

22.02.21

Indian And Indonesian Navies Conduct Exercise In Arabian Sea



- The Indian and Indonesian navies carried out a military exercise in the Arabian sea on Thursday to enhance operational interoperability and overall cooperation.
- Indian naval ship INS Talwar and Indonesian Navy's multirole corvette KRI Bung Tomo were part of the exercise, the Indian Navy said.
- India's maritime cooperation with Indonesia witnessed a renewed momentum in the last few years.
- Notwithstanding the coronavirus pandemic, the Indian Navy participated in maritime exercises in the last few months with a number of countries, including Japan, Russia, Australia, and the US. In November, India hosted the Malabar exercise, in which the navies of the US, Japan, and Australia participated.
- India invited Australia for the exercise, effectively making it a drill by all the Quad member nations.
- The Quad, comprising India, the US, Australia, and Japan, is aimed at ensuring a free and open Indo-Pacific, a region that has witnessed increasing Chinese military assertiveness in recent years.
- The Indian-Indonesian relationship stretches back for almost two millennia. ... India has an embassy in Jakarta and Indonesia operates an embassy in Delhi.
- India regards Indonesia as a key member of ASEAN. Both nations had agreed to establish a strategic partnership.

Software Defined Radio (SDR) For Army under Aatmanirbhar Bharat



- Software Defined Radio (SDR) for Army under Aatmanirbhar Bharat Communication is vital and critical to all military operations.
- The Combat Net Radio (CNR) is the mainstay of communications for the Indian Army in the battlefield.
- The contemporary CNR equipment in the Indian Army supports voice communication only and has limited or no data transmission capability.

- To arm the soldiers with advantages offered by technology and equip him to fight a war in the Net-Centric battle space, present radios are to be replaced soon by indigenously developed Software Defined Radio (SDR), which have enhanced data transmission capability, enhanced voice clarity and data transmission accuracy in spectrally noisy environments, support multiple waveforms, greater system security and better communication survivability in clear and secure mode to meet the operational requirements of the Indian Army.
- Indian Army is in the process to revamp its communication systems by procuring Very/Ultra High Frequency (V/UHF) Manpack SDRs under Make-II category.
- After successful evaluation of vendor responses, Project Sanction Order (PSO) has now been issued to 18 Indian vendors to start prototype development.
- The contract will be placed with one of the firms post successful development of prototype as per provisions of Buy (Indian-IDDMM) category of DAP 2020.
- Development of V/UHF Manpack SDR under Make-II will be a game changer for Indian Army.
- It is in sync with the “Aatmanirbhar Bharat” policy of the Government which will lead to “Self Reliance” in advanced communication systems.

Second phase of Rashtriya Sanskriti Mahotsav



- The second phase of the Rashtriya Sanskriti Mahotsav will be inaugurated by the Union Minister of State for Culture & Tourism (Independent Charge) on 22nd February 2021 at Raj Bhawan in Darjeeling, West Bengal.
- The festival is being held from 22nd February to 24th February.
- The Ministry of Culture is mandated with the task of preservation, promotion and propagation of Indian Culture, both tangible and intangible which inter-alia includes traditional folk dances and art forms, performing arts and rich tribal heritage.
- It organizes cultural programs, festivals and theatrical performances to fulfill this mandate.
- Rashtriya Sanskriti Mahotsav, the flagship festival of this Ministry organized since 2015 with the active participation of Seven Zonal Culture Centres has been playing a pivotal role to take the vibrant culture of India out to the masses instead of confining to auditoria and galleries.
- It has been instrumental in showcasing, folk and tribal art, dance, music, cuisines & culture of one state in other states reinforcing the cherished goal of “Ek Bharat Shreshtha Bharat” and at the same time providing an effective platform to the artists and artisans to support their livelihood.

- Ten editions of RSM have been held till date since November, 2015 in various states and cities such as Delhi, Varanasi, Bengaluru, Tawang, Gujarat, Karnataka, Tehri and Madhya Pradesh.

Karnataka to host second Khelo India University Games this year



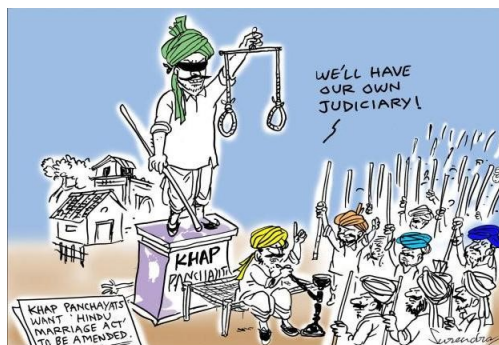
- Over 4,000 sportsmen under the age of 25 will compete with an opportunity to be selected for the national teams.
- The first edition of University games was held in Bhubaneswar last year.
- In the second edition of the games, Yogasana and Mallakhamb have been added.
- Chief Minister BS Yediyurappa assured all possible support for the games.
- Union Youth Affairs and Sports minister Kiren Rijiju will inaugurate four new sporting facilities at Sports Authority of India, Bengaluru campus today after participating in Fit Bengaluru for Fit India programme along with Member of Parliament Tejaswi Surya.

Herd immunity 'very difficult' to achieve: AIIMS Director Guleria



- AIIMS Director Randeep Guleria said that herd immunity is "very difficult" to achieve and one should not think of it in "practical terms" in India, especially in the times of "variant strains" of COVID-19. He added, "The variant strains and varying immunity with times can lead to a chance where people may have reinfection or get infection again."

Khap Panchayats



- 33 khap panchayat leaders, farmers from UP meet Kejriwal
- Khaps are most prevalent in the Jat Community of Haryana and Western UP.
- A khap is all male organization and its leaders are unelected but based on their social clout.
- A khap can be based on single caste and single gotra; or single caste and multiple gotras or multiple castes and multiple gotras.
- The single-caste-single-gotra khaps are found in areas where a single gotra dominates a sizable geographical area.

- Examples of such Khaps include Dahiya Khap; Huda Khap; Sangwan Khap or Haryana and Balyan Khap of western UP. All these are Khaps of gotras belonging to Jat clans
- The single-caste-multiple-gotra clans are found in areas where several villages are dominated by different gotras of same caste.
- The 24 villages of Meham in Rohtak of Haryana is example of such Khap.
- The multi-caste-multi-gotra khaps are found in areas where some villages are dominated by a particular caste and other areas by other castes.
- The Bawal Khap of Chaurasi in Rewari district of Haryana is example of such Khap.
- A Khap is consisted of 84 villages or 12 Thambas. Each Thamba is a group of seven villages.
- The Sarva Khap is a Khap of Khaps and is the supreme Khap council.

National Road Safety Month 18th January 2021 to 17th February 2021



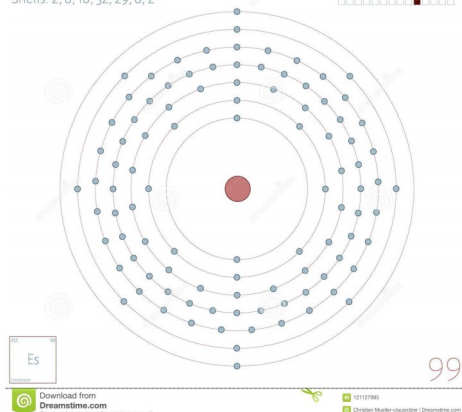
- Every year, more than 1.50 lakhs people lose their lives in our country in road accidents and many more are debilitated.
- This causes immense economic hardship and emotional trauma to their families.
- There is an urgent need to make our roads safer as the loss of lives and limbs cannot be accepted as the price of mobility.
- There is a need for the society at large to take cognizance of the issue and to join hands to make road safety a social movement.
- To give all the stakeholders an opportunity to take part in concerted action for the cause. "Road Safety Week" is observed throughout the country every year in order to highlight and emphasize the need for safe roads.
- It is also an opportunity for all stakeholders to contribute to the cause by taking up activities to promote the concept.
- This year instead of "Road, Safety Week", a month-long campaign "National Road Safety Month" will be observed from 18th January 2021 to 17th February 2021.
- The theme of this year is, "Sadak Suraksha- Jeevan Raksha".

Gauging einsteinium

Einsteinium

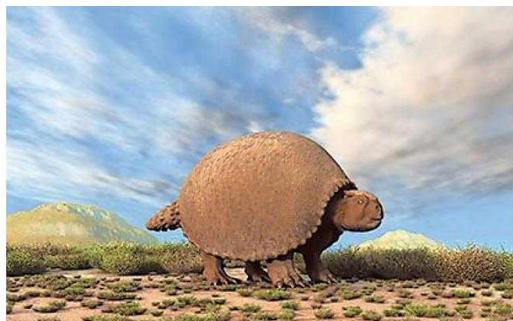
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Shells: 2, 8, 18, 32, 29, 8, 2



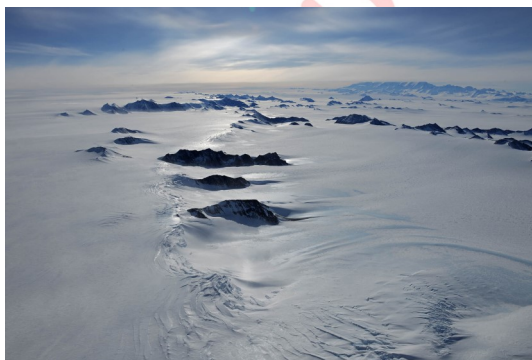
- Despite its being hard and exceptionally radioactive, chemists have studied element 99 – einsteinium – and characterised its properties in the lab.
- Discovered in 1952 from the debris of the atomic bomb, the element has not been studied so far.
- In an article in Nature, chemists using less than 250 nanograms of the element gauged its bond distance.

Mammoth tale



- Climate change and not extensive hunting by humans may have driven the large mammals of North America such as mammoths and glyptodons to extinction, a new study suggests
- Published in Nature Communications, the study used a novel statistical method to deduce that 13,000 years ago the intense lowering of temperatures resulted in their slow decline.

How hospitable are lakes isolated beneath Antarctic ice?



- British scientists have found (Science Advances) that lakes underneath the Antarctic ice sheet could be more hospitable than previously thought, and can host more microbial life.
- Researchers drilled into two small subglacial lakes at the edge of the ice sheet, where water can rapidly flow in or out and found microbial life beneath.
- The lakes being cut off from sunlight, they derive their energy not through photosynthesis but by processing certain chemicals found in sediments on the lake beds.
- Since the sediments are found only on the lake bed, the water mixing is required so that the sediments are evenly distributed.
- While water in surface lakes gets mixed by the action of wind and convection currents due to the sun's heat, the team found that in the lakes beneath the Antarctic, ice mix is due to geothermals — rising from the interior of the Earth and generated by the combination of heat left over from the formation of the planet and the decay of radioactive elements.

An estimate of WASH across healthcare facilities in India



- The status of WASH (water, sanitation and hygiene) in healthcare facilities is an important issue in development.
- They estimate that improving WASH across the public healthcare facilities in India and maintaining this for a year would cost \$354 million (Rs 2567,00,00,000 approximately) in capital costs and \$289 million (Rs 2095,00,00,000 approximately)
- The most costly interventions were providing clean water, linen reprocessing and sanitation while the least expensive were hand hygiene, medical device reprocessing and environmental surface cleaning.
- A 2019 joint global baseline report by WHO and UNICEF had pointed out that globally, one in four healthcare facilities lacked basic water servicing and one in five had no sanitation service and 42% had no hygiene facilities at point of care.
- A WHO document on WASH in healthcare facilities points out that 8,27,000 people in low- and middle-income countries die as a result of inadequate water, sanitation and hygiene each year.
- Also, death of 2,97,000 children under five years can be prevented each year if better WASH could be provided.
- On a positive note, a 2012 WHO report had calculated that for every dollar invested in sanitation, there was \$5.50 to be gained in lower health costs, more productivity and fewer premature deaths.
- It is noteworthy that ensuring availability and sustainable management of water and sanitation to all is one of the 2030 sustainable development goals of the WHO.
- Inadequacies in providing WASH and also lack of infection prevention and control can lead to healthcare associated infections.

Wettest place on Earth sees decreasing trend in rainfall



- A recent study that looked at the rainfall pattern in the past 119 years found a decreasing trend at Cherrapunji and nearby areas.
- The changes in the Indian Ocean temperature have a huge effect on the rainfall in the region.
- There was a reduction in the vegetation area in northeast India in the past two decades, implying that human influence also plays an important role in the changing rainfall patterns.
- The traditional way of cultivation known as Jhum cultivation or shifting cultivation is now decreased and being replaced by other methods.

- Also, previous studies have noted there is sizable deforestation in the region.
- The decrease in vegetation cover and increase in the areas of cropland mainly from the year 2006 onwards
- Since northeast India is mostly hilly and is an extension of the Indo-Gangetic Plains, the region is highly sensitive to changes in regional and global climate.
- Northeast India has the highest vegetation cover in India and includes 18 biodiversity hotspots of the world, indicating the importance of the region in terms of its greenery and climate-change sensitivity.
- We need to conserve the vegetation or forest area, biodiversity parks, the hills and valleys in the northeast. Also, solid water management strategies are inevitable to combat climate-induced changes of water bodies and ground water

Indradhanush 3.0



- Intensified Mission Indradhanush 3.0, (IMI 3.0) to expand immunization coverage across the country.
- It will have two rounds starting from the 22nd of this month and the 22nd of March this year and will be conducted in pre-identified 250 districts and urban areas across 29 States and UTs in the country.
- Both rounds will be for 15 days each. A portal of IMI 3.0 has also been launched besides releasing the Operational Guidelines and the awareness material of the campaign.
- The IMI 3.0 is aimed at reaching the unreached population with all the available vaccines under Universal Immunisation Programme and thereby accelerate the full immunization and complete immunization coverage of children and pregnant women.
- The focus of the Intensified Mission Indradhanush 3.0 will be the children and pregnant women who have missed their vaccine doses during the COVID-19 pandemic.
- They will be identified and vaccinated during the two rounds. Beneficiaries from migration areas and hard to reach areas will be targeted as they may have missed their vaccine doses during COVID19.
- The present campaign will target achieving 90 percent Full Immunization Coverage in all districts of the country and sustain the coverage through immunization system strengthening and foster India's march towards the Sustainable Development Goals.
- Since its first phase, Mission Indradhanush has covered 690 districts and vaccinated 37.64 million children and 9.46 million pregnant women.

Helina and Dhruvastra Missile Systems



- Recently, the Joint User Trials for Helina and Dhruvastra Missile Systems have been carried out from Advanced Light Helicopter (ALH) platform in desert ranges.
- Helina is an Army Version and Dhruvastra is an Air Force Version of Anti-Tank Guided Missiles.
- They have been designed and developed indigenously by Defence Research and Development Organisation (DRDO).
- They are the third generation, Lock on Before Launch (LOBL) fire and forget Anti-Tank Guided Missiles.
- The system has all-weather day and night capability and can defeat battle tanks with conventional armour as well as with explosive reactive armour.
- Helina is ready for induction into the armed forces with the infra-red missile striking 100 per cent success at test-firing trials
- Helina is comparable with the wire-guided HJ-8 or Hongjian-8 system with the People's Liberation Army (PLA) and BARQ laser-guided missile developed by Pakistan.

Advanced Light Helicopter (ALH-DHRUV)

- It is a twin engine, multi-role, multi-mission new generation helicopter in the 5.5 ton weight class.
- The basic Helicopter is produced in skid version and wheeled version. Dhruv is “type –Certified” for Military operations by the Centre for Military Airworthiness Certification (CEMILAC) and civil operations by the Directorate General of Civil Aviation (DGCA).

NAVDEX 21 and IDEX 21



- Indian Naval Ship (INS) Pralaya arrived at Abu Dhabi, UAE to participate in the NAVDEX 21 (Naval Defence Exhibition) and IDEX 21 (International Defence Exhibition), scheduled from 20 to 25 February 2021.
- INS Mysore (an indigenously built guided missile destroyer deployed in the Persian Gulf) is also participating in the exhibition.
- IDEX and NAVDEX, and the International Defence Conference are organised by the Abu Dhabi National Exhibitions Company (ADNEC), in cooperation with the Ministry of Defense and the General Command of the UAE Armed Forces.
- IDEX/NAVDEX takes place biennially. The exhibitions showcase the latest technologies and innovation in the global defence sector, support the growth of UAE's defence industry, and forge new relationships between major international companies.

- IDEX is the only international defence exhibition and conference in the MENA region demonstrating the latest technology across land, sea and air sectors of defence.

Coelacanth



- Palaeontologist discovers ancient, enormous Caelocanth species by accident
- Coelacanths are elusive, deep-sea creatures, living in depths up to 2,300 feet below the surface.
- These were thought to have gone extinct with the dinosaurs 65 million years ago. But its discovery in 1938 started a debate about how this lobe-finned fish fits into the evolution of land animals.
- There are only two known species of coelacanths: one that lives near the Comoros Islands off the east coast of Africa, and one found in the waters off Sulawesi, Indonesia.
- Living Fossil is an organism that has remained unchanged from earlier geologic times and whose close relatives are usually extinct. Other than Coelacanth, Horseshoe crab and ginkgo trees are examples of living fossils.
- However, in their new study, palaeontologists have found that Coelacanths gained 62 new genes through encounters with other species 10 million years ago.
- This suggests that they are actually evolving, albeit slowly.
- IUCN Status is Critically Endangered Sulawesi Coelacanth is listed as 'vulnerable'. CITES Status is Appendix I

Panamkutty Bridge



- Kerala C M opened first route of Water Metro project
- This project connects the islands across the city with the help of state-of-the-art boats. The metro route ranges from Vyttila to Kakkanad. Vyttila is one of the busiest traffic hubs in Kerala while, Kakkanad