crore trans-shipment port, an airport, a power plant and a greenfield township cum tourism infrastructure has been granted final environmental clearance (EC) and stage - 1 (in-principle) forest clearance (FC) by the Ministry of Environment, Forest and Climate Change (MoEFCC). The environmental clearance had been recommended by the ministry's Environmental Appraisal Committee (EAC) - Infrastructure 1 in its meeting in August 2022 (*PA Update* Vol XXVIII No. 5). It was granted by the ministry's impact assessment division on 11th November.

The state-1 FC was granted by the ministry's forest conservation division a couple of weeks earlier on 27 October. Compensatory afforestation for the project will be carried out in the state of Haryana and possibly in Madhya Pradesh according to the FC letter. (Also see *PA Updates* Vol. XXVIII, No. 4 and Vol. XXVII, No. 1).

Source: Pankaj Sekhsaria. 'Nicobar project gets assent for diversion of 130 sq. km of forest', [www.thehindu.com](http://www.thehindu.com), 09/11/2022.

Pankaj Sekhsaria. "Despite red flags, mega project on ecologically-sensitive Great Nicobar island gets green signal", [www.scroll.in](http://www.scroll.in), 15/11/2022.

### ANDHRA PRADESH

#### **Study on pangolins in Nagarjuna Sagar Srisailem TR**

The Andhra Pradesh Forest Department (FD) and the Eastern Ghats Wildlife Society *Protected Area Update* Vol. XXVIII, No. 6

(EGWS), a Visakhapatnam-based NGO, have joined hands to study and protect pangolins in the Nallamala - Nagarjuna Sagar Srisailem Tiger Reserve (NSTR) forest limits. A joint survey was undertaken recently to get a comprehensive picture of the pangolins here.

The two-year project will involve the conduct of public awareness camps and training sessions, special drives for the protection of pangolins, and getting more understanding of their habitat here.

As per an international survey, around 10,000 pangolins are trafficked every year illegally for their meat, scales and blood. Hunters catch them for trafficking to foreign countries like China and Vietnam, where one pangolin can be sold for Rs 60 lakh to Rs one crore.

Source: IVNP Prasad Babu. 'Field level survey to be conducted on pangolins in Nallamala', [www.newindianexpress.com](http://www.newindianexpress.com), 24/10/2022.

#### **Social media post leads to arrest of five poachers in Chittoor**

Forest officials of Chittoor district recently arrested five persons on charges of poaching wild animals after pictures, including one with the carcass of a leopard posted by one of them on a social media platform, were brought to the notice of the officials.

The forest personnel took one of the accused into custody on November 8. He revealed during investigation that he had killed a leopard with his country rifle in reserve forests between Yadamari and Chittoor mandals two years ago. With the help of two other accused, he reportedly chopped the animal's hind and forelegs and sold a portion of the nails and bones. The three-member group from the Chittoor and Yadamari mandals was reportedly into hunting wild animals for meat and trading their body parts.

Two others from Gudipala mandal of the district, who supplied country rifles to the

trio were then arrested on November 9. The accused, all in the age group of 32-40 were booked under the Wildlife Protection Act 1972 and the Arms Act, were produced before the Chittoor court and remanded. The forest officials also recovered several antlers, two rifles, two bikes, and three mobiles from the accused.

Source: K. Umashanker. 'Andhra Pradesh: Social media post leads to arrest of five persons on charges of animal poaching in Chittoor', [www.thehindu.com](http://www.thehindu.com), 10/11/2022.

## BIHAR

### **Tiger who killed 10 humans put down in Valmiki TR**

Tiger T-104 was put down by the forest department of Bihar in the Valmiki Tiger Reserve in West Champaran district in the month of October. The tiger in question was a three-year-old male, who had killed 10 people in the district. It was shot dead in a sugarcane field 8 October 2022 on the orders of the Chief Wildlife Warden (CWLW) of Bihar.

The CWLW said, justifying his orders, that the situation had become very dangerous and the safety of people was in jeopardy. The tiger had become a man-eater as it was observed attacking humans even when cattle were available as easy prey.

Source: Shuchita Jha. 'Bihar man-eater shot', [www.downtoearth.org.in](http://www.downtoearth.org.in), 10/10/2022.

### **FD to hire shooters for culling nilgai & wild pigs at Darbhanga airport**

The Bihar Forest Department (FD) is planning to rope in professional shooters to cull nilgai and wild boar inhabiting the extensive thick bushes at Darbhanga airport. Getting the nilgai and wild boar off the airfield area is critical for the safety of flight operations.

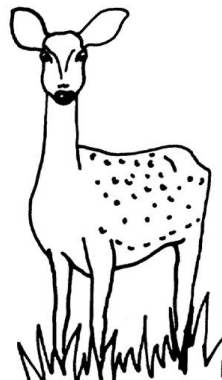
The nilgai population at Darbhanga airport is estimated to be more than 200 and their number has frustrated FD's efforts to trap and relocate them within a specified time frame. The FD had earlier tried to catch them for rehabilitation to forests in Bagha but were not successful.

As of now, state government has empowered heads of village panchayats to shoot the nilgai and boar in accordance with the relevant guidelines; the state FD too has empanelled 13 shooters for the purpose.

Source: Bishnu K Jha. 'Forest dept to cull blue bulls, wild boars at Darbhanga airport', [www.hindustantimes.com](http://www.hindustantimes.com), 15/10/2022.

## HARYANA

### **Haryana to set up 10,000-acre jungle safari park in the Aravallis**



Haryana has planned to develop a jungle safari park spread over 10,000-acre in the Aravalli range covering parts of Gurugram and Nuh districts. The announcement was made in September by chief minister (CM) Manohar Lal Khattar.

The safari would include a large herpetarium, an aviary, four zones for big cats, a large area for herbivores, an area for exotic animals, an underwater world, nature trails, zones for visitors, tourists, botanical gardens, and representations of biomes such as equatorial, tropical, coastal, and desert areas. It will be a joint project of the Central Ministry of Environment, Forest and Climate Change and the Haryana government.

A global expression of interest was floated for the project and two companies with international experience in designing and operating such facilities have been shortlisted.

The CM also added that the Central Zoo Authority had done an evaluation study of the area and agreed on the technical feasibility of setting up such a park.

Source: 'Coming up in 10,000 acres in Aravallis, largest curated jungle safari outside Africa', [www.indianexpress.com](http://www.indianexpress.com), 30/09/2022.

## JAMMU & KASHMIR

### Hangul population increasing gradually in J&K

The hangul population is showing a gradual increase in Jammu & Kashmir (J&K). 263 animals were counted in the 2021 census. The number of males per 100 females was 126 in 2021 down from 153 in 2019 while the number of fawns per 100 females has increased to 13.4 in 2021 from 9 in 2019.

Following is the annual population count of the animal since 2004 when annual hangul counts started here:

Year	No
2004	197
2006	153
2008	127
2009	175
2011	218
2015	186
2017	214
2019	237
2021	263

Source: 'Endangered Hangul population shows increase in Kashmir', [www.kashmirpatriot.com](http://www.kashmirpatriot.com), 10/11/2022.

## KARNATAKA

### Cricketers for Wildlife Conservation felicitates four conservationists

Cricketers for Wildlife Conservation announced awards recently for four *Protected Area Update* Vol. XXVIII, No. 6

conservationists working in Karnataka. The four awardees are wildlife watcher, Fairoz; wildlife conservationist Sunitha Dhairyam from the Mariamma Trust, Bandipur Tiger Reserve; Akhilesh Chipli from Shivamogga and Colonel CM Muthanna from Kodagu.

Fairoz is credited with having helped arrest 22 poachers besides rescuing 15 leopards and releasing them back into forests. Dhairyam, is noted for protecting tigers and leopards by ensuring farmers do not poison cattle kill by compensating them immediately, while Chipli is a wildlife activist from Sagar and has worked towards protecting the flora and fauna of the Western Ghats. Col Muthanna has been at the forefront of environmental conservation in the Kodagu district.

Source: 'Cricketer Laxman to honour forest watcher in Karnataka', [www.newindianexpress.com](http://www.newindianexpress.com), 03/11/2022.

## KERALA

### Recently released tiger found dead in Periyar TR

A tiger, trapped in a cage at Neymakkad estate near Munnar in Idukki in early October and released into the Periyar Tiger Reserve (TR) after being radio-collared, was found dead inside the reserve on October 16.

The ageing animal suffering from blurred vision due to eye cataracts had preyed on livestock in the Neymakkad estate under Kanan Devan Hills Plantations (KDHP) near Munnar. The tiger is estimated to have killed at least nine cows and seriously injured three. This had triggered panic and protests in the locality, with residents demanding protection and compensation from the forest department.

Once captured the National Tiger Conservation Authority (NTCA) had recommended the tiger's release in a highly restricted area deep inside Periyar TR. No other tiger was reported here and experts also found the captured tiger could hunt and did not require confinement.

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The tiger's body was found in the Sanyasiyoda area in Periyar Lake. It was suspected to have drowned but some forest officials said it may have been injured first in a fight with another tiger.

Source: 'Captured, collared, and released, tiger found dead in PTR reservoir', [www.thehindu.com](http://www.thehindu.com), 17/10/2022.

## **MADHYA PRADESH**

### **NGT stops mining in ESZ of Madhav NP**

The National Green Tribunal's (NGT) Madhya Pradesh (MP) bench, headed by Justice Arun Kumar Tyagi, recently restrained MP's mining department and district collector, Shivpuri, from granting a lease for mining operations in the eco-sensitive zone of the Madhav National Park (NP). The order was passed on 21 September 2022.

The tribunal was hearing a petition against mining in the ESZ of the park by advocate Abhay Jain of Zenith Society for Socio-Legal Empowerment, a non-governmental organisation that provides legal services. Advertisements were published for leasing out mining sites by Shivpuri district's mining department, he alleged. He submitted to the NGT that the ESZ of the park covers 100m on the notified urban and 'Abadi' (inhabited) area side and two km on the rest of the area from the boundary. Annexure II of the ESZ notification contains a list of villages falling within ESZ and Majhera is one of those villages. Jain noted that Majhera was called the village of widows owing to the high death rate of male members on account of silicosis and tuberculosis caused by stone mining in the area. The village was home to 25 families of Sahariya tribe — a particularly vulnerable tribal group — residing within a kilometre of the mining area.

The NGT had constituted a panel in July to submit a factual and action-taken report within two months over the issue. The joint committee comprised of members of the state

Pollution Control Board, the regional office of Ministry of Environment, Forest and Climate Change at Bhopal, director, Madhav NP, director, department of mines and minerals, MP government, commissioner, Gwalior and collector, Shivpuri, had submitted its report on September 13, 2022.

Mining had previously taken place at the sites and there was overburden in the area, the NGT said on the basis of the panel report. The bench ordered the mining and geology department of the state and collector, Shivpuri, to restrain from granting any mining lease and executing any mining lease deed in respect of the survey numbers in question and also in the areas falling within ESZ.

The joint committee recommended that a geological study may be conducted by the Central Ground Water Board through a reputed institution to find out the reasons for excess iron in the groundwater in the area. The bench directed the State Ground Water Board to engage experts from any of the reputed institutions in MP to study the issue.

Source: Shuchita Jha. 'NGT stops mining in ecologically sensitive Madhav National Park in Madhya Pradesh', [www.downtoearth.org.in](http://www.downtoearth.org.in), 04/10/2022.

### **Tiger captured in Bhopal released in Satpura TR**

A tiger captured on the campus of the Maulana Azad National Institute of Technology (MANIT) in Bhopal was released recently into the forests of the Satpura Tiger Reserve (TR) in Narmadapuram (formerly Hoshangabad) district. The tiger had entered the MANIT campus and had killed at least two cows. Forest officials were making efforts for a month to capture the big cat.

The two-and-a half-year-old tiger was kept in an enclosure for monitoring its health before being released. The Satpura TR director L Krishnamurthy informed that the tiger had been radio-collared and a team had been formed to keep a close watch on its movements.



Source: 'Satpura Reserve officials release tiger into the wild',  
[www.freepressjournal.in](http://www.freepressjournal.in), 23/10/2022.

### **Sanctuary proposed in Bhopal & Sehore districts**

The Madhya Pradesh Forest Department (FD) has sent a proposal to the state government to declare a wildlife sanctuary spread over the forest areas of Bhopal and Sehore districts. The move has been prompted by the reporting of tiger presence and movement in the forests in and around Bhopal.

An informal estimate suggests there are 17 tigers in the forests of Bhopal and Sehore. Tigers are often spotted on the outskirts of Bhopal and one recently entered the campus of the Maulana Azad National Institute of Technology (MANIT), forcing the college authorities to vacate the post-graduate students hostel and reschedule their academic calendar (see accompanying story).

The proposed sanctuary area will be spread over an area of 177 sq. km.

Source: 'Proposal to set up sanctuary in Bhopal, Sehore forest areas sent to government',  
[www.freepressjournal.in](http://www.freepressjournal.in), 23/10/2022.

## **MAHARASHTRA**

### **Study values SGNP at Rs 146 crore per hectare; supplies ecosystem services worth Rs 63,417 crore every year**

The Sanjay Gandhi National Park (SGNP) has been valued at an estimated Rs. 15 lakh crore, and it does not include the value of the land, says a report prepared by IIT-Bombay. Every hectare of the park was valued at Rs. 146 crore. The study also evaluated the value of the ecosystem services provided by the park at Rs. 63,417 crore per year on account of it being a protected area and rich in diversity,. The evaluation was carried out by Haripriya Gundimeda, chair-professor of economics in

the department of humanities and social sciences at IIT-Bombay. It had been commissioned by the SGNP authorities and was released recently by the State's environment minister, Sudhir Mungantiwar.

The study used the Millennium Ecosystem Assessment framework, which classifies ecosystem benefits into four types - provisioning (food, fibre, firewood, freshwater supply etc.), regulating (air quality, climate, water, flood control and carbon storage), cultural, and other supporting services. According to the report, SGNP sequesters carbon worth Rs 3 crore per year and stores carbon worth Rs 416 crore. The city of Mumbai is able to store carbon in vegetation instead of contributing to global warming because of the park. SGNP lowers the minimum temperature by 2.6 degree Celsius and the maximum temperature by 1.6 degree Celsius. The morbidity costs due to respiratory and respiratory-induced cardiac ailments that Mumbai saves because of SGNP are estimated at Rs 514 crore per annum.

The greenery also scavenges air pollutants: PM2.5 emissions were 28.3% lower, PM10 was 34% lower and NO2 emissions were 339% lower than non-green areas. The technological alternative for air purification would cost Mumbai Rs 660 crore over the next six years and the investment to provide the same quality of service is estimated at Rs 2,750 crore. SGNP's value is estimated at another Rs 5 crore for providing health benefits through walks and exercising, and its net present value is estimated at Rs 127 crore. People staying next to the park pay a 24% premium in rental values and for a good view, would pay a 38% premium. The value of this additional premium has been estimated at Rs 447 crore per annum and it generates an annual income of Rs 11,000 crore.

Tulsi and Vihar lakes inside SGNP provide 128 million litres of drinking water per day and help save the city Rs. 12 crore annually in treatment cost, estimated the study. In its absence, new drinking water sources would need to be created, costing the exchequer Rs



252 crore. SGNP's water treatment services are estimated at Rs 2,967 crore.

SGNP as a recreational zone is valued at Rs 15,721 crore per annum, and its net present value is approximated at Rs 3 lakh crore.

Source: Clara Lewis. 'Mumbai: SGNP valued at Rs 15 lakh crore, bestows Rs 64,000 crore worth eco benefits, says study', [www.timesofindia.indiatimes.com](http://www.timesofindia.indiatimes.com), 22/09/2022.

### **Day-long safaris to be launched in buffer zone of Tadoba Andhari TR**

Tadoba Andhari Tiger Reserve (TR) is planning to launch day-long safaris on interconnected routes in the reserve's buffer zone. The executive committee of the Tiger Conservation Foundation (TCF) took this decision at a meeting on November 7. The modalities will be worked out by the deputy director, TATR buffer.

One route - Moharli-Adegaon-Dewada-Agarzari-Junona in the Moharli buffer - has been identified on a pilot basis and the model will be replicated on other routes based on the response here. Another route where such a safari can be implemented includes the Kolara-Madnapur-Bellara and Alizanja-Navegaon-Nimdhela sections. The entry fees will be finalized soon, informed the TATR field director.

Presently, a day-long safari in the TATR core costs ₹ 45,000 for Indian tourists; and ₹ 55,000 for foreign nationals.

Source: Vijay Pinjarkar. 'Maharashtra: Tadoba-Andhari Tiger Reserve to start day-long safari in Moharli buffer zone', [www.timesofindia.indiatimes.com](http://www.timesofindia.indiatimes.com), 10/11/2022.

### **Tiger CT-1 captured in Gadchiroli district; allegedly killed 13 persons in Vidarbha**

The tiger CT-1 was captured on October 13 by the forest department (FD) in Gadchiroli district. 13 persons are reported to have died in CT-1's attacks in Vidarbha region over the past 10 months.

CT-1 is said to have killed six people in Wadsa division, four in Bhandara, and three in Bramhapuri. According to the Gadchiroli conservator of forest, the first human kill of the tiger was recorded on December 21, 2021, while the 13th attack, in Lakhandur tehsil of Bhandara district, was reported on 30 September 2022. In the meantime, the tiger is reported to have attacked livestock several times in the region.

CT-1 is referred to as a conflict tiger - that's the name given to tigers that attack humans other than for reasons like defending cubs or saving its own life. The first order to capture CT-1 was issued in February 2022.

After a farmer was killed by the tiger on 12 September 2022, villagers in Armori tehsil of Gadchiroli district held protests and demanded that the animal be captured immediately. The principal chief conservator of forest (wildlife) Nagpur held a meeting of all the division and circle heads on October 4, and constituted a coordination committee headed by Tadoba Andhari Tiger Reserve field director Dr. Jitend Ramgaonkar. And, the move to capture CT-1 gained momentum.

The tiger is now housed at the Gorewada rescue centre in Nagpur. According to the FD an estimated Rs 2.50 crore have been spent on the entire operation. This includes human and cattle kill compensation doled out, logistics and expenses of the rescue work.

Source: 'Maharashtra: Tiger that killed 13 people captured', [www.indianexpress.com](http://www.indianexpress.com), 16/10/2022. Vijay Pinjarkar. 'Maharashtra: Tiger CT1, with '17 human kills' in Gadchiroli, captured after 9-month hunt', [timesofindia.indiatimes.com](http://timesofindia.indiatimes.com), 14/10/2022. 'CT-1: The 'conflict tiger' that killed 13 persons nabbed in Maharashtra',

economictimes.indiatimes.com,  
13/10/2022.  
'सीटी-१ वाघ जेरबंद; वर्षभरात या वाघाच्या हल्ल्यांमध्ये १३  
माणसे मृत्युमुखी', *Maharashtra Sanrakshit*  
*Kshetra Vartapatra*, October 2022,  
no.11.

## TAMIL NADU

### State notifies Kaduvur Slender Loris Sanctuary



Tamil Nadu has notified the Kaduvur Slender Loris Sanctuary over 118 sq. km in Vedasandur,

Dindigul East and Natham taluks in Dindigul district and Kadavur in Karur district. The notification was issued recently under Section 26 (A)(1)(b) of the Wildlife Protection Act of 1972.

Source: 'First in India, a sanctuary for slender loris in Tamil Nadu',  
[www.timesofindia.indiatimes.com](http://www.timesofindia.indiatimes.com),  
13/10/2022.

### Cauvery South WLS notified; 17th in state

The Tamil Nadu government has notified the Cauvery South Wildlife Sanctuary (WLS) spread over 686.40 sq km in the Krishnagiri and Dharmapuri districts. It will be the State's 17th wildlife sanctuary. It will connect Cauvery North WLS of Tamil Nadu with the Cauvery WLS in neighbouring Karnataka thereby forming a large, contiguous network of protected areas in the region.

It is also an important component of the landscape that includes the Malai Mahadeshwara WLS and the Biligiri Rangaswamy Temple Tiger Reserve (TR) (both in Karnataka) and the Sathyamangalam TR and forests of the Erode District in Tamil Nadu. Two important elephant corridors - the Nandimangalam-Ulibanda Corridor and the Kovaipallam-Anebiddahalla Corridor - also fall in this area.

Source: 'Tamil Nadu notifies Cauvery South Wildlife Sanctuary as state's 17th wildlife sanctuary',  
[www.indianexpress.com](http://www.indianexpress.com), 10/11/2022.

### Tamil Nadu notifies country's first Dugong Conservation Reserve

Tamil Nadu has notified India's first ever Dugong Conservation Reserve (DCR) in the Palk Bay area of the Gulf of Mannar. The order notifying the approximately 450 sq. km reserve was published in the state gazette on September 21. According to the order, protecting dugongs and seagrass beds will also help in the "breeding of commercially valuable finfishes, crabs and shrimps, thereby benefiting thousands of small scale and marginal fishermen, who depend on fishery productivity for their daily livelihood in the nearshore areas".

The notification of the DCR assumes even more significance because of the several threats that dugongs face in these waters, despite the species being listed in Schedule I of the Wildlife Protection Act 1972 and "vulnerable" in the IUCN Red List. India's dugong population is estimated at around only 200 animals, with small populations being found in the waters of the Andaman and Nicobar Islands and off the coast of Tamil Nadu in the Gulf of Mannar and Palk Bay.

The move to finally notify a DCR comes more than a year after Tamil Nadu announced its decision to do so. Talks to designate such a reserve had been in the pipeline for three years. The state government has also conducted extensive consultations with local communities and fisherfolk before the creation of the reserve.

Source: Aathira Perinchery. 'Tamil Nadu Notifies India's First Dugong Reserve: Here's Why It's a Crucial Step',  
[www.thewire.in](http://www.thewire.in), 06/10/2022.

## **Coimbatore Forest Division tries out acoustic device to protect crops from wildlife**

The Coimbatore Forest Division (CFD) has set up a device called 'high-frequency acoustic crop safety' in Kuppepalayam hamlet in Thondamuthur Panchayat, which abuts the Booluvampatty forest range. The device, when connected to a solar panel, emits outputs of 4khZ at an interval of 10 seconds and can be heard up to a distance of 100 m. The initiative is aimed at protecting crops from wild animals such as elephants, wild boar and spotted deer.

Similar systems have been used in Coorg in Karnataka and Bhavani Sagar in Sathyamangalam Tiger Reserve (TR) and yielded good results, informed officials. CFD officials are planning to place similar devices in other forest ranges, especially in Coimbatore, Periyanaickenpalayam and Sirumugai.

A team including associate professors of electronics and communication engineering, Sanjoy Deb, R Ramkumar and R Saravanakumar from the Bannari Amman Institute of Technology in Erode, has developed the device, which is available for ₹ 3,300. Deb also heads 'Technology for Wildlife', an organisation working for human-animal coexistence.

Source: S Senthil Kumar. 'Coimbatore forest dept uses acoustic device to keep elephants at bay', [www.newindianexpress.com](http://www.newindianexpress.com), 10/11/2022.

## **TELANGANA**

### **Wildlife overpass on NH-63 in the Kagaznagar forests**

A wildlife overpass, the first in Telangana, is proposed near Wankhidi on NH-63 in the Kagaznagar forests. This will be built on the Mancheril-Chandrapur route, the forests of which see regular movement of tigers between Maharashtra and Telangana. The estimated

cost of the structure is Rs. 30 crore and the overpass is expected to be ready in about six months.

While NHAI is taking up the civil works, the forest department is coordinating in the structure design, location identification, ecological aspects and execution of works. The structure is being constructed as per guidelines of the Wildlife Institute of India.

Source: S Sandeep Kumar. 'Telangana's first overpass eco-bridge for wild animals coming up on NH-63', [www.telanganatoday.com](http://www.telanganatoday.com)

### **600 kg plastic collected from Amrabad TR sent for recycling**



Around 600 kg of plastic was collected from Amrabad Tiger Reserve (TR) and transported to a recycling centre in Hyderabad. The waste was collected from the

Mannanur entrance to Domalapenta Range check-post, a stretch that sees a large amount of polythene covers, wrappers and plastic bottles thrown by tourists and passengers who use the highway that passes through the reserve here.

In August 2022, 850 kg of plastic waste was collected by 12 *Swachh Sevaks* and transported to a recycling centre at Mannanur. The collected plastic waste is segregated into different categories and baled using a manual baling machine to reduce the volume to be transported. Once 36 bales are collected, the baled plastic is transported to a waste recycler in Hyderabad in association with digital platform Recykal.

Source: '600 kg of plastic litter found in Amrabad Tiger Reserve', [www.newindianexpress.com](http://www.newindianexpress.com), 11/11/2022.

## **Tigers sighted in villages of Kagaznagar and Adilabad**

The sighting of a tiger on the fringes of the forest near Kosini, Ootpalli and Regulaguda villages in Kagaznagar mandal, triggered panic among locals in the month of October. The tiger also attacked a cow from a herd of cattle grazing in the forests of Kosini on October 11. The cow died the next day.

Forest officials requested the public not to venture into the forest; they also urged the villagers not to harm the animal. Stating that the movement of the solitary animal was being tracked with the help of camera traps, they confirmed that they had found pugmarks of a tiger.

Tiger sightings have been reported regularly in different parts of the Kagaznagar Forest Division, which sees migration of tigers from the Tadoba Andhari Tiger Reserve in neighbouring Maharashtra.

In another incident, a tiger killed a goat in the forests of Kolama village in Gadiguda mandal of Adilabad district on October 12. Forests of Thamsi and Bheempur mandals have been registering the movement of a tiger, reportedly from the Tipeshwar Wildlife Sanctuary in Yavatmal district of Maharashtra for a few weeks.

Source: 'Tiger sighting triggers panic in Asifabad', [www.telanganatoday.com](http://www.telanganatoday.com), 13/10/2022.

'Officials observe migration of tigers from Maharashtra to Kagaznagar', [www.indianexpress.com](http://www.indianexpress.com), 16/10/2022.

### **Relocation of two villages from core area of Kawal TR begins**

The process for relocation of two villages - Maisampet and Rampur - from the core area of Kawal Tiger Reserve (TR) began recently with minister for environment and forest, A. Indrakaran Reddy, handing over compensation cheques to the villagers on 22nd October. 94 of the 142 families have accepted the package of

three acres of agricultural land and a house, while the other 48 families have accepted cash compensation of Rs 15 lakhs.

Officials have identified 12 acres of land for the construction of houses and 207 acres for agriculture for the families to be relocated in the Khanapur Reserve Forest. A budget of Rs 14.2 crore has been provided for rehabilitation under Project Tiger, borne in the ratio of 60:40 between the Centre and the State, while Rs 7.2 crore has been provided under CAMPA for those opting for monetary compensation.

The villagers had voluntarily opted to move out of the villages five to seven years ago when the compensation package announced by the National Tiger Conservation Authority (NTCA) was ₹10 lakh per family. However, the scheme encountered several bureaucratic hurdles with the state government delaying the grant of its 40% share of the compensation. In the meantime, the package got revised by NTCA to Rs 15 lakh each.

There are 39 habitations within the core area of the reserve; 15 of these have been identified as high priority for relocation.

Source: 'Relocation of two villages out of Kawal Tiger Reserve begins', [www.thehindu.com](http://www.thehindu.com), 22/10/2022.  
'Efforts being made to relocate two villages from Kawal Tiger Reserve', [www.deccanchronicle.com](http://www.deccanchronicle.com), 14/10/2022.

## **UTTARAKHAND**

### **Tiger spotted in Chilla-Motichur corridor of Rajaji TR after two decades**

Tiger movement was recently spotted in the Chilla-Motichur corridor of the Rajaji Tiger Reserve (TR), making it the first such sighting in 20 years. The movement in this corridor which connects the eastern and western parts of the reserve was disrupted due to heavy traffic on the Dehradun-Haridwar highway, an army ammunition dump that has been around

since the Indo-China war in 1962, and a railway line, apart from the rising population of Haridwar and Raiwala (see *PA Updates* XXVIII, No. 5; Vol XXVII, No. 1 and Vol. XXVI, No. 2)

The river Ganga bifurcates Rajaji TR into two sections - the eastern side of about 250 sq km and the rest – 571 sq km – on the western side.

To ensure the unrestricted movement of animals, a flyover was proposed on the highway in 2010 by the National Highways Authority of India (NHAI) but the delay in completion over the years kept the movement of animals disrupted. While the eastern tract showed a high presence of tigers, the western one showed a distinct decline in tiger numbers and presence. Around 35 tigers are present in the eastern part. In the western part, the number came down to one following which the forest department translocated two tigers from the Corbett TR.

Following a petition filed in the National Green Tribunal (NGT) in 2018 by a Delhi-based advocate Gaurav Kumar Bansal, the NGT asked the NHAI to furnish Rs two crore “performance guarantee” to the Union environment ministry for failing to implement the Supreme Court’s directive on constructing an elephant flyover on the Chilla-Motichur corridor in Uttarakhand. The flyover was finally completed in September 2021.

Source: 'Tiger movement spotted in Chilla-Motichur corridor of RTR after 2 decades', [www.hindustantimes.com](http://www.hindustantimes.com), 13/11/2022.

### **FSI confirms felling of over 6,000 trees in Corbett TR for safari**

The Forest Survey of India (FSI) has confirmed that over 6,000 trees were felled without permission in the Corbett Tiger Reserve (TR), to facilitate the Pakhro Tiger Safari. A news report published about a year ago had revealed that 100s of trees, and not just

163, as claimed by the authorities, had been cut without permission in the reserve.

The Uttarakhand Forest Department (FD) had sought the environment ministry’s clearance for the project by stating that only 163 trees would be chopped for the project.

The FSI had conducted a ground survey in June 2022, after which its finding of over 6000 trees being cut was confirmed. The FSI report has been submitted to the central empowered committee of the Supreme Court. The report states that the area cleared is estimated at 16.21 ha.

The state FD has not yet accepted the report and has sought further clarifications regarding the same.

Source: Shivani Azad. ‘6,000 trees, not 163, felled in Corbett for tiger safari: FSI’, [www.timesofindia.indiatimes.com](http://www.timesofindia.indiatimes.com), 02/10/2022.

## **NATIONAL NEWS FROM INDIA**

### **Report highlights threat to sea cucumbers due to illegal trade**



A report by TRAFFIC and World Wide Fund (WWF) for Nature - India has highlighted the serious threat to sea cucumbers in India due to illegal trade. Titled 'In Deep Waters: India's sea cucumbers in illegal wildlife trade', the study found at least 101.40 tonnes and 6,976 sea cucumber individuals in illicit wildlife trade in India for 2010-2021. High demand for sea cucumbers in East Asian and Southeast Asian markets, along with the ease of harvest and low



processing costs (drying), are among the main threats. Based on seizure reports the study says that Sri Lanka, China, and Southeast Asia were the top three destinations for sea cucumbers trafficked from India.

The study found that maximum seizures (139) were reported from Tamil Nadu, followed by 15 seizures in Lakshadweep, four in Andaman and Nicobar Islands, two in Karnataka, and one each in Manipur and Kerala, while one seizure occurred mid-sea.

To understand the sea cucumber trafficking from collection to transport, surveys were conducted in three sea cucumber-rich areas - the Andaman & Nicobar Islands, Lakshadweep, and Tamil Nadu. Hand-picking and skin/free diving were reported as the main ways for sea cucumber collection in Andaman and Nicobar Islands and Lakshadweep, while in Tamil Nadu mechanised boats were the primary method used to collect sea cucumbers. In the Andamans, preservation was done by cleaning, cutting, and drying while in Lakshadweep it was done through salting. In Tamil Nadu, fresh sea cucumbers are kept alive in seawater and then drying as a preservation method.

Source: 'Sea cucumber in deep waters: New study reveals worrying illegal trade in India', Press note by WWF-India, 07/11/2022; [www.trafficindia.org](http://www.trafficindia.org).

### **Railway minister issues directions to avoid wild animal deaths in train collisions**

Taking note of frequent elephant and tiger deaths in train collisions, railway minister Ashwini Vaishnav has asked all railway zones to construct permanent mitigation structures at 100 locations across the country, particularly in tiger and elephant landscapes. A meeting to discuss the issue was held on August 17 in Delhi and was attended by top officials from the Railway ministry, the Union environment ministry, National Tiger Conservation Authority, Capacity Building Commission, and Wildlife Institute of India (WII).

The Railway ministry has said it plans to use technology to find a solution to the problem. It will prioritize mitigation measures like underpasses and overpasses for railway lines passing through sensitive wildlife habitats. If there is no option to build mitigation measures, other technological interventions will be explored.

The minister asked WII to train railway officials on mitigation measures, and identify 100 most vulnerable and accident-prone spots. He directed AK Khandelwal, head, Gati-Shakti, to construct underpasses to ensure safe crossings for wildlife. Further he said that the dimensions of structural measures should be worked out in collaboration with the Railways, environment ministry, and the WII.

The officials were told underpasses in elephant areas should not be less than 6m high whereas in the tiger landscape the height of structures cannot be less than 4m. In case of sensitive elephant habitats where mitigation measures are not possible, other measures should be taken to reduce likelihood of barrier effect. It was noted that many collisions between wildlife and trains occur at curves. The minister advised identifying such locations and realigning railway lines to avoid this situation.

Source: Vijay Pinjarkar. 'Railways to allow wildlife easy passage with infra at 100 spots', [www.timesofindia.indiatimes.com](http://www.timesofindia.indiatimes.com), 21/10/2022.

### **Indian Herpetological Society's founder Anil Khaire dies at 65**

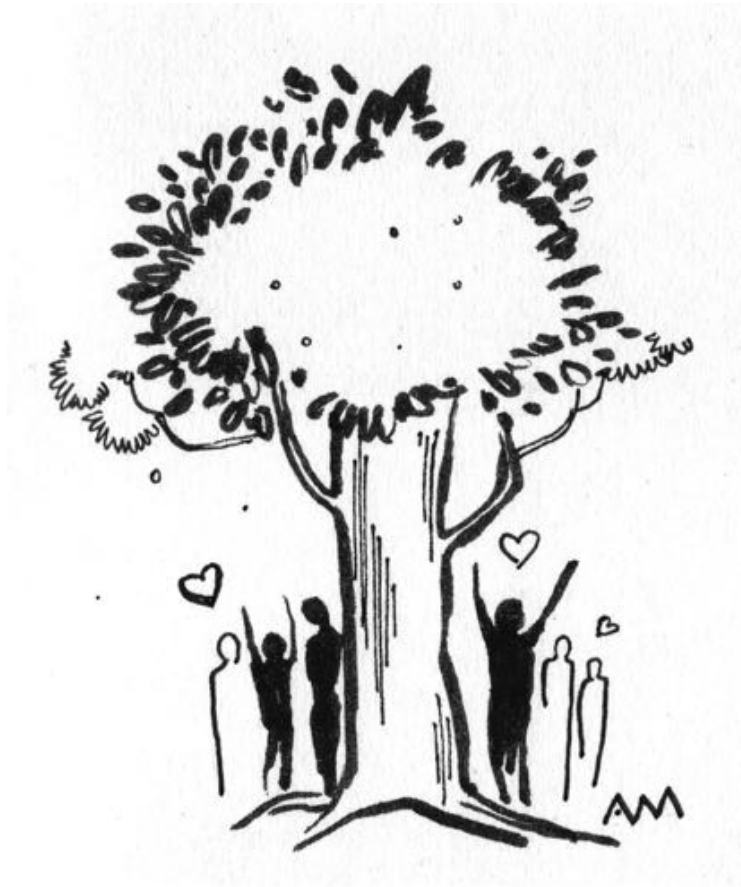
Anil Rajaram Khaire (65), founder of the Indian Herpetological Society (IHS) that manages the Katraj Snake Park and the rescue centre at Rajiv Gandhi Zoological Research Centre, Pune, died after a brief illness in Pune on October 16. He is survived by his wife and son. His elder brother Neelim Kumar Khaire is a renowned snake expert.

An ITI graduate, he worked in the engineering giant Telco before developing an interest in nature conservation, and training at the Jersey Wildlife Conservation Trust (now Durrell Wildlife Trust) in England.

He also served as director of Bahinabai Chaudhary Park, Pimpri-Chinchwad. A campaign to safely capture and release

leopards in Kondhwa area of Pune was also conducted under his leadership.

Source: Prachi Bari. 'Indian Herpetological Society president Anil Khaire passes away', [www.hindustantimes.com](http://www.hindustantimes.com), 17/10/2022.





## IMPORTANT BIRD AREAS UPDATE

### BIHAR

#### Growth in population of Greater adjutant storks in Bihar

The population of Greater adjutant storks has seen substantial growth in recent years in Bihar with the state's Kadwa-Kosi riverine belt now estimated to have more than 600 birds. The International Union for Conservation of Nature (IUCN) study of 2013 had put their worldwide number at 1200-1300, but now the estimates put the figures at 1,500-1,800. India accounts for 90% of the stork's global population with Bihar's Kosi riverine belt being the main contributor. The belt is now in the select list of "Other Effective Area-based Conservation Measures" (OECMs) to draw global attention towards conservation efforts

The birds have also been spotted in Khagaria, Purnea and Madhepura in Bihar and in some pockets in Assam's Brahmaputra valley.

Source: Arun Kumar. 'Endangered greater adjutant storks grow in Bihar, says wildlife official', [www.hindustantimes.com](http://www.hindustantimes.com), 10/10/2022.

### JAMMU & KASHMIR

#### NGT halts mining at Shaliganga Nallah that feeds the Hokresar Wetland Reserve

A National Green Tribunal (NGT) bench headed by Justice Sudhir Agarwal recently ordered halting of mining operations at the Shaliganga Nallah in Budgam district of the Kashmir Valley. The NGT order came in response to a plea by activist Raja Muzaffar Bhat challenging the validity of the environmental clearances given to three mining blocks in the area earlier in 2022. The

nallah feeds the Hokresar Wetland Reserve, which is a Ramsar site.

The NGT called into question the ECs and restrained all mining activities in the area by construction company NKC Projects Pvt Ltd. The company had proposed that it be allowed to mine 1.81 ha in Block 1, 1.29 ha in Block 2 and 2.90 ha in Block 4. It was given clearance for the same May 19, 2022 by the State Environment Impact Assessment Authority.

The NGT noted that the Shaliganga Nallah is a feeding channel for the Hokresar wetland and mining activity may be detrimental to the natural flow and quality of water flowing into the wetland. Irrigation *kuhls*, the traditional, community-managed irrigation systems are also present within the mining site. The appellant noted in his plea that the Jammu & Kashmir Expert Appraisal Committee (JKEAC) had examined the mining blocks on the latest Google Image of October 2021 and found that minerals had been depleted to a large extent due to heavy illegal mining. Hardly any material was available for exploitation without endangering the environmental setting of the Nallah.

Bhat wrote in his appeal that the ECs were granted without taking into account the grounds on which the previous proposals of the project proponent had been rejected. He noted that the ECs violated Rule no. 4 of the Jammu and Kashmir Minor Mineral Concession, Storage, Transportation of Minerals, and Prevention of Illegal Mining Rules, 2016. This prohibits any minor mineral concession being granted within a distance of 25 m of any embankment. He further cited the fact that the ECs were given without the district survey report being prepared with proper guidelines. The appellant pointed out that the project proponent had also undertaken certain activities during mining that were 'strictly prohibited' under the ECs.

Source: Shuchita Jha. 'NGT questions clearances; halts mining at Shaliganga Nallah in Kashmir', [www.downtoearth.org.in](http://www.downtoearth.org.in), 04/10/2022.

## MANIPUR

### **Amur falcons killed in Tamenglong district; four accused arrested**

Recent reports of killing of the migratory Amur falcons at one of the roosting sites in Tamenglong district evoked sharp reactions from concerned citizens. Following reports of the hunting, the range forest officer of Tamenglong Forest Division TFD led a joint team of forest and police officials that arrested persons on charges of hunting the birds. Three air guns and 27 dead birds carried in gunny bags were also seized.

"A wildlife offence case has been registered under Section 9 and 51 of the Wildlife (Protection) Act 1972 and all the four accused have been arrested, the air guns and the dead birds were also seized," said a press release issued by TFD.

The forest department is also reported to have taken up 24x7 vigilance by a joint team of forest and police personnel to prevent further hunting.

Source: Sobhapati Samom. 'Killing of Amur falcons in Manipur hills evoke reactions from concerned citizens', [www.hindustantimes.com](http://www.hindustantimes.com), 02/11/2022.

## MAHARASHTRA

### **Vulture sighted in Phansad WLS after seven years**

A vulture was sighted in the Phansad Wildlife Sanctuary (WLS) for the first time after seven years. The sighting of an Egyptian vulture was reported during a recent bird count conducted here by the forest department (FD) and the Green Works Trust (GWT).

The FD had started a 'vulture restaurant' in Phansad WLS in 2010. It was however not being maintained since the last sighting way back in 2015. In December 2021 the FD collaborated with GWT and the latter started to provide cattle carcasses for the vulture restaurant as part of an effort titled 'Project Jataayu' for the revival of the vulture species in the sanctuary.

In the past 11 months the GWT team visited 275 gram panchayats and nagar parishads in seven talukas of Raigad district and delivered 13 carcasses to the vulture restaurant in the hope of attracting vultures. The last carcass was dropped at the restaurant site in Phansad on November 2. An Egyptian vulture was sighted there three days later.

Source: Raina Assainar. 'Count them in, endangered Egyptian Vulture spotted at Phansad', [www.hindustantimes.com](http://www.hindustantimes.com), 10/11/2022.

## RAJASTHAN

### **No water supply at Ramdevra GIB breeding centre; three chicks die in three weeks**

The newly built Great Indian Bustard (GIB) breeding centre at Ramdevra in Jaisalmer district has no proper water supply for nearly a year. Three GIB chicks are reported to have died here in three weeks by mid-November.

The high-density polyethylene (HDPE) pipes laid by the State Public Health Engineering Department (PHED) to supply water to the Ramdevra centre a year ago had stopped working just nine days after being laid. However, the nine GIB chicks were shifted to the centre at Ramdevra from the one at Sudashari in the Desert National Park (DNP) in multiple phases between August 4 and September 16, 2022. The Ramdevra facility for conservation and breeding of GIBs was set up jointly by the ministry of environment, forest, and climate change, the government of

Rajasthan and Wildlife Institute of India (WII) in collaboration with International Fund for Houbara Conservation (IFHC) of United Arab Emirates (UAE).

Money was provided to the state PHED for the new water pipeline on March 12, 2021 and the pipeline was laid by mid-December 2021. The pipes were laid over the ground and vehicles passing over them in a 600 m stretch had caused many breakages and leaks. Water supply to the centre was stopped on December 23, 2021 and has not been restored yet.

Source: Vimal Bhatia. 'Water shortage at Jaisalmer GIB breeding facility', [www.timesofindia.indiatimes.com](http://www.timesofindia.indiatimes.com), 11/11/2022.

## TAMIL NADU

### **TN govt constitutes 10-member panel for vulture conservation**

The Tamil Nadu (TN) government has constituted a 10-member state-level committee for the conservation of vultures. The 'Vulture Conservation Committee', headed by principal chief conservator of forests and chief wildlife warden of the state, will monitor, conserve, and recover vulture sites, map vulture population, and create safe zones for them. The tenure of the committee is two years. The committee will prepare and implement a "Tamil Nadu Action

Plan for Vulture Conservation (TNAPVC)" and chalk out and implement a regulatory mechanism to ban drugs toxic to vultures.

The members of the committee include the director of animal husbandry department, the director of drug controller, food safety and drug administration department, experts from the Wildlife Institute of India, Salim Ali Centre for Ornithology and Natural History, and NGOs working in the field of vulture conservation.

The responsibilities of the committee will include setting up vulture care, rescue, rehabilitation and breeding centres, bringing synergy among various departments for vulture conservation, ensuring scientific management of carcass dumps, carrying out analysis of cattle carcasses, conducting census and enhancing public awareness on the need to conserve vultures.

Four vulture species - Oriental white-backed vulture, Long-billed vulture, Red-headed vulture and Egyptian Vulture - are found in Tamil Nadu. Sigur plateau in Mudumalai in the state is one of the last remaining regions where vultures are found. Rough estimates show only 200 vultures remain in the wild in TN.

Source: 'TN govt constitutes 10-member panel for conservation of vultures', [www.newindianexpress.com](http://www.newindianexpress.com), 20/10/2022.



## TRIBUTE

### **Kusum Karnik and her fight for the environment**

A walking encyclopaedia on Indian forests, Kusum Karnik was an epitome of an ideal eco-friendly lifestyle. A committed activist, Kusum left this world on November 2<sup>nd</sup>, 2022. She wanted to rest in eternal peace in the Ahupe Deorai (sacred grove) area but it couldn't happen due to some practical difficulties. It was satisfying, however, that her last remains were immersed there.

In 1984, plans were hatching to cut down the Ahupe Deorai in Bhimashankar region. At that time, Kusum, inspired by the Chipko movement in Uttarakhand, organized a movement and saved the sacred grove with an active participation of the local people. The sacred grove is very important for a tribal, who is hardworking, conscientious and humane person who uses the forest sparingly and protects it. Kusum used to get enraged if someone called them destroyer of forests.

The forests of Bhimashankar were declared a wildlife sanctuary in 1985, after which the news of local people's relocation started making the rounds. The people started an agitation under Kusum's leadership. It was a time when the slogan – "The forest is ours and not of anybody's father's" echoed across Maharashtra.

Sanctuary related conferences were started with workers from different sanctuaries. Four sanctuary conferences were held in various states, wherein experts, scholars and nature lovers participated. These became a place for the evaluation of the sanctuary concept and its appropriateness and reinforced the nature of the positive relationship between local people, the environment and their forest. Later, in 1995, Kusum participated in a forty-five-day 'Jungle Jeevan Bhachao Yatra' (Let's save wildlife march) through several national parks

and sanctuaries in seven states, organised by several groups. It revealed the disturbing details of how the conventional model of 'protected areas' is top-down, alienating or exploiting the tribal people who have lived in these areas for centuries. A year before this, Kusum had participated in a national conference on people and protected areas, and contributed an article on Bhimashankar to a book that emerged from that conference.

In 1998, she studied the Indian Eco Development Project in seven national parks of the country. An attempt was being made through them to break-down the association between the local people and forests. It has now been proven that when this association is severed, people become indifferent towards the forests, thus, eventually leading to its degradation. Besides, a huge debt piles up on the country. Kusum was telling all this to the people and creating awareness in them with all her strength throughout her life for the last 40-50 years.

It was her firm belief that environmental protection requires a change at all levels. She fought for this at multiple levels through the organisation Ekjut that led the struggle and through the Shashwat Trust that undertook innovative and constructive work. Shashwat, that she founded jointly with her husband, Anand Kapoor, was honoured with UNDP Equator Initiative's 'Equator Prize' for its incessant efforts to protect the environment. And, the Ambegaon taluka with Bhimashankar and Manchar was placed on the world map.

The adventurous attitude, luxurious lifestyle and luxury-seeking mindset of the urban tourists are spreading everywhere rapidly. Newer ideas of comfort and enjoyment are mushrooming by the day. Their speech, behaviour and the demand for luxury influences local people who start demanding the same. They are attracted to a life of indulgence leading to a rapid erosion of the eco-cultural space. This was what Kusum passionately told the urban middle and upper middle classes as well as the locals. She used to get aggressive at times for this. She was

warning us about development being disastrous towards nature and natural resources. But we, who are too self-obsessed, never cared to hear this. Today, we are facing the dire consequences. Let's wake up and embrace an environment-friendly lifestyle! That would be a true tribute to her lifelong hard work!

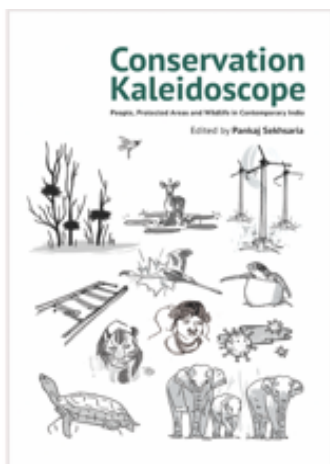
- **Geetali Vinayak Mandakini** is editor of Marathi magazine *Miloon Saryajani* and founding trustee, Shaswat Trust. Email: [geetali.mandakini@gmail.com](mailto:geetali.mandakini@gmail.com)

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## **Contemporary research in & around protected areas: An overview**

### **1. Macrofaunal diversity and distribution in Kishtwar High Altitude National Park, Jammu and Kashmir, India**

**Author(s):** Y. P. Sharma, S. A. J. Hashmi, Roshi Sharma, Sanjeev Kumar and R. K. Manhas

**Keywords:** Agaricomycetes, diversity and distribution, National Park, environmental factors, macrofungal communities

**Summary:** Macrofungi diversity and distribution were analysed by establishing 40 permanent plots across ten sites between July 2015 and October 2017 in the protected area. Eighty-three wild macrofungal species were recorded.

**Link:**

<https://currentscience.ac.in/Volumes/122/12/1415.pdf>

### **2. High striped hyena density suggests coexistence with humans in an agricultural landscape, Rajasthan**

**Author(s):** Debashish Panda, Subham Mohanty, Tanuj Suryan, Puneet Pandey, Hang Lee, Randeep Singh

**Keywords:** Hyena, Rajasthan, agricultural landscape, carnivores, conservation

**Summary:** The researchers determined density, activity patterns, spatial use and people's perception regarding striped hyena in and around Sawai Mansingh Wildlife Sanctuary, Rajasthan, through motion sensors-based surveys, satellite remote sensing images, and household questionnaire survey.

**Link:**

<https://journals.plos.org/plosone/article?id=10.1371/journal.pone.0266832>

### **3. Birds of D'Ering Memorial Wildlife Sanctuary, Arunachal Pradesh: Summer Surveys**

**Author(s):** Asad R. Rahmani, Abidur Rahman, Mohammad Imran, Taksh Sangwan, Rohit R S Jha, Ngulkholal Khongsai

**Keywords:** D'Ering Memorial WLS, grassland birds, Arunachal Pradesh

**Summary:** One hundred and thirty-one bird species were identified during surveys conducted in April-May 2015 and 2016 in the D'Ering Memorial Wildlife Sanctuary, Arunachal Pradesh. The park hosts the largest population of the Critically Endangered Bengal florican. The authors estimate that there maybe more than 250 species of birds in the sanctuary.

**Link:**

<https://nieindia.org/Journal/index.php/ijeas/article/view/2613>

### **4. An updated checklist of reptiles from Dampa Tiger Reserve, Mizoram, India, with sixteen new distribution records**

**Author(s):** Malsawmdawngliana, Bitupan Boruah, Naitik G. Patel, Samuel Lalronunga, Isaac Zosangliana, K. Lalhmangaiha, Abhijit Das

**Keywords:** Indo-Burma biodiversity hotspot, herpetofauna, Mizoram, natural history, northeastern India, snakes

**Summary:** The authors report 33 species of reptiles after gathering data through visual encounter surveys, opportunistic searches and road-kills during March and September 2021. The findings also include three rare species and 16 new distributional records for snake species.

**Link:**

<https://threatenedtaxa.org/JoTT/article/view/8004/8849>

### **5. An annotated checklist of odonates of Amboli-Chaukul-Parpoli region showing new records for the Maharashtra State, India with updated state checklist**

**Author(s):** Dattaprasad Sawant, Hemant Ogale, Rakesh Mahadev Deulkar

**Keywords:** Anisoptera, biodiversity, range extension, Sindhudurg, Western Ghats, taxonomy, zygoptera

**Summary:** Opportunistic surveys in Amboli-Chaukul-Parpoli region of Sindhudurg District from August 2019 to August 2021 recorded a



total of 93 species of odonates (damselflies and dragonflies). Fifteen species are endemic to Western Ghats and six species are reported for the first time from the state.

**Link:**

<https://threatenedtaxa.org/JoTT/article/view/7715>

## 6. Food Habits of Tiger (*Panthera tigris*) in Tropical Moist Deciduous Forest of Dudhwa National Park, Uttar Pradesh

**Author(s):** Kaleem Ahmed, Jamal A Khan

**Keywords:** Biomass, Dudhwa National Park, Prey Species, Scat, Tiger

**Summary:** An analysis of 116 scats collected from Dudhwa National Park identified a minimum of 14 prey species consumed by Tiger, with strong seasonal dietary variations.

**Link:**

<https://nieindia.org/Journal/index.php/ijeec/article/view/2612>

## 7. Effect of Altitude in Shaping the Distribution Pattern of Flora in a Protected Area of the Eastern Himalaya, Mizoram

**Author(s):** Lal Rinmuana, J Lalbiaknunga, Lalbiaknii P.C, Vanlal Hruaia

**Keywords:** Altitudinal gradient, Cluster analysis, Distribution pattern, Phawngpui National Park, Similarity index

**Summary:** Using a random stratified sampling method; 108, 37 and 77 tree, shrub and herb species, respectively, were recorded across five altitudinal zones between 273 to 2157 m a.s.l. from Phawngpui National Park in Mizoram.

**Link:**

[https://papers.ssrn.com/sol3/papers.cfm?abstract\\_id=4280746](https://papers.ssrn.com/sol3/papers.cfm?abstract_id=4280746)

## 8. Plant species of family Euphorbiaceae from Badalkhol sanctuary of Surguja district, Chhattisgarh

**Author(s):** Shilpa Tiwari, Kumud Sandya

**Keywords:** Euphorbiaceae, Badalkhol Sanctuary, Surguja District, Chhattisgarh

**Summary:** Plant exploration surveys conducted from 2019 to 2021 revealed 25 species belonging to family Euphorbiaceae in Badalkhol Sanctuary, Chhattisgarh.

**Link:**

<https://www.plantsjournal.com/archives/2022/vol10issue4/PartC/10-4-12-390.pdf>

- This section has been collated by Anand Pendharkar and Aradhya Sardesai (SPROUTS Environment Trust, Mumbai).

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### WHITHER PROTECTED AREAS?

18 years back when some of us took the first fledgling steps towards bringing out a newsletter on protected area issues in India, little did we realize that we would one day be seeing its 100<sup>th</sup> issue! It's gratifying to see it having not only survived this long, but growing in its readership and the interest it has generated. Also encouraging is the fact that, though it has at times been a struggle, organizations and individuals have come forward to keep it financially afloat.

The immediate motivation for starting this was a national workshop in 1994 on the possibilities of joint protected area management ... hence its first name, *JPAM Update*. Several issues thereafter, responding both to the kind of news we were getting, and feedback from several readers, we switched to the wider (and still used) name of *PA Update*. These 100 issues have therefore carried news and some analytical comments on a broad sweep of issues relating to conservation in India: threats to wildlife from human (including developmental) activities, wildlife-human conflicts, problems faced by communities due to conservation policies and programmes, wildlife tourism and finances, community-based conservation, and many others. The *PA Update* has been a fascinating mirror to how the context and situation of PAs has changed in some ways, and remained static in others. Clearly threats to wildlife (and more specifically to PAs) have increased as India has moved into a phase of economic globalisation and rapid industrialization, demanding land and resources at a rate never before seen. PAs have perhaps not seen as massive an attack as areas outside them (an important contribution of the Wild Life Protection Act), but they too have not always been spared (witness the number of permissions given for mining, dams, etc., affecting them). And as their surrounds get increasingly carved up and they become tiny islands in a landscape of devastation, inevitably they too will suffer.

State attention to PAs has simply not kept pace with the rapidity of India's economic transformation; even the National Board for Wildlife, despite some of India's most prominent

conservationists being its members, has been able to do little to stem the rot. This also brings up the question of whether it is wise to focus so much attention on PAs, rather than on trying to transform the way in which entire landscapes are governed and managed. We are seeing some change here; while strategies for some wide-ranging animals like the elephant continue to remain very PA-centric, those for others like the snow leopard are (at least on paper) are beginning to look at landscapes as a whole.

Unfortunately what has not changed much in policy or practice is the relationship of PAs to local communities. The national workshop on JPAM in 1994 was one of earliest national-level attempts to try moving conservation paradigms to more inclusive, participatory ones (as has happened across the world). Communities are more vocal today than then, several forest officials have joined in questioning exclusionary top-down strategies, and we have relatively more progressive documents like the National Wildlife Action Plan 2002 and the PA Programme of Work of the Biodiversity Convention to which India is party. India's policy, however, has remained stubbornly immune to voices of reason and democracy. One development that promises to make conservation more broad based, albeit slowly, is the Forest Rights Act; noting this, the *PA Update* has begun devoting pages to how the FRA is playing out in PAs. Despite these problems, significant wildlife populations are still holding ground in India, due, both, to some dedicated officials and communities. I am quite sure that, given some of the hopeful signs mentioned above, the 150<sup>th</sup> issue of the *Update* will be full of news on collaborative and community-based approaches achieving effective conservation across landscapes and seascapes, based on an integration of traditional and modern knowledge, and genuine partnerships respecting rights, responsibilities and roles. Maybe then we can switch back to *JPAM Update*?

- **Ashish Kothari** is a founder member of Kalpavriksh and was part of the editorial team that produced the first issue of the *J(PA)M Update* in 1994

## **PERSPECTIVE**

### **Snow leopard in upper regions of the Kashmir Valley: A new sighting brings fresh hope**

The high-altitude areas of Kashmir aren't often at the centre of this region's agenda when it comes to wildlife research and conservation. In the land of the hangul and the prominence given to the Dachigam National Park, the higher regions are thought of as desolate and bare. Not only are regions the water towers for the valley and beyond, they are also critical grazing areas for livestock of the Bakerwal community. It was a welcome invitation in this context to have the Department of Wildlife Protection Jammu and Kashmir facilitating surveys with partner NGOs, to understand presence and abundance of snow leopards under the Snow Leopard Population Assessment of India (SPAI) project in the upper reaches of Kashmir.

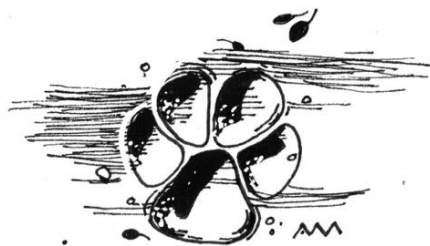
This iconic and culturally treasured great cat is a good indicator species as it quickly reacts to habitat disturbances and its successful conservation requires sustainable long-term systemic solutions to the threats impacting the quality of habitats. Various teams have been conducting surveys across the nearly 12,000 sq. km potential habitat of the snow leopard of Jammu and Kashmir (J&K) for a few years now covering the Gurez, Thajwas, Baltal-Zojila, Warwan, and Kishtwar landscapes. There is limited evidence of snow leopard presence across J&K and it is no surprise then, that snow leopard surveys have focused in neighbouring areas of Ladakh, Himachal Pradesh and Uttarakhand.

Recently, partners on this project, researchers from Nature Conservation Foundation (NCF) recorded images of snow leopard in the upper Baltal-Zojila region of Kashmir. These were amongst the first images obtained through systematic surveys for the species in the region. The team was comprised of locals Aashiq Dar (Tangmarg- Baramula) and Aijaz Raina (Sarbal, near Sonamarg),

along with snow leopard experts from Himachal Pradesh Tanzin Thuktan (Kibber, Himachal Pradesh), Rinchen Tobge (Kibber, Himachal Pradesh), and Kesang Chunit (Kibber, Himachal Pradesh).

This finding brings renewed hope to Kashmir and its high-altitude regions, as the presence of the snow leopard can be used as a conservation flagship to address high-mountain development issues for people and the environment. The camera trapping exercise also revealed other important and rare species such as Asiatic ibex, Brown Bear and Kashmir Musk Deer. Moving forward, it is key that local capacity is built in conducting research and conservation for the often-neglected high altitude regions of Kashmir.

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