

NATIONAL SOCIAL ISSUES- WOMEN, POPULATION, URBANISATION, EMPOWERMENT ETC**Galo Community**

Members of the Galo community in Arunachal Pradesh can recall the name of their ancestor from 20 generations ago i.e. right up to the founder of their clan. This is made possible by their system of naming. Now they have developed a Genealogical website for record-keeping, with some names hyperlinked.

About:

- The Galos belong to the Tani group inhabiting Assam and Arunachal Pradesh, besides Tibet.
- Galos are one of the 26 major communities of Arunachal Pradesh. They dominate West Siang, Lepa Rada and Lower Siang districts in Arunachal Pradesh and have a big population in East Siang, Upper Subansiri and Namsai districts too.
- They trace their common origin to a primeval ancestor, Abotani. But unlike the Mising (Assam), Adi, Apatani, Nyishi and Tagin, the other communities, only the Galos maintain genealogy through given names.
- They have a system of prefixing the second syllable of a father's name to that of a son, who passes on the suffix in his name to his son. thus, they can trace the names of ancestors from the first syllable or prefix of our names.

GEOGRAPHY**Goldschmidtite**

A new, curious mineral has been discovered inside a diamond unearthed from a mine in Koffiefontein, South Africa. It has been described in the journal American Mineralogist.

About:

- The mineral has been named goldschmidtite, after Victor Moritz Goldschmidt, the Norwegian scientist acknowledged as the founder of modern geochemistry.
- Goldschmidtite has an unusual chemical signature for a mineral from Earth's mantle. While the mantle is dominated by elements such as magnesium and iron, goldschmidtite has high concentrations of niobium, potassium and the rare earth elements lanthanum and cerium.
- For potassium and niobium to constitute a major proportion of this mineral, it must have formed under exceptional processes that concentrated these unusual elements.
- It was found as single grain of the mineral in the diamond. it is described as dark green and opaque.

Salar De Uyuni

Bolivia, among the poorest countries in South America, sits on one of the world's largest lithium reserves, beneath the vast Salar de Uyuni salt flat.

About:

- Beneath Salar de Uyuni, the world's largest salt flat, lies one of the world's greatest lithium deposits – around 17 percent of the global total.
- Bolivia, one of South America's poorest countries, envisions a road to prosperity by harvesting this resource on an industrial scale from underground salt water brines.
- Enticed by lithium prices more than doubling in recent years, as demand for electric vehicles and smart devices (powered by lithium-ion batteries) escalates, Bolivia sees an opportunity.

Salar de Uyuni

- Salar de Uyuni (or Salar de Tunupa) is the world's largest salt flat, at 10,582 square kilometers.
- It is in Bolivia, near the crest of the Andes.
- The Salar was formed as a result of transformations between several prehistoric lakes.

It is covered by a few meters of salt crust, which serves as a source of salt and covers a pool of brine, which is exceptionally rich in lithium. It contains 50% to 70% of the world's known lithium reserves.

Mont Blanc

Part of a glacier on a mountain in the Mont Blanc range is at risk of collapse, prompting Italian authorities to close roads and evacuate Alpine hamlets. Rising global temperatures are causing the melting of mountain glaciers and the retreat of polar ice sheets.

About:

- Mont blanc is also known as White Mountain in French.
- It rises 4,808 m above sea level and is the highest mountain in the Alps and the highest in the European Union.

- The mountain stands in a range called the Graian Alps, between the regions of Aosta Valley, Italy, and Savoie and Haute-Savoie, France. The border between Italy and France passes through the summit of Mont Blanc, making it both French and Italian.

INTERNATIONAL AFFAIRS- BILATERAL, GROUPINGS, ORGANISATIONS

Petronet LNG Limited

During PM Modi's visit to the United States, a MoU, instead of an actual agreement, was signed for the \$2.5 billion investment planned by Indian PSU Petronet in American LNG company Tellurian's Driftwood LNG terminal.

About:

- Petronet LNG Limited, was formed as a Joint Venture by the Government of India to import LNG and set up LNG terminals in the country.
- It involves India's leading oil and natural gas industry players with its promoters being GAIL, ONGC, IOCL and BPCL.
- It has set up the country's first LNG receiving and regasification terminal at Dahej, Gujarat, and another terminal at Kochi, Kerala.
- Headquarters: New Delhi.
- In September 2019, PetroNet signed an MoU with United States-based Tellurian Inc to purchase a stake in the latter's Driftwood project in Louisiana and to import 5 million tonnes of LNG annually. The deal is expected to be finalized by 31 March 2020.

Portamento

An MIT student has invented a novel algorithm that produces a portamento effect between any two audio signals in real-time.

About:

- In music, "portamento" is a term that's been used for hundreds of years, referring to the effect of gliding a note at one pitch into a note of a lower or higher pitch.
- But only instruments that can continuously vary in pitch — such as the human voice, string instruments, and trombones — can pull off the effect.
- Now an MIT student has invented a novel algorithm that produces a portamento effect between any two audio signals in real-time. His paper describing the algorithm won the "best student paper" award at the recent International Conference on Digital Audio Effects.
- The algorithm relies on "optimal transport," a geometry-based framework that determines the most efficient ways to move objects — or data points — between multiple origin and destination configurations. Formulated in the 1700s, the framework has been applied to supply chains, fluid dynamics, image alignment, 3-D modeling, computer graphics, and more.

G5 Sahel

UN Secretary-General Antonio Guterres warned that al Qaeda and Islamic State have strengthened their foothold across the Sahel region this year. The G5 Sahel task force launched to combat the insurgents has been perennially underfunded.

About:

- G5 Sahel task force is a five-nation anti-terror force in the Sahel region of West Africa.
- G5 Sahel initiative is led by Former colonial power France. France is fighting against jihadists in West Africa with its 4,000-strong regional Barkhane force, but is keen for the countries affected to take on more responsibility.
- Headquarters: Nouakchott, Mauritania.

Sahel

- The Sahel Belt is a semi-arid tropical savanna ecoregion in Africa, which forms the transitional zone between the Sahara Desert to the north and the more humid savanna belt to the south.
- The Sahel stretches from the Atlantic Ocean on the west, eastward through northern Senegal, southern Mauritania, the great bend of the Niger River in Mali, Burkina Faso, southern Niger, north-eastern Nigeria, south-central Chad, and through the nation of Sudan to the Red Sea coast.

INDIAN ECONOMY

Government bans export of Onions

In the light of increasing prices, the GOI prohibited onion exports and imposed limits on the stocks that can be held to prevent hoarding. The buffer stocks are maintained through National Agricultural Cooperative Marketing Federation of India (NAFED) and supplies are sent to states at regulated prices using these stocks

About NAFED

- NAFED was set up in 1958 under the Multi State Co-operative Societies Act.
- Its objective is to promote Co-operative marketing of agricultural produce to benefit the farmers.
- Agricultural farmers are the main members of NAFED, who have the authority to say in the form of members of the General Body in the working of NAFED.

ENVIRONMENT- CONSERVATION, BIO-DIVERSITY AND ISSUES**IPCC Report On Oceans And Cryosphere**

The Intergovernmental Panel on Climate Change (IPCC) presented the special report on the Ocean and Cryosphere in a Changing Climate Context.

- The latest report, on Ocean and Cryosphere, is the last in a series of three that the IPCC had been asked to produce to assess the impacts of climate change on specific themes.
- The first of these, examining the feasibility of restricting global rise in temperatures to within 1.5°C from pre-industrial times, was submitted in October last year.
- It was followed in August this year by a report on how land systems contribute to and are impacted by climate change.

Key findings of the report:

- The global mean sea level had risen by 16 cm between 1902 and 2015, and that the rate of increase had doubled in the last one decade.
- The sea levels were rising because of thermal expansion of ocean waters due to rising temperatures as well as due to melting of glaciers and polar ice.
- Between 2006 and 2015, the Greenland ice sheet lost ice-mass at an average rate of 278 billion tonnes every year, while the Antarctic ice sheet lost a mass of 155 billion tonnes on an average every year.
- Snow over areas outside of these two regions, like the glaciers in the Himalayas, together lost an average of 220 billion tonnes of ice every year.
- The cryosphere is an all-encompassing term for those portions of Earth's surface where water is in solid form, including sea ice, lake ice, river ice, snow cover, glaciers, ice caps, ice sheets, and frozen ground (which includes permafrost).

UN Climate Action Summit, New York

Governments and private sector leaders have unveiled initiatives aimed at reducing planet-warming emissions at the UN Climate Action Summit in New York.

Key pledges made:

- The Climate Investment Platform was officially announced. It will seek to directly mobilize US\$ 1 trillion in clean energy investment by 2025 in 20 Least Developed Countries in its first year.
- The “Three Percent Club”, a coalition of countries and businesses will work to drive a three percent annual global increase in energy efficiency.
- The Cool Coalition will set ambitious national cooling targets for its members with the potential to avoid 1 degree of warming by 2050.
- 65 countries and major sub-national economies such as California committed to cut greenhouse gas emissions to net zero by 2050.
- France announced that it would not enter into any trade agreement with countries that have policies counter to the Paris Agreement.
- India pledged to increase renewable energy capacity to 175gw by 2022 and committed to further increasing to 450GW, and announced that 80 countries have joined the International Solar Alliance.
- Russia announced that they will ratify the Paris Agreement, bringing the total number of countries that have joined the Agreement to 187.

QUOTE OF THE DAY

Always do your best. What you plant now, you will harvest late.

DAILY ANSWER WRITING PRACTICE

Qns. While there are ongoing efforts to reduce greenhouse gas emissions and restrict global warming to below 2°C or even below 1.5°C, there are also efforts to help us live in a world where average global temperatures are rising. Examine.

Ans

Weather patterns are changing, sea levels are rising, weather events are becoming more extreme and greenhouse gas emissions are now at their highest levels in history. An IPCC report has warned on the harmful impacts of rise in temperature beyond 2°C and need to limit it within 1.5°C for better chance of survivability. Climate change mitigation generally involves reductions in human (anthropogenic) emissions of greenhouse gases (GHGs). Adaptation to global warming are actions taken to manage the eventual (or unavoidable) impacts of global warming, e.g., by building dikes in response to sea level rise.

Efforts to reduce emissions

- Adoption of Paris Agreement at the COP21 in Paris in which all countries agreed to work to limit global temperature rise to well below 2 degrees centigrade.
- Increasing the capacity of carbon sinks, e.g., through reforestation to remove greater amounts of carbon dioxide from the atmosphere..
- Switching to low-carbon energy sources, such as renewable and nuclear energy.
- Improving energy efficiency for example by improving the insulation of buildings.
- Another approach to climate change mitigation is geo-engineering
- Reducing sources of the gases (for example, the burning of fossil fuels for electricity, heat or transport) or enhancing the sinks that accumulate and store these gases (such as the oceans, forests and soil).

Significance of Mitigation Measures

- To avoid significant human interference with the climate system and ensure sustainability
- To stabilize greenhouse gas levels in a sufficient time frame
- To allow ecosystems to adapt naturally to climate change
- To ensure that food production is not threatened
- To enable economic development to proceed in a sustainable manner.

Efforts for Adaptation

- Large-scale infrastructure changes: Building flood defenses against sea-level rise and installing water-permeable pavements to better deal with floods and stormwater and improve water storage and use.
- Plan for heat-waves and higher temperatures: Improving the quality of road surfaces to withstand hotter temperatures
- Building global consensus to address the issue of refugee migrations due to climate change.
- Understanding, identifying and moving towards more climate resilient agriculture. Making the most of any potential beneficial opportunities associated with climate change for example, longer growing seasons or increased yields in some regions.
- Behavioural shifts such as individuals using less water, farmers planting different crops and more households and businesses buying flood insurance.

Significance of Adaptation

- Adaptation can help manage the effects of-
- Droughts on land, and flooding at the coasts,
- The loss of marine species due to acidification of the oceans
- The disruption of long-term weather patterns around which the world's agriculture has been shaped
- Can help reduce vulnerability by lowering sensitivity or building adaptive capacity
- Can allow populations to benefit from opportunities of climatic changes, such as growing new crops in areas that were previously unsuitable.

Conclusion- Mitigation addresses the root causes, by reducing greenhouse gas emissions, while adaptation seeks to lower the risks posed by the consequences of climatic changes like sea-level encroachment, more intense extreme weather events or food insecurity. Both the measures are equally important to address the issue of climate change holistically.

DAILY CURRENT AFFAIRS MCQS

1. With reference to G5 SAHEL, consider the following statements:

1. It is a five-nation anti-terror force in the Sahel region of West Africa.
2. The Sahel Belt is a semi-arid tropical savanna ecoregion in Africa, which forms the transitional zone between the Sahara Desert to the north and the more humid savanna belt to the south.

Which of the statements given above is/are correct?

- (a) 1 only
(b) 2 only
(c) **Both 1 and 2**
(d) Neither 1 nor 2

2. With reference to the Salar de Uyuni, consider the following statements:

1. It is the world's largest salt flat located in Brazil.
2. It is covered by a few meters of salt crust, which serves as a source of salt and covers a pool of brine, which is exceptionally rich in lithium.

Which of the statements given above is/are correct?

- (a) 1 only
(b) **2 only**
(c) Both 1 and 2
(d) Neither 1 nor 2

3. With reference to the Key pledges made during UN Climate Action Summit, New York, consider the following statements:

1. The "Three Percent Club", a coalition of countries and businesses will work to drive a three percent annual global increase in energy efficiency.
2. The Cool Coalition will set ambitious national cooling targets for its members with the potential to avoid 1 degree of warming by 2050.

Which of the statements given above is/are correct?

- (a) 1 only
(b) 2 only
(c) **Both 1 and 2**
(d) Neither 1 nor 2

4. Which of the following is a new, curious mineral has been recently discovered inside a diamond unearthed from a mine in Koffiefontein, South Africa?

- (a) **Goldschmidtite**
(b) Abellaite
(c) Tinnunculite
(d) Somersetite

5. What is "portamento", recently seen in news?

- (a) **It is a term that's been used for hundreds of years, referring to the effect of gliding a note at one pitch into a note of a lower or higher pitch.**

- (b) A new element discovered with magnetic properties in chemical element Ruthenium (Ru).

- (c) It is a semiconductor nano crystal which is made of specific materials.

- (d) None of the above

6. With reference to the Intergovernmental Panel on Climate Change (IPCC) report on the Ocean and Cryosphere, consider the following statements:

1. The global mean sea level had risen by 16 cm between 1902 and 2015, and that the rate of increase had doubled in the last one decade.

2. The sea levels were rising because of thermal expansion of ocean waters due to rising temperatures as well as due to melting of glaciers and polar ice.

Which of the statements given above is/are correct?

- (a) 1 only
(b) 2 only
(c) **Both 1 and 2**
(d) Neither 1 nor 2

7. With reference to Petronet LNG Limited, consider the following statements:

1. It was formed as a Joint Venture by the Government of India to import LNG and set up LNG terminals in the country.

2. It has set up the country's first LNG receiving and regasification terminal at Kochi, Kerala.

Which of the statements given above is/are correct?

- (a) **1 only**
(b) 2 only
(c) Both 1 and 2
(d) Neither 1 nor 2

8. Galo community, recently seen in news, belongs to which one of the following states?

- (a) **Arunachal Pradesh**
(b) Odisha
(c) Kerala
(d) Gujarat