

UPSC Daily Current Affairs 19 May 2021

1. Rock art of Sulawesi

(Topic- GS Paper I – Geography + Art and Culture, Source- The Hindu)

Why in the news?

- Researchers have recently reported that Pleistocene-era rock paintings dating back to 45,000-20,000 years ago in cave sites in southern Sulawesi, on the Indonesian island of Sulawesi, are weathering at an alarming rate in his report “**The effects of climate change on the Pleistocene rock art of Sulawesi**”.

Key findings of the study



- The researchers studied flakes of rock that have begun to detach from cave surfaces to find that salts in three of the samples comprise calcium sulphate and sodium chloride, which are known to form crystals on rock surfaces, causing them to break.
- The artwork made with pigments was decaying due to a process known as haloclasty, which is triggered by the growth of salt crystals due to repeated changes in temperature and humidity, caused by alternating wet and dry weather in the region.
- Indonesia has also experienced several natural disasters in recent years, which have quickened the process of deterioration.

Significance of the cave paintings

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- A team of Australian and Indonesian archaeological scientists, conservation specialists, and heritage managers examined 11 caves and rock-shelters in the **Maros-Pangkep region in Sulawesi**.
- The artwork in the area includes what is believed to be the world's oldest hand stencil (almost 40,000 years ago), created by pressing the hand on a cave wall, and spraying wet red-mulberry pigments over it.
- A nearby cave features the world's oldest depiction of an animal, a warty pig painted on the wall 45,500 years ago.
- The cave art of Sulawesi is much older than the prehistoric cave art of Europe.

2. SAMVEDNA Platform

(Topic- GS Paper II–Governance, Source- PIB)

Why in the news?

- Recently, the Ministry of Women and Child Development has called for SAMVEDNA Platform for children affected by COVID-19.

About SAMVEDNA Platform



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- SAMVEDNA is Sensitizing Action on Mental Health Vulnerability through Emotional Development and Necessary Acceptance.
- National Commission for Protection of Child Rights (NCPCR) is providing Tele-Counselling to children with an objective to provide psycho-social mental support for Children affected during COVID 19 Pandemic.
- The tele-counselling is being provided through a network of qualified Experts/Counselors/Psychologists.
- Counsellors have been specially trained by the expert team of NIMHANS to address the needs of children in these difficult times.
- Technical support to this initiative has been provided by National Institute of Mental Health and Neuro-Sciences (NIMHANS) in training of counsellors.
- SAMVEDNA tele counselling service is for psychological support to children to address their stress, anxiety, fear and other issues during the Pandemic.

Tele counselling is provided to the children under three categories:

1. Children who are in Quarantine/isolation/COVID Care centers.
2. Children who have COVID positive parents or family members and near ones.
3. Children who have lost their parents due to Covid-19 Pandemic.

About National Commission for Protection of Child Rights

- It is a statutory body set up in March 2007 under the Commissions for Protection of Child Rights (CPCR) Act, 2005.
- It is under the administrative control of the Ministry of Women and Child Development.
- For the Commission, protection of all children in the 0 to 18 years age group is of equal importance.

Mandate

- To ensure that all laws, policies, programmes and administrative mechanisms are in consonance with the child rights perspective as enshrined in the Constitution of India and also the United Nations Convention on the Rights of the Child, 1989.

Powers

- It monitors the implementation of Protection of Children from Sexual Offences (POCSO) Act, 2012.
- It inquires into complaints and takes **suo moto** notice of matters related to:
 - a. It can inquire into complaints about violation of the law and can summon individual, demand evidence, seek a magisterial enquiry.
 - b. Deprivation and violation of child rights.
 - c. Non implementation of laws providing for protection and development of children.
 - d. Non compliance of policy decisions, guidelines or instructions aimed at mitigating hardships to and ensuring welfare of the children and to provide relief to such children or take up the issues arising out of such matters with appropriate authorities

About NIMHANS

- The National Institute of Mental Health and Neuro-Sciences is a premier medical institution located in Bengaluru, India.
- It is an Institute of National Importance operates autonomously **under the Ministry of Health and Family Welfare.**
- Recently a team of neuroscientists from the National Institute of Mental Health and Neuro Sciences (NIMHANS) has developed **Indian Brain Templates (IBT) and a brain atlas.**

Brain Template

- It is a gross representation from various brain images to understand brain functionality in diseased conditions.

Brain Atlas

- It has been developed for five age groups covering late childhood to late adulthood (six to 60 years).

Note:

- **NIMHANS RAAH app** of National Institute of Mental Health and Neuro-Sciences (NIMHANS) provides free information to the public on mental health care professionals and mental healthcare centres.

[3. MyGov launches innovation challenge for creating Indian Language Learning App](#)

(Topic- GS Paper II–Governance, Source- PIB)

Why in the news ?

- Recently, MyGov, the citizen engagement platform of the Government of India, in partnership with Department of Higher Education has launched an Innovation Challenge for creating an **Indian Language Learning App.**
- This Innovation Challenge has been launched to take forward Prime Minister Narendra Modi's vision of celebrating **India's cultural diversity through greater interaction among its constituent parts.**

About the Innovation Challenge

- It has been launched by MyGov to create an app that will enable individuals to learn simple sentences of any Indian language and acquire working knowledge of a language.
- The objective of this challenge is to create an app that will promote regional language literacy, thereby creating greater cultural understanding within the country.

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- The key parameters that will be looked into will include ease of use, simplicity, Graphical User Interface, gamification features, UI, UX and superior content that makes it easy and fun to learn an Indian language.

4. Analysis of the loss of life associated with working long hours

(Topic- GS Paper II–Social Issue, Source- Indian Express)

Why in the news?

- According to the latest estimates by the World Health Organization (WHO) and the International Labour Organization (ILO) published in Environment International, Long working hours led to 7.45 lakh deaths from stroke and ischemic heart disease in 2016, a 29% increase since 2000.
- It is the first global analysis of the loss of life and health associated with working long hours jointly prepared by WHO and ILO.

Key Highlights

- The number of people working long hours is increasing and this trend puts even more people at risk of work-related disability and early death.
- The working long hours is now known to be responsible for about one-third of the total estimated work-related burden of disease.
- It estimated that in 2016, 3.98 lakh people died from stroke and 3.47 lakh from heart disease as a result of having worked at least 55 hours a week.
- It highlights that between 2000 and 2016, the number of deaths from heart disease due to working long hours increased by 42% and from stroke by 19%.
- The study concludes that working 55 or more hours per week is associated with an estimated 35% higher risk of a stroke and a 17% higher risk of dying from ischemic heart disease, compared to working 35-40 hours a week.

Impact of Long Working Hours on Gender

- It highlighted that the work-related disease burden is particularly significant in men (72% of deaths occurred among males), people living in the Western Pacific and South-East Asia regions, and middle-aged or older workers.
- Most of the deaths recorded were among people dying aged 60-79 years, who had worked for 55 hours or more per week between the ages of 45 and 74 years.

5. New naming system for virus variants

(Topic- GS Paper III–Science and Technology, Source- The Hindu)

Why in the news?

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- The World Health Organization (WHO) would unveil a system of naming of coronavirus variants drawn from the way tropical storms are named.
- It will also be easier for the lay public to remember rather than these complicated lineage numbers.

More on the news

- The WHO and health and science agencies across the world, for instance the Indian Council of Medical Research, the United States' Centres for Disease Control and the Public Health England refer to viruses and their variants by formal lineage names, which are a combination of letters and names that point to the relationships between different variants.

Geographical tag

- The virus names and their associated diseases have frequently been named after geographical places where outbreaks were first reported or samples first isolated — such as the West Nile virus or Ebola.
- B.1.1.7 started to be known as the 'U.K. variant' and B.1.351 as the 'South African' variant.
- India's Health Ministry, in the aftermath of B.1.617 that was popularly called the 'Indian variant', issued a press release decrying the media's use of the name.
- The dilemma of having names that don't stigmatise places but also are amenable to popular use has to an extent been solved by the system of naming hurricanes, or tropical cyclones.
- The World Meteorological Organisation leaves it to countries that surround a particular ocean basin to come up with names.

6. Winchcombe meteorite

(Topic- GS Paper III–Science and Technology, Source- Indian Express)

Why in the news ?

- Recently, a piece of the Winchcombe meteorite that touched down in the town of Winchcombe in Gloucestershire in the UK in February 2021 will be displayed at the National History Museum.

Significance of Winchcombe meteorite

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- It dates back to the birth of the solar system nearly 4.5 billion years ago and therefore examining it may offer scientists and researchers clues about the beginning of the solar system and maybe even the Earth.

Different Mission to Study asteroids

- Space agencies have launched specific missions to asteroids to be able to study them.

NASA's OSIRIS-REx mission

- It was launched in 2018 with the aim of reaching asteroid Bennu and getting back a sample from the ancient asteroid.
- The spacecraft is now on its way back to Earth and is bringing with it about 60 grams of the asteroid that will help scientists study the beginnings of the solar system.

Hayabusa2 mission

- Hayabusa 2 is a Japanese mission launched in December 2014 on a six-year mission to study the asteroid Ryugu and to collect samples to bring to Earth for analysis.
- It returned to Earth in December 2020.

Difference between an Asteroid, Comet, Meteoroid, Meteor and Meteorite

- **Asteroid:** A relatively small, inactive, rocky body orbiting the Sun.
- **Comet:** A relatively small, at times active, object whose ices can vaporize in sunlight forming an atmosphere (coma) of dust and gas and, sometimes, a tail of dust and/or gas.

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- **Meteoroid:** A small particle from a comet or asteroid orbiting the Sun.
- **Meteor:** The light phenomena which results when a meteoroid enters the Earth's atmosphere and vaporizes; a shooting star.
- **Meteorite:** A meteoroid that survives its passage through the Earth's atmosphere and lands upon the Earth's surface.

7. Air India begins zeolite cargo flight service

(Topic- GS Paper III–Science and Technology, Source- The Hindu)

Why in the news?

- National carrier Air India has begun the first of its “zeolite cargo flights” with the government of India having commenced the process of importing zeolite from across the world for use in medical oxygen plants.

About Zeolite

- It is also called molecular sieve are microporous crystalline solid of aluminium silicate that have small openings of fixed size to trap large molecules, while allowing small molecules to pass through.
- Atmospheric air contains 78 % nitrogen and about 20 % oxygen and zeolite adsorbs or traps nitrogen onto its surface.

Used for the generation of Oxygen

- Zeolite is used in the Medical Oxygen Plant (MOP) technology, developed by DRDO for on-board oxygen generation on aircraft like Tejas.
- The technology will now be used to generate oxygen for medical purposes to battle the current oxygen shortage brought on by the Covid second wave.

About Medical Oxygen Plant (MOP) technology

- The MOP utilizes Pressure Swing Adsorption (PSA) technique and Molecular Sieve (Zeolite) technology to generate oxygen directly from atmospheric air.
- Medical Oxygen Plant (MOP) technology is capable of generating oxygen with 93±3% concentration which can be directly supplied to hospital beds or can be used to fill medical oxygen cylinders

Significance

- The MOP technology will be useful to provide oxygen supply during the pandemic in hospitals in urban and rural areas.
- The oxygen plant is designed for a capacity of 1,000 litres per minute (LPM), that is, the system can cater to 190 patients and charge 195 cylinders per day.

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- Hospitals will be able to generate on site medical oxygen, in a cost-effective manner with this oxygen plant rather than depending upon sourcing it from other places.

8. Customs (Import of Goods at Concessional Rate of Duty) Amendment Rules, 2021

(Topic- GS Paper III–Economics, Source- AIR)

Why in the news?

- Recently, the Central Board of Indirect Taxes and Customs has introduced changes through the Customs (Import of Goods at Concessional Rate of Duty) Amendment Rules, 2021.
- They change in the existing Customs (Import of Goods at Concessional Rate of Duty) Rules, IGCR 2017 to boost trade facilitation.



Key highlights

- One major change that accommodates the needs of trade and industry is that the imported goods have been **permitted to be sent out for job work**.
- The absence of this facility had earlier constrained the industry especially those in the Micro, Small and Medium Enterprises sector which did not have the complete manufacturing capability in-house.
- The importers who do not have any manufacturing facility can now avail the IGCR, 2017 to import goods at concessional Customs duty and get the final goods manufactured entirely on job work basis.
- However, some sectors such as gold, jewellery, precious stones and metals have been excluded.
- The Ministry also said that another major incentive now provided is to allow those who import capital goods at a concessional Customs duty to clear them in the domestic market on payment of duty and interest, at a depreciated value.
- This was not allowed earlier and manufacturers were stuck with the imported capital goods after having used them as they could not be easily re-exported.

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