

### NEWSPAPER HIGHLIGHT

**Qataris voted in the Gulf Arab state's first elections for two-thirds of the advisory Shura Council, a process that has stirred domestic debate about electoral inclusion and citizenship. Turnout for the election of 30 members of the 45 seat body was 44%, the elections' Supervisory Committee said. The ruling emir will continue to appoint the remaining 15 Council members. The Council will have legislative authority and approve general state policies and the budget, but has no say in the setting of defence, security, economic and investment policy for the small but wealthy gas producer, which bans political parties.**

**Bacteria, fungi and viruses that comprise the microbiome of corals may play a role in the ability of corals to resist global warming and avoid bleaching, according to a new study by Penn State researchers. This study, published in Nature Communications, observed three species of corals: the shallow water starlet coral, shown in the picture, the knobbly brain coral and the mountainous star coral.**

**A new study by researchers from the University of Exeter, U.K., finds, by examining cats' whiskers that most of their food (about 96%) came from what is provided at home and only 3%-4% came from hunting wild animals. This involved clipping off the whiskers and studying them for proportion of stable isotopes. The study indicates that it is predatory instinct rather than hunger which drives cats to hunt.**

**Researchers from University of Madras and Presidency College, Chennai, have isolated an alga species that shows promise as an agent of biodegradation of plastic sheets. It is a preliminary study that has been published in Scientific Reports and needs further research and development before it can be translated to the industry. According to the Central Pollution Control Board's annual report for the year 2011-12, the plastic waste generated in a year amounted to 5.6 million metric tonnes. Only 60% of the plastic used in India was collected and recycled. The metros alone contributed some 21.2% of the total waste, led by Delhi, followed by Chennai, Kolkata and Mumbai. The usual means of disposal of plastic waste involves incineration, land-filling and recycling. These methods have limitations and also sometimes produce sideeffects that are**

### RENUNCIATION OF INDIAN CITIZEN NOW SIMPLER

**1.** New guidelines introduced by Ministry of Home Affairs (MHA) to simplify the process of renunciation of citizenship for Indians who wish to do so.

**2.** More on this news Some of the simplified provisions in the new guidelines include- Uploading of documents online and completion of the process of renunciation within 60 days. The new form also has a provision mandating the Indian citizen to indicate the reason for renouncing the citizenship. The uploaded documents have to be submitted to the District Magistrate in case of citizen living in India or an Indian Mission abroad. The applicant will be interviewed before issuing the final certificate.

**3.** Also, the guidelines specify that as per the Citizenship act, 1955- "every minor child of that person shall thereupon cease to be a citizen of India". Concern with the guidelines: The guidelines are not clear if minors would also lose citizenship if only one of the parents gives up her/his Indian citizenship.

**4.** The citizenship act, 1955 prescribes three ways of losing citizenship: **By renunciation:** Any citizen of India of full age and capacity can make a declaration renouncing Indian citizenship Such declaration may not be accepted during war. Even the minor children of the person who renounces citizenship stands to lose their Indian citizenship. However, when their children attain the age of eighteen, he may resume Indian citizenship.

**5.** **By termination:** If a citizen of India voluntarily acquires the citizenship of another country, then he loses the citizenship of India However, this provision does not apply during times of war. **By deprivation:** Compulsory termination of Indian citizenship by the Central government, in the following conditions: Obtained the citizenship by fraud. Citizen has shown disloyalty to the Constitution of India. Citizen has unlawfully traded or communicated during the times of war.

### BLOOD PRESSURE, CHOLESTEROL CONTROL KEY FOR TYPE 1 DIABETES

**1.** A study conducted recently observed that it is crucial to have a good control over blood pressure and cholesterol and not just good control over blood sugar level to combat Type 1 diabetes.

**2.** Other observations made in this study- Patients who have T1D have reduced life-span even with insulin being administered to them Subjects who were able to control all the three had better glycemic and blood pressure control, more favourable lipid profiles and lower prevalence of complications which helped them to increase their life-span compared to those who could not control all the three. T1D prevalence in India: India is home to more than 95,000 children with T1D, reported to be the highest in the world, according to the 9th International Diabetes Federation Atlas.

**3.** What is Type 1 diabetes? **In type 1 diabetes, the pancreas (a small gland behind the stomach) progressively reduces the amount of insulin (the hormone that regulates blood glucose levels) it produces until it stops producing any at all.** If the amount of glucose in the blood is too high, it can, over time, seriously damage the body's organs.

**4.** National Programme for prevention and Control of Cancer, Diabetes, Cardiovascular Diseases and strokes (NPCDCS): It was launched in 2010 in 100 districts across 21 States, in order to prevent and control the major NCDs. The main focus of the programme is on health promotion, early diagnosis, management and referral of cases, besides strengthening the infrastructure and capacity building. The funds are being provided to States under NCD Flexi-Pool through State PIPs of respective States/UTs, with the Centre to State share in ratio of 60:40 (except for North-Eastern and Hilly States, where the share is 90:10). Fit India' movement was launched recently to highlight the need to stay healthy amid rising instances of lifestyle disorders and non-communicable diseases (NCDs).

### CHINA SENDS 25 JETS INTO TAIWAN AIR ZONE

**1.** China's display of air force against Taiwan. Display of military

**hazardous to the environment. Hence, researchers are on the lookout for biodegradation methods that are safe and environment friendly.**

**The Indian Astronomical Observatory (IAO) located at Hanle near Leh in Ladakh is becoming one of the globally promising observatory sites, according to a recent study. This is due to its advantages of more clear nights, minimal light pollution, background aerosol concentration, extremely dry atmospheric condition and uninterrupted monsoon, the Department of Science and Technology said. The researchers used reanalysis data combined from assimilation and observation extending over 41 years, along with 21 years of data from satellites. The study classified the quality of observable nights for different astronomical usages like photometry and spectroscopy on a daily basis.**

**Inspired by the inner layer of mollusc shells, scientists at McGill University, Canada, have developed stronger and tougher glass (Science). The material does not shatter on impact and has the resiliency of plastic. Potential uses could be to improve cell phone screens in the future. The researchers combined and centrifuged glass flakes with poly(methyl methacrylate) (PMMA) to make a transparent composite. A transparent composite was created by doping the glass flakes to alter the refractive index of PMMA to increase the optical clarity and make it at par with glass. The new material is not only three times stronger than the normal glass, but also more than five times more fracture resistant.**

**Firms such as Cairn and Vodafone disputing retrospective tax demands in India will not only have to withdraw all legal proceedings and waive all rights to claim costs or attach Indian assets but also indemnify the government on costs and liabilities from any action pursued by other interested parties in future. Setting the stage for a closure of the retrospective tax disputes over indirect transfer of assets situated in India, the Union government late on October 1 notified new rules under the Income Tax Act for specifying the process to be followed by affected taxpayers to settle these long brewing disputes.**

**On the day when farmers staged demonstrations in many parts of Punjab and Haryana against postponement of paddy purchase, the Centre on Saturday decided to start procurement in both the States from October 3. The Centre had postponed the procurement citing higher moisture content due to rain.**

power like this has been on the rise by China against Taiwan.

**2.China- Taiwan relations- Background:** China has claimed Taiwan through its "one China" policy since the Chinese civil war forced the defeated Kuomintang, or Nationalist, to flee to the island in 1949 and has vowed to bring it under Beijing's rule, by force if necessary. While Taiwan is self-governed and de facto independent, it has never formally declared independence from the mainland. Under the "one country, two systems" formula, Taiwan would have the right to run its own affairs; a similar arrangement is used in Hong Kong. Presently, Taiwan is claimed by China, which refuses diplomatic relations with countries that recognize the region.

**3.Indo- Taiwan relations: Although they do not have formal diplomatic ties, Taiwan and India have been cooperating in various fields. India has refused to endorse the "one-China" policy since 2010.**

### **TO HUNT TIGER T23**

**1.**The Male Tiger (name T23) has been responsible for the death of four persons in villages around Mudumalai Tiger Reserve (TN). Efforts to capture the animal had been unfruitful and after locals protest, TN Chief Wildlife Warden has ordered to hunt the Tiger T23 as a last resort.

**2.**Major causes of Human-Animal conflict: Encroachment: People are increasingly encroaching into the country's traditional wild spaces and animal sanctuaries, where people compete with wildlife for food and other resources. Unsustainable development: Animal usual corridors blocked by highways, railway tracks, and factories. This results in ecological dislocation of sorts, wherein endangered wild animals like tigers either cause distress or land themselves in trouble.

**3.**Failure of government measures: Human-Wildlife conflict mitigation measures are dysfunctional, haphazardly implemented, and therefore not effective. Location of animals outside protected areas: Wildlife experts estimate that 29 percent of the tigers in India are outside the protected areas. Wildlife experts claim that territorial animals do not have enough space within reserves and their prey do not have enough fodder to thrive on.

**4.**Government Initiatives to reduce the man-tiger conflicts are: **Sonitpur Model: WWF India had developed the 'Sonitpur Model' during 2003-2004 by which community members were connected with the state forest department. They were given training on how to work with them to drive elephants away from crop fields safely.** Afterward, crop losses dropped to zero for four years running. Human and elephant deaths also reduced significantly. Advisory for management of Human-Wildlife Conflict (HWC) approved by Standing Committee of National Board of Wildlife (SC-NBWL): Empower gram panchayats in dealing with the problematic wild animals as per the Wildlife (Protection) Act, 1972. Utilize add-on coverage under the Pradhan Mantri Fasal Bima Yojna for crop compensation against crop damage due to HWC.

### **LUCY MISSION-FIRST MISSION TO TROJANS**

**1.**Lucy Mission - First Mission to Trojans NASA will launch its first spacecraft Lucy on an Atlas V rocket to study Jupiter's Trojan asteroids to collect insights into the solar system's formation. The mission is named as 'Lucy' after an ancient fossil that provided insights into the evolution of human species.

**2.**Mission - To investigate the group of rocky bodies circling the Sun in two swarms, one preceding Jupiter in its orbital path and the other trailing behind Jupiter. After receiving boosts from Earth's gravity, Lucy will embark on a 12-year journey to 8 different asteroids. Among the 8 asteroids, one asteroid is in the Main Belt between Mars and Jupiter and then 7 Trojan Asteroids. Lucy will offer new insights into the history of the solar system, including how all of the planets came to be and why they are aligned in their current configuration.

**3.**Trojan Asteroids-**Trojan asteroids or Jupiter Trojans are group of asteroids (more than 7,000 in number) that share the planet Jupiter's orbit around the Sun.** They are leftovers of the primordial material from which Jupiter and the other outer planets were formed. Despite the fact that they really are in a very small region of space, they're very physically different from one another.

### **NEW EEL SPECIES DISCOVERED**

**1.**A new species of swamp eel belonging to the genus

**The maiden sea trials of the indigenous aircraft carrier Vikrant have progressed very well and the second phase of trials are expected to begin by October end, with the third phase planned in December, a defence official said. "Vikrant is expected to be delivered to the Navy in April and likely to be commissioned in August 2022," the official said which would also coincide with 75 years of Independence.**

Rakthamichthys that is endemic to India was discovered in a well in Mumbai. It was named Rakthamichthys mumba. Unlike other species of its genus, the mumba lacks eyes, fins and scales, has jaws equal in forward extent, different gill aperture, crescentic-shaped cephalic.

**2.The species differs from its congener from Western Ghats of India by the possession of jaws-projecting forward equally, when viewed laterally, absence of eyes and having more vertebrae. The present known habitat of the species is only the Mumbai well.**

**3.**Members of the family synbranchidae are very peculiar, relict lineages of percomorphs, consisting of eel-like fishes, distributed across all countries except Antarctica. Presently, this family consists of 26 valid species and are unique among teleosts by lacking paired, median and caudal fins.