

### ROAD TO NET-ZERO STATUS

#### Context

- The article discusses the plan outlined by India at the ongoing COP27, to achieve a net-zero emission status by 2070 and the sectors it will focus on.
- It also examines critically the reason that why a key area like agriculture, find no mention in the plan.

#### Background

- **CoP26 declaration:** In the run-up to last year's climate change conference in Glasgow, countries also announced target years for achieving net-zero status.
  - In the case of most developed countries, this is 2050. China has set 2060 as its target year, while India said it would reach there in 2070.
- **Submission:** A year after announcing its intention to achieve a net-zero emission status by 2070, India recently submitted to the United Nations Framework Convention on Climate Change (UNFCCC) its long-term plan to achieve this target, emphasizing climate justice, sustainable lifestyles and equity.
- **Updated goals:** India's updated NDCs (under the Paris Agreement) has broad quantifiable goals as follows:
  - India will reduce the emissions intensity of its GDP by 45% from 2005 levels by the year 2030
  - Achieve about 50% cumulative electric power installed capacity from non-fossil fuel-based energy resources by 2030.
  - Creation of 2.5 to 3 billion tonnes of additional carbon sink through forests (not updated).
- **Funding requirement:** As per India's submitted document, the overall climate finance requirement by 2050 to achieve net zero emissions by 2070 will be around ₹85.6 trillion by 2030 for India's adaptation needs.

#### The scheme

- Under the 2015 Paris Agreement, countries have to prepare and submit two kinds of climate action plans, one for the short term, and another for long-term.

- **Short-term climate action plans:** Also called Nationally Determined Contributions (NDCs), these have to be submitted every five years, with specific actions being taken over 5 or 10-year periods.
  - The NDCs of all countries currently contain the actions they are taking till 2030.
- **Long-term strategies:** Apart from NDCs, the Paris Agreement also asks countries to submit their long-term strategies to reduce emissions.
  - But there is no particular time frame for which these long-term strategies have to be prepared,



but countries may draw out the plans till the middle of the century.

- **No mid-term targets:** There are no mid-term goals or indicative pathways and the document is entirely devoid of any numbers or projections. Most of the 60-odd countries that have submitted their long-term strategies have not offered mid-term targets or pathways.

## Conclusion

- The net-zero status can be achieved only when the emissions are offset either by **absorption** of greenhouse gases by forests or physical removal of these gases through futuristic technologies.
- The balance would have to be offset through various kinds of carbon capture and storage technologies, which, at the moment, seem unviable. This is what all the countries are relying on in their promises to turn net-zero.

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## WORLD @ 8 BILLION, INDIA SET TO BE MOST POPULOUS

### In News:

- The United Nations Population Fund said that the world's population reached 8 billion on November 15, 2022.

- This unprecedented growth is due to the gradual increase in human lifespan owing to improvements in public health, nutrition, personal hygiene and medicine.
- It is also the result of high and persistent levels of fertility in some countries.

## **The United Nations Population Fund (UNFPA)**

- United Nations Population Fund (UNFPA), formerly (1969–87) known as United Nations Fund for Population Activities, is trust fund under the jurisdiction of the United Nations Development Programme (UNDP).
- Established in 1969, the UNFPA is the largest international source of assistance for population programs.
- It is the leading UN organization for the implementation of the 1994 Programme of Action of the International Conference on Population and Development.
- In other words, UNFPA is the United Nations sexual and reproductive health agency.
  - Its mission is to deliver a world where every pregnancy is wanted, every childbirth is safe and every young person's potential is fulfilled.
- **More than half the world's population lives in Asia**
  - As of 2022, more than half the world's population lives in Asia, China and India being the two most populous countries with more than 1.4 billion people each.
    - The World Population Prospects 2022, released in July 2022, put India's population estimate at 1.412 billion this year, compared with China's 1.426 billion.
    - It also said that India is set to become the world's most populous country next year by surpassing China.
- **World population to peak in 2080s**
  - The UNFPA projects world population to peak at 10.4 billion in the 2080s and stay there until the end of the century.
    - As per the current trend, India is likely to peak in 2048 at 1.7 billion population and then start declining to 1.1 billion at the end of the century.
- **International migration is now the driver of growth in many countries**

- According to the UN, international migration is now the driver of growth in many countries, with 281 million people living outside their country of birth in 2020.
- All South Asian nations — India, Pakistan, Nepal, Bangladesh and Sri Lanka — have seen high levels of emigration in recent years.
- **Observations regarding India**
- While India's population growth is stabilising, it is still growing at 0.7% per year and is set to surpass China in 2023 as the world's most populous country.
- It noted that **India's fertility rate has hit 2.1 births per woman** — replacement-level fertility — and is falling.
- Replacement Rate – is the required number of births per woman in a country required to keep the population size stable.
- **We need to address the issue of growing inequality**
- A handful of billionaires control as much wealth as the poorest half of the world.
- The top one per cent globally pockets one fifth of the world's income.
- People in the richest countries can expect to live up to 30 years longer than those in the poorest.
- The UN said that unless we bridge the yawning chasm between the global haves and have-nots, we are setting ourselves up for an 8-billion-strong world filled with tensions and mistrust, crisis and conflict.

## EAST ASIA SUMMIT

Vice President Jagdeep Dhankhar recently addressed the East Asia Summit.



### About:

- Beginning in 2005, 16 participating countries comprised this grouping, with their first meeting in Kuala Lumpur, Malaysia.
- These members were the **10 ASEAN countries, Australia, China, India, Japan, New Zealand, and the Republic of Korea.**
- ASEAN's 10 member countries are **Brunei, Cambodia, Indonesia, Laos, Malaysia, Myanmar, the Philippines, Singapore, Thailand, and Vietnam.**

- The **United States and the Russian Federation** joined at the 6th East Asia Summit in 2011.
- The EAS is an ASEAN initiative and refers to the annual Meeting of Heads of States/Governments of these countries, where they are able to discuss common concerns and interests.
- Its creation was based on the idea of enhancing cooperation among East Asian countries and those in the neighbouring regions.

### **Priority areas of cooperation:**

- **Six priority areas of cooperation were identified** – environment and energy, education, finance, global health issues and pandemic diseases, natural disaster management, and ASEAN Connectivity.
- In the past, the issues of claims over the South China Sea, the United Nations Convention on the Law Of the Sea, terrorism, the actions of North Korea and the conflict situation in Myanmar have been discussed by the countries.

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### **SHABD SHALA**

**The Commission for Scientific and Technical Terminology will soon launch Shabd Shala, a website to invite suggestions for translation of words that are recent additions to the English language.**

### **About:**

- People across India can log onto the ‘Shabd Shala’ website and provide suggestions for possible translations of these words or their most prevalent usages in their respective languages.
- After collating all the suggestions, the Technical Words Selection Committee will zero in on the most popular or appropriate translations for each word, following which a glossary would be brought out in all the respective languages.
- The committee, to be constituted in consultation with the Education Ministry, will comprise of subject experts in science and technology, and experts in linguistics and the Sanskrit language.

**The Commission for Scientific and Technical Terminology:**



- It was established on October 01, 1961 in pursuance of a Presidential Order dated April 27, 1960.
- Presently, CSTT is functioning under Department of Higher Education, Ministry of Education, Government of India with its headquarters at New Delhi.
- The main objective is to evolve standard terminology, propagate its use, and distribute it widely.
- The commission is mandated to collaborate with State governments, universities, regional textbook Boards, and State ‘Granth Academies’, which are nodal bodies in-charge of providing translations of English textbooks in local languages for institutions of higher education.
- Eighteen States were mandated to have Granth Academies.

## ARTEMIS 1

**The National Aeronautics and Space Administration (NASA) of the United States is set to launch the Artemis-1 mission, which will take humans back to the Moon.**



### **About:**

### **Objective:**

- It is only a lunar Orbiter mission even though, unlike most Orbiter missions, it has a return-to-Earth target — it is intended to lay the foundations for more complex and ambitious missions.
- The CubeSats it will carry are equipped with instruments meant for specific investigations and experiments, including searching for water in all forms and for hydrogen that can be utilised as a source of energy.
- Biology experiments will be carried out, and the impact of deep space atmosphere on humans will be investigated through the effect on dummy ‘passengers’ on board Orion.
- The Space Launch System (SLS) rocket, the most powerful ever built, will also be on test for its potential for more ambitious missions in the future.

### **Importance:**

- It’s been a half century since the six Apollo human Moon landings between 1969 and 1972.

- Since then, spacecraft have travelled beyond the solar system, exploratory missions have probed Mars, Jupiter, and Saturn, more than 500 astronauts have made return trips to space, and permanent space labs have been set up.
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## INDIA HAS TO INVEST \$55 BILLION P.A. IN URBAN INFRA TO MEET NEEDS OF GROWING POPULATION: WORLD BANK REPORT

### **In News:**

- According to a new World Bank report, India would need to invest \$840 billion in urban infrastructure over the next 15 years (an average of \$55 billion per year) to adequately address the needs of its rapidly rising urban population.
- The report was titled as "Financing India's Infrastructure Needs: Commercial Financing Constraints and Policy Action Prospects".
- It emphasises the urgent need to leverage **additional private investments** to cover rising financial gaps.

### **Highlights of the report:**

- **Urban population:**
  - By 2036, 600 million people or 40% of the population, would be living in urban areas.
  - This is projected to place **extra strain on India's already overburdened urban infrastructure** and services, with increased demand for clean drinking water, reliable power supply, efficient and safe road transportation, etc.
- **Financing of urban projects:**
  - Currently, the central and state governments fund more than 75% of city infrastructure, with ULBs funding the 15% with their own surplus revenues.
  - Only 5% of Indian cities' infrastructure needs are currently being funded through private sources.
  - A weak regulatory environment and weak revenue collection add to the challenge of cities accessing more private financing.
- **Low revenue:**

- Between 2011 and 2018, urban property tax stood at 0.15% of GDP compared to an average of 0.3-0.6% of GDP for low- and middle-income countries.
- The policy decisions to keep the service charges below those required for cost recovery and financial sustainability contribute to low revenue.
- **Public Private Partnership (PPP):**
- PPP transactions for urban infrastructure in India have seen a significant fall (both in monetary value and transaction volume) over the last decade.
- For example, 124 PPP projects awarded in the urban sector since 2000 worth \$5.5 billion.

## VOSTRO ACCOUNT

The Union Government has recently approved 'vostro' accounts for nine Russian banks to help promote trade in rupees.



### About:

- Russia becomes first country to facilitate rupee-based export-import transactions
- The move will facilitate India's exports to sanction-hit Russia, which reported a 24% decline in the April-August period. The RBI-designed mechanism only entails trade in the Indian rupee, eliminating exchange risks.
- To facilitate trade through this route, the government, through an amendment in the foreign trade policy recently, allowed exporters to avail of incentives or duty rebates for settling trade in rupee terms.

### Nostro account:

- A Nostro account is an account held by a bank in another bank.
- It allows the customers to deposit money in the bank's account in another bank. It is often used if a bank has no branches in a foreign country.
- The main difference between a deposit account and a Nostro account is that the former is held by individual depositors while foreign institutions hold the latter.



## **Vostro account:**

- A Vostro account is just another name for a Nostro account.
  - It is an account held by a bank that allows the customers to deposit money on behalf of another bank.
  - A Nostro account is a Vostro account for the bank that opens the account.
  - If a person deposits money in the Vostro account, it will be transferred to the account holder's bank.
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## **GOOGLE'S 1,000 LANGUAGE AI MODEL**

While many other existing AI language models are deployed for business or research, Google's 1,000 languages initiative aims to improve AI language models as a whole for diverse use cases.



### **About:**

- Google is developing a model that can support the **1,000 most spoken languages of the world.**
- The company claimed this model had the “largest language coverage” among existing speech models.
- Google's plan is to build one gigantic model for the 1,000 languages so that both widely used and rarer languages can co-exist, interact, and grow together.

### **Purpose of the new language model:**

- Google doesn't have a specific use case for the language model.
- However, the end goal is to enable Google users to experience better searches, more accurate auto-generated captions, natural online translation, and faster calculations.
- The project is under development and researchers are now collecting linguistic data to train the model.

### **AI language models:**

- Through AI language models, companies aim to automate manual processes, generate new insights based on existing data, and reduce reliance on human labour in fields like translation, customer service, or computation. For instance, website chatbots etc.

### **Other language models:**

- AI research firm, **OpenAI built the GPT-3 (Generative Pre-trained Transformer 3)** set of models named **Davinci, Curie, Babbage, and Ada** that can generate “natural” text responses and perform tasks like classification, simple summaries, address correction, answering questions, and more.
- **Meta is also working on AI-based language translation.**
- Facebook AI claims the M2M-100 model to be the first multilingual translation model that does not use English as the default language when it translates directly between 100 languages. It is also open source.
  - It is further focusing on AI-based translation for not just text, but primarily oral languages like **Hokkien**.

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## **NATIONAL PRESS DAY**

**The day is observed on 16th November every year to commemorate a free and responsible press.**



### **About:**

- It was on this day that the Press Council of India started functioning as a moral watchdog to ensure that the press maintains high standards and is not fettered by any influence or threats.
- Since the year 1997, the Council has commemorated the day in a significant way through seminars with relevant themes.

### **Press Council of India:**

- The **Press Council of India was first set up in the year 1966** by the Parliament on the recommendations of the First Press Commission.
- **Status:** It is a statutory body functioning under the **Press Council Act, 1978**.

- **Objective:** Preserving the freedom of the press and of maintaining and improving the standards of press in India.
  - **Function:** It is a quasi-judicial authority. It adjudicates the complaints against and by the press for violation of ethics and for violation of the freedom of the press respectively.
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## YUDH ABHYAS

**18th edition of India-US joint military training exercise Yudh Abhyas will begin on November 16, 2022 in Auli, Uttrakhand.**



### **About:**

- The 15-day-long exercise will focus on high altitude and extremely cold climate warfare.
  - Exercise Yudh Abhyas is conducted annually between India and US with the aim of exchanging best practices, Tactics, Techniques and Procedures between the Armies of the two nations.
  - The previous edition of the exercise was conducted at Joint Base Elmendorf Richardson, Alaska (USA) in October 2021.
  - The schedule will include all operations related to peacekeeping and peace enforcement.
  - The troops from both nations will work together to achieve common objectives.
  - The joint exercise will also focus on Humanitarian Assistance and Disaster Relief (HADR) operations.
  - US Army soldiers of 2nd Brigade of the 11th Airborne Division and Indian Army soldiers from the Assam Regiment will be participating in the exercise.
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