

# 'Road transect method is most effective for vulture population estimation in MTR'

The method, if undertaken properly, eliminates double-counting by volunteers, and also helps track fluctuating populations over time, say researchers, who published a paper on this subject

**Rohan Premkumar**  
UDHAGAMANDALAM

A group of researchers has ascertained that the road transect method is the most effective method to estimate vulture populations in the Mudumalai Tiger Reserve (MTR), home to the southernmost, viable populations of at least three species of endangered vultures in India.

Road transects are a sampling methodology between two points along which a survey is undertaken to identify the species and number of individual animals seen along the line. If suitably planned, road transects can cover large areas with little chance of individuals being double-counted by volunteers undertaking the count.

A recent paper pu-



Vultures seen at the Mudumalai Tiger Reserve in the Nilgiris.

blished in an international peer-reviewed journal – *Environmental and Experimental Biology* – by the University of Latvia, titled, 'Assessing the accuracy of population estimation methods for vulture populations: a case study from the Mudumalai Tiger Reserve, Tamil Nadu, India,' by authors S. Manigandan, H. Byju and P. Kannan, compared estimations of vulture populations in the

Mudumalai Tiger Reserve done through different methods: the road transect method, carcass monitoring and nest counting.

## Most accurate

Of the three estimation methods evaluated, the researchers found that the road transect method was the most accurate method to estimate the vulture population in MTR. Road transects were successful

in identifying all four species of vultures seen in the MTR – the white-rumped vulture, long-billed vulture, Asian king vulture and the Egyptian vulture. This would have been difficult otherwise, as only the nesting sites of white-rumped and long-billed vultures are accessible to researchers in MTR, while the nesting site of the Asian king vulture is yet to be identified and the Egyptian vulture is known to have stopped nesting in the Nilgiris altogether.

"Any accurate population estimation of vultures in the critical habitat (MTR) requires considering various factors such as logistics, cost-effectiveness of the surveys, accessibility to breeding colonies, elephant migrations and tiger habitats," said Mr. Byju, one of the authors of the paper.

## **T.N. is free of ganja plantation, says Chief Minister**

The drug is being smuggled from Andhra Pradesh, Odisha, Telangana and northeastern States, but measures against this have been stepped up: CM



Chief Minister M.K. Stalin administering a pledge against drugs in Chennai on Friday.

**The Hindu Bureau**  
CHENNAI

**W**hile Tamil Nadu remained free of ganja plantation, the drug was being smuggled into the State from Andhra Pradesh, Odisha, Telangana and northeastern States, Chief Minister M.K. Stalin said in Chennai on Friday.

"We are taking various steps to prevent this. Though the situation is not bad in Tamil Nadu, we have intensified anti-drug measures and awareness initiatives in this regard," Mr. Stalin said. Orders had been issued to take action against anyone involved in the sale of drugs under the

Goondas Act, he added.

The Chief Minister was speaking at an event titled, 'Drugs-Free Tamil Nadu', during which he administered a pledge to students, volunteers of the National Service Scheme and anti-drug clubs, and cadets of the National Cadet Corps, among others.

About 13,000 kg of ganja and other banned drugs seized in various cases were destroyed by the police on Friday. Recalling the efforts made by the State government to set up anti-drug clubs in schools and colleges and declare the campuses drug-free, Mr. Stalin expressed the hope that it would create a generation that was healthy

and responsible. He also called for coordinating efforts to control and prevent the movement of drugs. Commending the police and other officials involved in curbing the menace of drugs in the State, Mr. Stalin requested them to continue their mission.

Minister for Higher Education K. Ponmudy, Minister for Health and Family Welfare Ma. Subramanian, Minister for Hindu Religious and Charitable Endowments P.K. Sekarbabu, Minister for School Education Anbil Mahesh Poyyamozi, MLA Thayagam Kavi, Home Secretary P. Amudha, DGP Shankar Jiwai and senior officials were present.



## More brick structures unearthed at Porpanaikottai, a Sangam-era site

**The Hindu Bureau**  
TIRUCHI

A portion of a circular brick structure has been unearthed by archaeologists at Porpanaikottai, a Sangam-age site, in Pudukottai district.

According to excavation director T. Thangadurai, the structure is contiguous to a three-course brick structure, exposed in the A1 trench within a few days of the Archaeology Department having commenced digging at the site on May 20. A Sangam-age fort is believed to have existed here. "The brick structure was found at a depth of 3.8 centimetres in Za1 trench. Its diameter is 230 centimetres. We have exposed portions of a couple of water channels built with bricks. A couple of brick structures have been found at a depth of 32 cen-



**New find:** The structure is contiguous to a three-course brick structure which was exposed earlier. SPECIAL ARRANGEMENT

timetres in the adjacent trench (Za2), too. One of them runs to a length of 200 centimetres," Mr. Thangadurai said. However, it would require more digging to assess the nature and purpose of these structures, he added.

### **Rouletted ware**

Over 355 antiques, including a gold nose stud, hopscotch, spouts, pieces of

glass bangles and beads, green stones, a terracotta lamp, a coin, a spindle whorl and a rubbing stone, besides 11 graffiti, have been found at the site so far. Potsherds, comprising glazed ware, black ware, black and red ware, roof tiles, perforated ware and three pieces of rouletted ware, a distinctive type of decorated pottery, have also been found. "One of the

three pieces is hopscotch. A hopscotch made of rouletted ware is a rare and important find," he said.

Porpanaikottai, situated about 6.5 km to the east of Pudukottai town, is one of the new sites where the Archaeology Department took up excavation this year after studies carried out with Light Detection and Ranging (LIDAR), a remote sensing method, indicated that a fort had existed there.

A habitation mound, spread over 1.26 hectares, is believed to have existed within the fort and excavations have been taken up in this area. Fourteen trenches have been dug so far. Significantly, all the trenches have been dug in private property owned by six individuals – Rengasamy, Marimuthu, Sundararajan, Nagar, Karuppiyah and Palaniappan.



## Tamil Nadu is committed to securing elephant corridors, says Forest Minister

**The Hindu Bureau**  
COIMBATORE

Tamil Nadu is committed to securing elephant corridors, according to Supriya Sahu, Additional Chief Secretary, Environment, Climate Change and Forests.

At the inaugural of Tamil Nadu Elephant Conclave 2023 in Coimbatore on Friday, she said, "The Elephant Corridor Committee has completed field visits in Tamil Nadu, covering all elephant-spread areas." As many as 42 corridors – 24 south of Palakkad and 18 north of Palakkad – have been identified. After the final evaluation, the corridors will be frozen for consolidation and follow-up action, she later told *The Hindu*.

The Forest Department released a handbook on camp elephant management and a standard oper-



Forest Minister M. Mathiiventhan, third from left, at the inauguration of Tamil Nadu Elephant Conclave 2023 in Coimbatore. M. PERIASAMY

ating procedure for handling orphaned elephants. Forests Minister M. Mathiiventhan, along with Anamalai Tiger Reserve Field Director S. Ramasubramanian, also released a handbook on Boundary Night Patrolling Team. 'Mahouts' and 'Cavadis' of the camps in the Anamalai and Mudumalai Tiger Reserves shared their experience of working with elephants.

As many as 12 elephant

rescue and relocation operations were carried out across the State in the last two years, Chief Wildlife Warden Srinivas R. Reddy said. To facilitate safe passage for elephants near rail lines and oversee their movement, the Forest Department has begun using Artificial Intelligence-based systems and drone surveillance, he said.

Invasive species, a pressing threat to fores-

tland, were also a point of discussion at the conclave. R. Sukumar, Professor, Indian Institute of Science, called for a deep understanding of local ecology and different approaches towards the species.

The conclave brought together scientists, forest officers and civil society organisations to discuss the latest measures in elephant conservation.

At the conclave, the Wildlife Trust of India (WTI) announced the launch of 'Yaana Thiruvizha', in collaboration with the government. The festival focuses on involving members of the public in awareness campaigns and activities over three months. "We have partnered with five to six NGOs from different districts to carry out the activities," said Vivek Menon, Founder and Executive Director, WTI.

## Luna-25 will not affect Chandrayaan: Russian space agency

**Hemanth C.S.**  
BENGALURU

Russia's space agency Roscosmos, which launched the Luna-25 on Friday, has said that its landing on the moon would not impede India's Chandrayaan-3, which was launched on July 14, 2023, as the two missions had different landing areas and there was enough space on the moon for everyone.

Luna-25 was launched from Russia's Vostochny spaceport in the country's far east region on Friday. Its lunar lander is expected to reach the moon on August 23, the same day on



Up close: A view of the moon as viewed by the Chandrayaan-3 lander during Lunar Orbit Insertion on August 5. REUTERS

which Chandrayaan-3 is also expected to land on the lunar surface.

"Luna-25 and Chandrayaan-3 have different landing areas planned.

There is no danger that they will hamper each other's functions or collide. There is enough space on the moon for everyone. Luna-25 is static, it will not

move on the surface of the moon," Ilya Morozov, Center of internal and external communications, State Corporation Roscosmos, told *The Hindu*.

"Launching Luna-25 onto the flight trajectory to the moon will take one hour and 20 minutes. The duration of the flight from earth to the moon is five days. Stay in lunar orbit – from five to seven days, depending on the landing area. Three areas are selected for the lunar landing," Mr. Morozov said.

The Indian Space Research Organisation (ISRO) plans to have the Chandrayaan-3 lander and rover

touch down near the lunar south pole region at 5.47 p.m. on August 23.

**Six active lunar orbiters**

According to ISRO, there were six active lunar orbiters as of July 2023. "Currently, the only operating rover is China's Yutu-2 rover released by Chang'e 4, which operates on the far side," ISRO said on August 9.

"There is no interaction with ISRO on the Luna-25 project. At the same time, the Russian side is open to cooperation on the participation of the Indian side in implementing the project of the International Scien-

tific Lunar Station (ILRS). Moreover, we are ready to consider the possibility of placing a Russian payload on future Indian missions," Mr. Morozov said.

The ILRS is a planned lunar base currently persuaded by Roscosmos and the Chinese space agency.

ISRO on Friday congratulated Russian space agency Roscosmos for the successful launch of its moon mission Luna-25, the country's first lunar lander in 47 years.

India and Russia are both aiming to be the first ever country to land on the moon's south pole.

(With inputs from PTI)



# Parliament paves way for 28% GST on online gaming

The government hopes to roll out higher levy on casinos, horse-racing and e-gaming by October 1; States will have to amend their respective laws soon; FM assures review of tax after six months

**The Hindu Bureau**  
NEW DELHI

**P**arliament on Friday cleared amendments to the Goods and Services Tax (GST) laws to facilitate the levy of 28% GST on the face value of all bets made in casinos, horse-racing and online gaming.

Along with amendments to the Central and Integrated GST laws that were cleared without discussion by the Lower House, States will also have to make legislative changes to their respective GST Acts for the 28% levy to kick in. The Rajya Sabha returned the Bill to the Lok Sabha by Friday afternoon, paving the way for its enactment.

Union Finance Minister Nirmala Sitharaman had indicated an October 1 target date to roll out the tax and an assured review of the levy six months after



**Firm stand:** Nirmala Sitharaman speaking in the Lok Sabha during the Monsoon Session on Friday. PTI

implementation.

Approved by the GST Council earlier this month, the legislative changes, moved through the Integrated GST (Amendment) Bill, 2023, and the Central GST (Amendment) Bill, 2023, include a provision that makes it mandatory for offshore online money gaming firms providing services to Indian users to register in India and pay taxes or face blockages.

While the Council had approved a 28% GST levy

on wagers made in these sectors at its meeting in July 11, it was reconvened on August 2 to review the move in light of representations from industry and the Electronics and IT Ministry that is in charge of the e-gaming policy.

The Council decided to stick to its decision despite dissent from States like Sikkim and Goa that wanted the tax to be levied on gross gaming revenues as is the current practice, rather than the face value of

bets. It, however, clarified that earnings from bets would not face repeat taxation.

Amendments to the Central GST law include definitions for online gaming, online money gaming, specified actionable claim and virtual digital assets. Schedule III of the Act will be amended to include "specified actionable claim" so as to provide "clarity regarding taxability of actionable claims involved in or by way of casinos, horse racing and online gaming", the Bill's statement of objects and reasons noted.

While the changes will enable the GST levy on monetary deposits on gaming portals, including those done through crypto assets, it is still not clear whether a mere recharge of payment wallets would imply a 'supply', EY India tax partner Saurabh Agarwal said.