

1. Criminal identification bill

Topic: Polity and Governance

In the eye of storm | The Criminal Procedure (Identification) Bill, 2022 would allow the police and prison authorities to store and analyse physical and biological samples, including retina and iris scans of convicts

■ The bill seeks to repeal The Identification of Prisoners Act, 1920, whose scope was limited to recording finger impressions and foot-print impressions of limited category of convicts

■ The new bill expands the scope of "measurements" to include iris, retina, signature, handwriting, biological samples and their analysis

■ The records can be stored for 75 years

■ It also proposes to record the details of persons detained under any preventive detention law. Opposition says this can be mis-used against political adversaries

■ If a person with no criminal background is released without trial or discharged or acquitted by the court, all records of measurements so taken shall be destroyed from the records



In News: Criminal identification bill was cleared in the Lower House of the parliament. New debates on reforming Indian criminal justice system is gaining momentum.

More on the Topic:

- The Criminal Procedure (Identification) Bill, 2022 seeks to update a British-era law to enable police to collect samples of a person's biometric details, such as fingerprints and iris scans, if they have been arrested, detained or placed under preventive detention on charges that attract a jail term of seven years or more.
- The bill makes it mandatory for people to allow collection of finger impressions, palm print impressions, footprint impressions, photographs, iris and retina scans, physical and biological samples and their analysis, behavioural attributes, including signatures and handwriting, among others.
- The draft law also empowers the National Crime Records Bureau (NCRB) to collect, store and preserve these records for 75 years and share it with other agencies. Resistance or refusal to allow the collection of data is an offence.

Concerns:

- **Ambiguous Terms:** The phrase 'biological samples' is not described further, hence, it could involve bodily invasions such as drawing of blood and hair, collection of DNA samples.
- These are acts that currently require the written sanction of a magistrate.
- **Right to Privacy:** The Bill proposes to collect samples even from protestors engaged in political protests. The bill undermines the right to privacy of not only persons convicted of crime but also every ordinary Indian citizen.

- **In Conflict with Article 20(3):** The Bill implied use of force in collection of biological information, could also lead to narco analysis and brain mapping. It may violate Article 20(3), which protects the right against self-incrimination.
- **Data Security:** A cyber attack may leak all the data.
- **Lack of Awareness:** The bill provides that an arrested person (not accused of an offence against a woman or a child) may refuse the taking of samples, not all detainees may know that they can indeed decline to let biological samples be taken.
- And it may be easy for the police to ignore such refusal and later claim that they did get the detainee's consent.

Way Ahead:

- The law enforcement agencies should ensure data protection measures.
- There should be mechanism to ensure consent of the detainee is ensured while collecting samples.
- The need is to have more experts to collect measurements from the scene of crime, more forensic labs, and equipment to analyse them to identify possible accused involved in a criminal case.
- The training of the investigation officers, prosecutors, judicial officers and collaboration with doctors and forensic experts need to be prioritised too.

Source: Indian Express

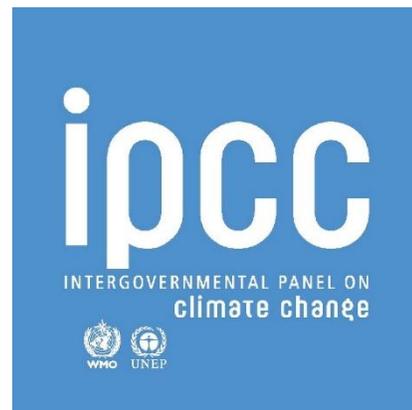
2.The Inter-Governmental Panel on Climate Change (IPCC)

Topic: Environment and Ecology

In News: The Inter-Governmental Panel on Climate Change (IPCC) delivered a dire assessment and warning in its latest report.

More on the Topic:

- The United Nations' climate science body, the Intergovernmental Panel on Climate Change (IPCC) published the third part of its Sixth Assessment Report (AR6).
- The first part of this report, on the physical science of climate change was published in 2021. It had warned that 1.5-degree Celsius warming was likely to be achieved before 2040 itself.



Key Findings:

Greenhouse gas (GHG) emissions were 54 per cent higher in 2019 than they were in 1990, but growth is slowing.

- In 2019, global net anthropogenic GHG emissions were at 59 gigatonnes of carbon dioxide equivalent (GtCO₂e), 54 per cent higher than in 1990.

- **Net emissions refer to emissions accounted for after deducting emissions soaked up by the world's forests and oceans.**
- Anthropogenic emissions refer to emissions that originate from human-driven activities like the burning of coal for energy or cutting of forests.
- This emissions growth has been driven mainly by CO₂ emissions from the burning of fossil fuels and the industrial sector, as well as methane emissions.

Least developed countries emitted only 3.3 per cent of global emissions in 2019. This indicates Carbon inequality.

- LDCs contributed **less than 0.4 per cent of total historical CO₂ emissions** from fossil fuels and industry in the period 1850-2019.
- Globally, 41 per cent of the world's population lived in countries emitting less than 3 tCO₂e per capita in 2019.

Pledges to the Paris Agreement are insufficient, emissions must fall 43 per cent by 2030 compared to 2019:

- The CO₂ emissions from existing and planned fossil fuel infrastructure — coal, oil, and gas — contribute greatly to this projected failure.
- In its best-case scenario, known as the **C1 pathway**, the IPCC outlines what the world needs to do to limit temperatures to 1.5°C, with limited or no '**overshoot**'.
- Overshoot refers to global temperatures crossing the 1.5°C threshold temporarily, but then being brought back down using technologies that suck CO₂ out of the atmosphere.

Abundant and affordable solutions exist across sectors including energy, buildings, and transport, as well as individual behavioural changes.

- Widespread 'system transformations' are required across the energy, buildings, transport, land and other sectors, to achieve the 1.5°C target and this will involve adopting low-emission or zero carbon pathways of development in each sector. But solutions are available at affordable costs.
- The costs of low emissions technologies have fallen continuously since 2010.

The impact on GDP would be negligible and the long-term benefits of cutting emissions immediately would outweigh the initial costs.

- In fact, the long-term benefits of limiting warming far outweigh the costs.
- Finance falls short, especially in developing countries, but there is sufficient money in the world to close this gap.

Financial flows fall short of the levels needed to achieve the ambitious mitigation goals:

- However, the gaps are the widest for the agriculture, forestry, and other land uses (AFOLU) sector and for developing countries.
- But the global financial system is large enough and "sufficient global capital and liquidity" exist to close these gaps, according to the IPCC.

About IPCC:

- The IPCC is the United Nations body **for assessing the science related to climate change.** The IPCC was set up in 1988 by the World Meteorological Organisation (WMO) and the UN Environment Programme (UNEP).

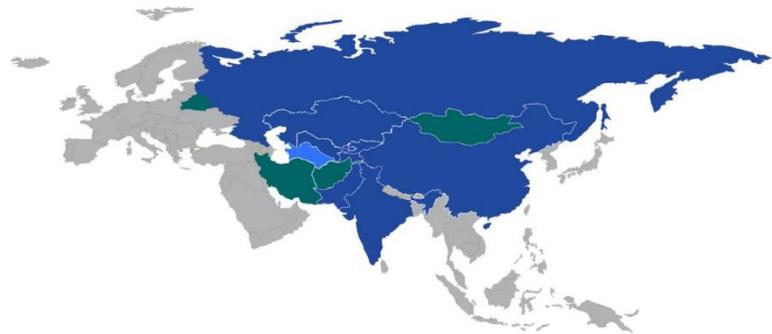
- Its main activity is to prepare **Assessment Reports, special reports, and methodology reports assessing the state of knowledge of climate change.**
- However, **the IPCC does not itself engage in scientific research.** Instead, it asks scientists from around the world to go through all the relevant scientific literature related to climate change and draw up the logical conclusions.

Source: Indian Express

3. Shanghai Cooperation Organization (SCO)

Topic: International Relations

In News: At the virtual meet of SCO India has called for the countries of SCO to join hands to innovate affordable scientific solutions for common challenges like ensuring food, affordable healthcare and energy access for its people.



More on the Topic:

- SCO is a **permanent intergovernmental international organisation.**
- It's a Eurasian political, economic and military organisation aiming to maintain peace, security and stability in the region.
- It was created in 2001.
- The SCO Charter was signed in 2002, and entered into force in 2003.
- It is a statutory document which outlines the organisation's goals and principles, as well as its structure and core activities.
- The SCO's official languages are Russian and Chinese.
- The SCO currently comprises **eight Member States (China, India, Kazakhstan, Kyrgyzstan, Russia, Pakistan, Tajikistan and Uzbekistan).**

Central asian member states of SCO

-  Kazakhstan
-  Kyrgyzstan
-  Tajikistan
-  Uzbekistan

Other member states of SCO

-  China
-  India
-  Pakistan
-  Russia

Observer states of SCO

-  Afghanistan
-  Belarus
-  Iran
-  Mongolia

Source: Indian Express

4. Fortified Rice

Topic: Government Schemes

In News: The Union Cabinet Committee on Economic Affairs approved a scheme to distribute fortified rice under government programmes by 2024.

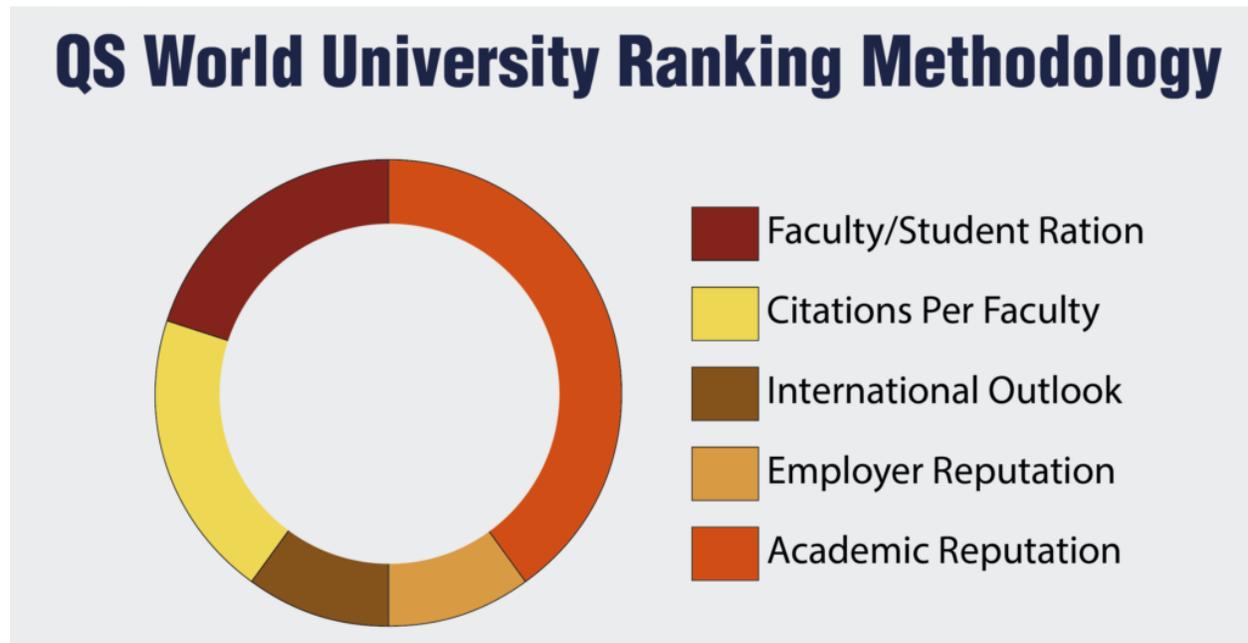
More on the Topic:

- The Food Safety and Standards Authority of India (FSSAI) defines fortification as “deliberately increasing the content of essential micronutrients in a food so as to improve the nutritional quality of food and to provide public health benefit with minimal risk to health”.
- Rice fortification is a process of **adding micronutrients to regular rice**. The micronutrients are added keeping in mind dietary requirements.
- Various technologies are available for rice fortification, such as **coating and dusting**. For rice fortification in India, ‘extrusion’ is considered to be the best technology. This involves the production of fortified rice kernels (FRKs) from a mixture using an extruder machine.
- In the first phase, **fortified rice is being distributed under ICDS and PM Poshan programmes**.
- The second phase will cover targeted public distribution system (TPDS) and other welfare schemes in all aspirational and high-burden stunting districts by March 2023.
- In the final phase, all remaining districts will be covered by March 2024.

Source: Livemint

5. QS World University Ranking

Topic: Reports and Indices



In News: The QS World University Rankings 2022 was released by the Quacquarelli Symonds (QS).

More on the Topic:

- Started in 2004, the **QS World University Rankings** is an annual publication of **university rankings**.
- Featuring 1,300 Universities from around the world, the university rankings of the year 2022 is the largest of the rankings.
- This ranking can be used to easily compare universities by looking at their score which is from 0 to 100.
- In the 2022 ranking, the top rank holders are
- Massachusetts Institute of Technology (MIT), Cambridge, USA,
- University of Oxford, United Kingdom and
- Stanford University, United States.
- IIT-Kharagpur has been ranked 37th in 2022 in mineral and mining engineering and 80th in 2022 in electrical and electronic engineering globally.
- Jadavpur University is the only state university in India which was ranked in the QS World University Rankings in the sphere of arts and humanities, 2022.

Source: PIB

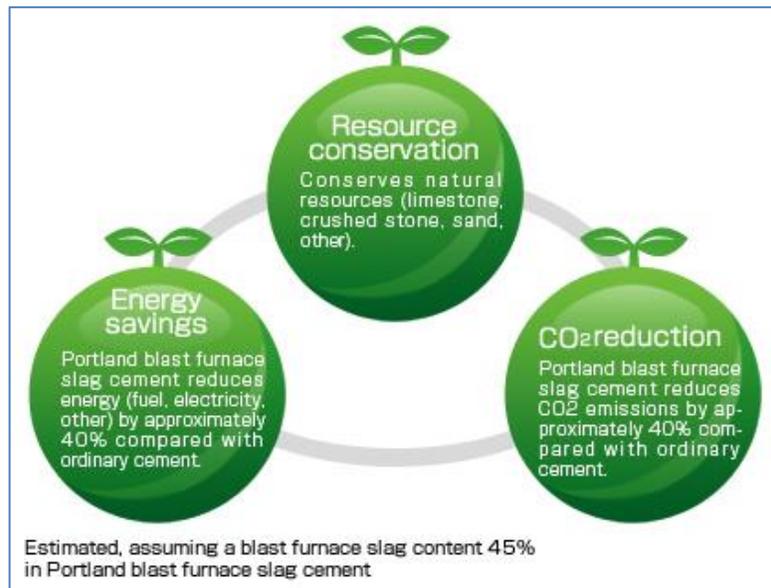
6. Steel Slag Road

Topic: Infrastructure Development

In News: Surat has become the first city in the country to get a processed steel slag (industrial waste) road.

More on the Topic:

- This project falls under the initiative of the Waste to Wealth and Clean India Campaign.
- The slag is generated from a steel furnace burning at around 1,500-1,600 degree centigrade in the form of **molten flux material**



as an impurity. The molten material is poured into the slag pits for cooling as per the customized procedure and further processed to develop stable steel slag aggregates.



- The construction cost of the processed steel slag road is 30 per cent cheaper than roads built from natural aggregates.

Other Uses of Steel Slag:

- Steel slag can be used as **aggregates in concrete to replace natural aggregates**, because it has favorable mechanical properties, and high resistance to abrasion and impact.
- It is used to **treat acidic water**.
- In Agricultural sector, due to its **ability to correct soil acidity**, it is used as silicate fertilizer that is capable of providing silicon to the plants.

Source: PIB
