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MINISTRY OF SCIENCE AND TECHNOLOGY



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THE HINDU

Page 2

ZIKA VIRUS

(Syllabus: GS Paper 2 – Health)

Five Karnataka villages come under surveillance after Zika virus outbreak

The Hindu Bureau
BENGALURU

The Karnataka Health Department, which is closely monitoring the situation in Chickballapur after a mosquito pool in Thalakayalbetta village of the district was found to be positive for Zika, has sent serum samples of 30 pregnant women from five villages in the containment zone to the National Institute of Virology (NIV), here, for testing.

As many as 888 houses with a population of 4,282 in the containment zone are under intense surveillance, officials said.

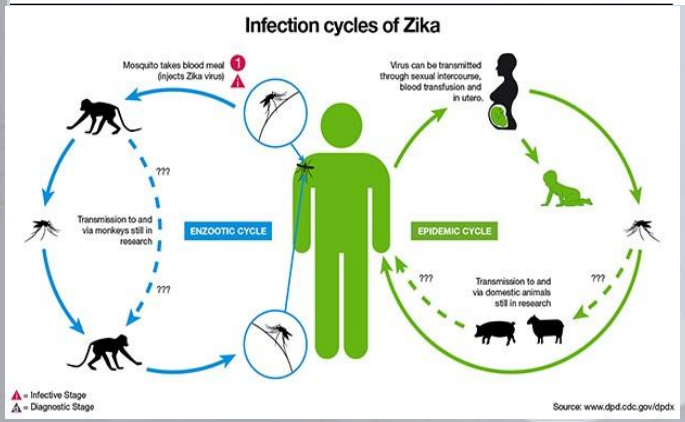
Mosquito samples collected from Thalakayalbetta village in the jurisdiction of Dibburahalli Primary Health Centre (PHC) during routine surveillance were found to be carrying the Zika virus.



Cause for concern: The potential mosquito breeding sites have been noticed in cement tanks and barrels in the containment zone.

On Friday, the department submitted a detailed report on the surveillance measures undertaken to the National Centre for Vector Borne Diseases Control (NCVBDC) under the Union Health Ministry.

State Health Commissioner Randeep D. said reports were expected in a week.



Context: Karnataka has stepped up surveillance after a **mosquito pool in Chickballapur** was found to be **positive for Zika virus.**

Zika Virus

- **About**: The Zika virus is a mosquito-borne flavivirus originally discovered in Uganda in 1947, initially in monkeys.
- **Identification**: It was **identified in humans in 1952**, both in Uganda and the United Republic of Tanzania.
- **Transmission**: It is primarily transmitted by Aedes mosquitoes, primarily the Aedes aegypti species.
  - This mosquito is **also responsible for the** transmission of diseases like **dengue, chikungunya,** and yellow fever.
  - It can also be transmitted **from mother to foetus during pregnancy**, through sexual contact, via the transfusion of blood and blood products, and through organ transplantation.
- **Symptoms**: Fever, rash, conjunctivitis, muscle and joint pain, malaise, or headache. It's important to note that many individuals infected with Zika virus remain asymptomatic and do not develop any symptoms.
  - **Zika virus infection during pregnancy** can have severe consequences, potentially causing infants to be born with microcephaly (abnormally small head size) and other congenital malformations, collectively known as congenital Zika syndrome.
- **Treatment**: Currently, there is no vaccine or specific antiviral medication available for Zika virus.

INDIAN EXPRESS Page 17

AMNESTY SCHEME

(Syllabus: GS Paper 3 - Economy)

FinMin launches amnesty scheme for filing appeals against GST demand orders

PRESS TRUST OF INDIA
NEW DELHI, NOVEMBER 3

THE FINANCE ministry has come out with an amnesty scheme for filing appeals against Goods and Services Tax (GST) demand orders.

The scheme, which will be open till January 31, 2024, will be available for entities that were unable to submit their appeals against orders issued by the tax officer on or before March 31, 2023, according to the Central Board of Indirect Taxes and Customs (CBIC). The CBIC issued a notification with respect to the scheme on Thursday.

So far, the GST law allowed an assessee to file an appeal against an assessment order seeking taxes within three months of the tax officer passing such a demand order. This can be extended by one more month.



The entities willing to avail of the scheme will have to pre-deposit 12.5 per cent of the tax demand. *File*

In its last meeting on October 7, the GST Council had approved this amnesty scheme for filing appeals. The entities willing to avail of the scheme will have to pre-deposit 12.5 per cent of the tax demand, against 10 per cent currently.

The move will facilitate a large number of taxpayers, who could not file an appeal in the past within the specified time period.

AMRG & Associates Senior Partner Rajat Mohan said the scheme would be a lifeline for those who might have missed the appeal deadline due to administrative errors or unforeseen circumstances. This initiative can also promote enhanced compliance among taxpayers.

By offering a fair and lenient approach to appeal filing, it encourages better cooperation with tax authorities and a willingness to resolve disputes or clarify tax matters.

"Additionally, by allowing disputes to be resolved more efficiently, the scheme may reduce the burden on the legal system. This benefits both taxpayers and the tax administration by streamlining the appeal process and potentially reducing the need for prolonged litigation," Mohan added.

Context: The finance ministry recently **introduced an amnesty scheme** for filing appeals against **Goods and Services Tax (GST) demand orders**.

Amnesty Scheme

- **About**: The amnesty scheme **allowing appeals, missed to be filed against jurisdictional** orders due to technical or administrative errors, while requiring a tax demand, strikes a balance between relief to taxpayers and maintaining the integrity of tax collections.
- **This approach can help reduce the burden** of litigation benefiting both taxpayers and tax authorities."
- **Coverage**: Only covers orders passed under sections 73 and 74 of CGST Act

Goods and Services Tax (GST)

- **History**: The idea of a Goods and Services Tax (GST) for India was first mooted during the Prime Ministership of Shri Atal Bihari Vajpayee.
- **Introduced**: The Constitution (122nd Amendment) Bill was introduced in 2014.
- **Effective from**: It was **launched with effect from 1st July 2017.** It is **completely transformed the indirect tax** structure of India.
- **It subsumed**: GST was **born out of subsuming of 17 taxes and 13 cesses** levied by the Central and State governments.
- **New Structure Slab**: 5%, 12%, 18 and 28%.
- **GST Council**: The GST Council is a joint forum of the Centre and the States which makes recommendations to the Union and the States on GST.

PIB Nov 3

NECP & EECP

(Syllabus: GS Paper 2 – Government Schemes)

National Efficient Cooking Programme launched, to promote affordable and energy-efficient induction cookers

Context: Recently, Energy Efficiency Services Limited (EESL), a **joint venture of public sector undertakings (PSU)** under the Ministry of Power have launched NCEP and EEFP.

National Efficient Cooking Programme (NECP)

- **About:** NECP, a **component of the Clean Cooking Scheme**, concentrates on Non-Solar/Electricity-based Induction Cookstoves, aligning with the Go-electric initiative of the Ministry of Power.
- **Ministry**: Ministry for Power and New & Renewable Energy
- **Aim**: To promote affordable and energy-efficient induction cookers
  - NECP introduces induction-based cook-stoves, which deliver a cost advantage of 25-30% compared to traditional cooking methods.
- **Objective**: To deploy 2 million energy-efficient induction cook stoves across India, aiming to reduce the environmental impact of cooking practices and consequently leading to cleaner air and improved health.
- **Partnership**: EESL has partnered with Modern Energy Cooking Services (MECS) for the large-scale deployment.
- This initiative is anticipated to expedite the adoption of modern electric cooking appliances in Indian households.

Energy Efficient Fans Programme (EEFP)

- **Goal** - EESL will distribute 1 crore efficient BLDC fans which was initiated during the G20 Energy Transitions Working Group, 2023.
- **Objectives:** To reduce energy consumption and environmental impact.
  - To enhance consumer comfort while lowering electricity bills, creating a win-win situation for all.

DTE

Nov 3

EL NINO & ITS IMPACTS

(Syllabus: GS Paper 3 – Env and Eco)

El Nino may be drying out the southern hemisphere — here's how that affects the whole planet

Context: A **new study** has shown that the **southern hemisphere has been drying** out more than the **northern hemisphere** over the past two decades (2001-2020).

- The authors suggest the principal cause is the weather phenomenon known as El Nino, which occurs every few years when ocean water in the eastern Pacific is warmer than usual.

Key Point of Study

- The **new analysis reveals a strong decrease** in **water availability in South America**, most of Africa, and central and northwestern Australia.
- However, **some regions such as the southern part** of South America will have more water available.
- **South America includes** the Amazon rainforest, **which is a key regulator for the climate**, as well as a globally important habitat for species and home to many Indigenous communities.
- **Drying of the rainforest would reduce vegetation** and increase the risk of fire. This would be bad news for humans and animals that live in the forest, and has the **potential to release billions of tons of carbon** currently locked into forest vegetation and soils.
- The **experts suggest the principal cause** is the weather **phenomenon known as El Nino**, which occurs every few years when ocean water in the eastern Pacific is warmer than usual.

El Nino

- **About**: It is the name given to the occasional development of warm ocean surface waters along the coast of Ecuador and Peru.
- **Frequency**: El Niño events occur irregularly at intervals of 2–7 years, although the average is about once every 3-4 years.
- **Impact of El Nino across the globe**: El Nino impacts ocean temperatures, the speed and strength of ocean currents, the health of coastal fisheries, and local weather.
  - **South America**: El Niño can bring heavy rainfall to the west coast of South America, particularly in countries like Peru and Ecuador. In the eastern part of South America, including parts of Brazil and Argentina, El Niño is often associated with drier conditions.
  - **Asia**: El Niño tends to bring drier and warmer conditions to parts of Indonesia and Southeast Asia including India.
  - **Africa**: It result in reduced rainfall in eastern and southern Africa, but parts of West Africa may experience increased rainfall and flooding during El Niño events, which can disrupt communities and agriculture.
  - **Pacific Islands**: Many Pacific Island nations experience rising sea levels and increased storm activity during El Niño, which can lead to coastal erosion and damage to infrastructure.

HINDUSTAN TIMES Page 8

KALESHWARAM PROJECT

(Syllabus: GS Paper 3 – Eco – Infra/Agri.)

{ REPORT ON ₹1L-CR T'GANA PROJECT }

Kaleshwaram barrage 'useless': Central team

Srinivasa Rao Apparasu
letters@hindustantimes.com



Panel pointed out lapses in the operation and maintenance of the Kaleshwaram project.

HYDERABAD: A technical experts committee, constituted by the National Dam Safety Authority (NDSA) to inspect damaged portions of the Medigadda barrage of the Kaleshwaram lift irrigation project on the Godavari river in Telangana, has declared the barrage "completely useless" in the present condition, unless it is fully rehabilitated.

The panel pointed out lapses in the operation and maintenance of the ₹1 lakh crore Kaleshwaram project, and sounded a note of caution for the other two barrages – Annaram and Sundilla – saying it may also have to be rehabilitated. The panel, comprising six members and headed by Central Water Commission (CWC) chief engineer Anil Jain, made the recommendations in a report submitted to NDSA on November 1. HT has seen a copy of the report.

The engineering lapses in the project has triggered a political controversy in the poll-bound state, with the Congress and the Bharatiya Janata Party (BJP) accusing the ruling Bharat Rashtra Samithi (BRS) of corruption.

While there was no immediate reaction from the state government or the BRS on the report, party working president and state minister K T Rama Rao on Thursday said the barrage withstood the last five flood seasons. "The contracted agency will bear the cost of any repair," he said.

The sinking of six out of 86 pillars – from the 15th to the 20th – and suspected weakening of the gates of the barrage came to light on October 21, prompting irrigation authorities to empty the reservoir and ban traffic on the road constructed over the barrage. "The barrage under the present condition is rendered useless until fully rehabilitated," the report said.

State Congress chief A Revanth Reddy said half of the barrage is now facing a threat of being demolished because of CM K Chandrashekar Rao's "greed".

Context: The **technical experts committee recently declared** the Medigadda barrage of the **Kaleshwaram lift irrigation project** on the Godavari river in Telangana **"completely useless" in its current state** and recommended full rehabilitation for it to be functional.

Kaleshwaram Lift Irrigation Project

- **About**: It is a multi-purpose irrigation project on the Godavari River in Kaleshwaram, Bhupalpally District, Telangana, India.
- **3 Main Purposes**: Irrigation, Transport, and Power.
- The project starts at the **confluence point of Pranahita River and Godavari River**.
- **Serving Agricultural Needs**: The project is primarily designed to facilitate irrigation and drinking water requirements for approximately 45 lakh acres of land across 20 of Telangana's 31 districts.

Significance of Project

- The Kaleshwaram project **will revolutionize Telangana's agricultural potential**, offering year-round water supply that allows farmers to cultivate multiple crops.
- This **mission draws a large quantity of water** from the KLIS and some quantity from projects on River Krishna.

Godavari River

- **Also Known as**: Dakshin Ganga
- **Source**: Godavari river rises from Trimbakeshwar near Nasik in Maharashtra and flows for a length of about 1465 km before outfalling into the Bay of Bengal.
- **Tributaries**: Pravara, Purna, Manjra, Penganga, Wardha, Wainganga, Pranhita (combined flow of Wainganga, Penganga, Wardha), Indravati, Maner and the Sabri.

INDIA TODAY Nov 3

COPERNICUS SENTINEL-2 MISSION

(Syllabus: GS Paper 3 – Sci and Tech)

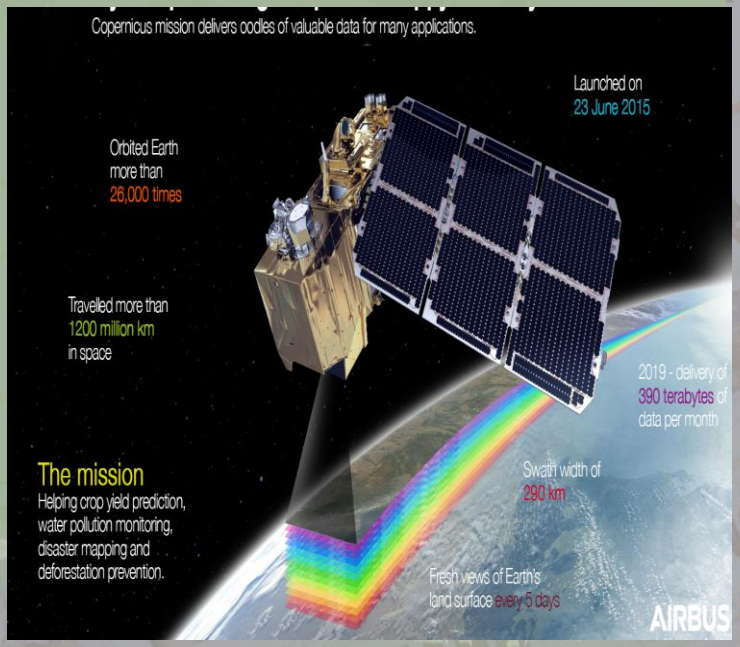
Acid cauldron on Earth: World's largest acidic lake looks spooky from space

Context: The **Copernicus Sentinel-2 mission**, which provides optical images of Earth's surface, recently captured stunning images of **Kawah Ijen Crater Lake**.

Kawah Ijen Crater Lake

- **About**: Kawah Ijen is a volcanic crater lake situated in East Java, Indonesia.
  - It is a component of the larger Ijen volcano complex, which comprises several other craters.
- **Acidic Crater Lake**: This lake holds the distinction of being the largest highly acidic crater lake globally.

- **UNESCO Recognition**: It has earned a place in UNESCO's World Biosphere Reserves.
- **Volcanic Activity in the Ijen Complex**: The Ijen volcano complex remains active, with Kawah Ijen serving as one of the sites where volcanic activity is monitored.
- **Blue Fire**: The volcano emits sulfur gases that can be ignited, creating impressive blue flames, particularly visible at night. These flames are often referred to as **"blue fire."**
- **Sulphur Mining**: The vicinity of Kawah Ijen is renowned for traditional sulfur mining practices.



Copernicus Sentinel-2 Mission

- It is a **European mission with a broad focus** on high-resolution, multi-spectral imaging.
- This **mission involves a pair of polar-orbiting satellites**, both placed in a sun-synchronous orbit, with a 180° phase difference between them.
- **Aim**: To track changes in land surface conditions. Its wide swath width (290 km) and frequent revisit times (10 days at the equator with one satellite and 5 days with 2 satellites under cloud-free conditions, translating to 2-3 days at mid-latitudes) facilitate effective monitoring of Earth's surface alterations.

PIB

Nov 3

COSTA SERENA

(Syllabus: GS Paper 3 – Economy - Tourism)

Shri Sarbananda Sonowal flags off domestic sailing of the first International Cruise Liner in India

Context: Recently, the Union Minister of Ports, Shipping & Waterways and AYUSH, flagged off the maiden voyage of the **vessel Costa Serena**, the first International Cruise Liner in India from Mumbai.

- Such cruise **initiatives are part of 'Dekho Apna Desh'**, an initiative to the middle class to prefer domestic tourism over international tourism.

Dekho Apna Desh

- **Nodal Ministry**: The Ministry of Tourism spearheads the Dekho Apna Desh initiative.
- **Aim**: To enhance tourism in India and encourage people to explore the nation's diverse cultural heritage.
  - Dekho Apna Desh offers **financial support to travelers** who are exploring different parts of India.
  - A **significant budget has been earmarked by the government** to execute the program, with a focus on improving travel experiences and enhancing tourist infrastructure on a national scale.
- **Objectives**: The scheme aims to increase domestic tourism in India and under this plan, around 50 destinations in the country will be developed and promoted to attract tourists.

First International Cruise Line

- **About:** The Costa Serena is a Concordia-class cruise ship owned and operated by Costa Cruises.
- The government's plan involves the development of three new international cruise terminals in Andamans, Puducherry, and Lakshadweep.
- **These terminals are anticipated** to become operational by 2024.
- The government has a vision of increasing the count of cruise ships from 208 in 2023 to 500 in 2030 and possibly up to 1100 by 2047.
- **Aim**: To see the number of passengers grow from 9.5 lakhs in 2030 to 45 lakhs in 2047.
- **Maritime India Vision 2030**: Government envisions to establish India as the premier cruise hub in the Asia Pacific region.

TWO STATE SOLUTION
(Syllabus: GS Paper 2 – IR)



OCTOBER 7 IS A BIG ACT OF TERRORISM, BUT...

There has to be 2-State Solution to Israel-Palestine Issue: EAM

Jaishankar also calls for respecting int'l humanitarian law

DipanjanRoy.Chaudhury
@timesgroup.com

New Delhi: External affairs minister S Jaishankar has said that what happened on October 7 is "a big act of terrorism and we all need to stand up against it but at the same time also stressed the need for a solution to the Palestine issue".

Addressing a joint secretary session of the Senate's External Affairs and Defence Commission in Rome on Thursday, Jaishankar said, "What happened on October 7 is a big act of terrorism and the subsequent happenings after that, have taken the entire region to a different direction... Within this, we have to find a balance between different issues... We all find terrorism unacceptable and we have to stand up against terrorism but there is also an issue of Palestine. There has to be a solution to the problems faced by the Palestinian people."

Reiterating New Delhi's position of a 'two-state' solution in the Israel-Palestine conflict, he said "if you have to find a solution, you have to find it through dialogue and negotiation".

"Our view is that it has to be a two-state solution... You cannot find a solution through conflict and terrorism... We believe that international humanitarian law must be respected by everybody...," he said.

"We all find terrorism unacceptable and we have to stand up against terrorism but... there has to be a solution to the problems faced by the Palestinian people"

S Jaishankar in Rome on Thursday – PTI

CLEAR STAND

"You can't find solution through conflict and terrorism... Given the current situation... we believe that international humanitarian law must be respected"

'REVIVAL OF RETURN OF HISTORY'

Referring to Indo-Italy ties, Jaishankar said, "Italy is surely, I think historically, among our oldest links with Europe.

"And I will come to the connectivity and what, Senator, you call the cotton road, which in many ways is like a revival of return of history. But in recent years, I would say, Italy has also made a very major contribution to strengthening our cooperation with European Union as a whole," he said.

"In recent years, there have also been more conversations between us on connectivity, as I mentioned. And we very much welcome, both Italy and the European Union's greater interest in the Indo-Pacific. For us, your presence there, your activities there, your interest there is a stabilising factor."

'SECURITY & STABILITY IN INTEREST OF EVERYONE'

PM, UAE President Discuss West Asia Situation

NEW DELHI: "Had a good conversation with my brother HH @MohamedBinZayed, President of UAE, on the West Asia situation. We share deep concerns at the terrorism, deteriorating security situation and loss of civilian lives. We agree on the need for early resolution of the security and humanitarian situation and that a durable regional peace, security and stability is in everyone's interest," Prime Minister Narendra Modi posted on X. – DPR

Context: External Affairs Minister of India recently emphasised the **need for a collective stance against the significant act of terrorism** that occurred on October 7, while also underscoring the **importance of finding a solution to the Palestine issue.**

- "It **must be a two-state resolution.** Resolving conflicts and combating terrorism will not lead to a solution. We firmly advocate that everyone **should uphold international humanitarian law,"** stated the Indian External Affairs Minister.

Two-State Solution

- **Israel-Palestine Conflict**: The two-state solution envisions the creation of independent Israel and Palestine, representing the mainstream approach to conflict resolution.
- **1993 Oslo Accords**: The 1993 Oslo Accords were a historic moment as they marked the first formal recognition **between the State of Israel and the Palestine Liberation** Organization (PLO).
  - Both parties **publicly committed to negotiating a solution** to their long-standing conflict, paving the way for further discussions.
- **Israel's Recognition of Palestinian Claims**: The realization of the two-state vision necessitates that Israel abandons its opposition to Palestinian claims for national sovereignty.
- **Palestinian Statehood**: Since the signing of the Oslo Accords, granting statehood to the Palestinians has remained a **fundamental element of any proposal aimed at resolving the conflict**, as it is widely recognized as the internationally endorsed solution.

BUSINESS STANDARD Page 6

QUAD SUMMIT
(Syllabus: GS Paper 2 – IR)

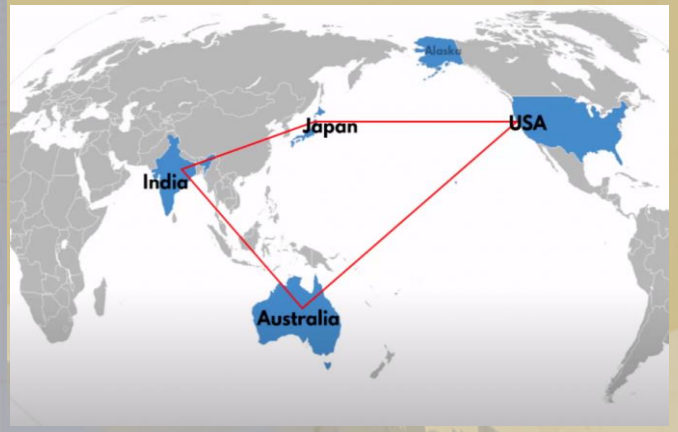
India looks to host Biden, Kishida in Jan Quad summit

The next Quad summit may take place in India around January 27 with New Delhi looking at hosting US President Joe Biden, Japanese Prime Minister Fumio Kishida, and his Australian counterpart Anthony Albanese for the in-person deliberations, people familiar with the matter said on Friday.

India has already invited Biden to be the Chief Guest for the Republic Day celebrations on January 26 and the Quad summit could take place the next day if everything goes according to plan, they said.

India has invited Biden to be the Chief Guest on January 26 and the Quad summit could take place the next day

It is learnt that it could be inconvenient for India and the US if the summit is held after March and New Delhi has conveyed to three other member nations that it would like to host the Quad leaders in the later part of January. Japan and Australia have sent preliminary communication to New Delhi that they are fine with the proposed date for the summit. PTI



Context: The next **Quad summit may take place in India** around January 27 with New Delhi looking at hosting US President Joe Biden, Japanese Prime Minister Fumio Kishida, and his Australian counterpart Anthony Albanese for the in-person deliberations, as it was recently discussed in diplomatic circles.

Quadrilateral Security Dialogue (QUAD)

- **About**: It is also known as the Quadrilateral Security Dialogue or simply the Quad, is a strategic forum.
- **Countries**: United States, Japan, India, and Australia.
- **Aim**: To promote regional security and economic cooperation in the Indo-Pacific region.
- **Origin of QUAD Concept**: It was initially proposed by Japanese Prime Minister Shinzo Abe in 2007. Nevertheless, the initiative faced obstacles as Australia withdrew from it, seemingly influenced by Chinese pressure, which hindered its progress.
- **Last Quad summit Held**: Hiroshima

Objectives of QUAD

- Combating the Covid-19 crisis especially vis-à-vis vaccine diplomacy
- Addressing the risks of climate change
- Creating an ecosystem for investment in the region and
- Boosting technological innovation

DTE Nov 3

ECOLOGICAL THREAT REPORT 2023

(Syllabus: GS Paper 3 – Env and Eco)

Over 2.8 billion people may be pushed into living in areas with severe ecological threats by 2050

Context: The **Ecological Threat Report 2023 revealed** that more than half of the hotspot countries **facing a severe threat are in sub-Saharan Africa**, underscoring the pressing environmental challenges recently identified in the region.

Key Findings of Report 2023

- The **compounding of ecological threats**, such as rapid population growth, water risk, and food insecurity, by climate change is anticipated to lead to mass displacement of people and conflicts.
- A **25% escalation in food insecurity** elevates the risk of conflict by 36%.
    - **Similarly, a 25% surge in the number** of individuals lacking access to clean drinking water increases the probability of conflict by 18%.
- **Presently, 1 billion people** inhabit **42 nations confronting severe food** insecurity.
- Globally, 1 in 4 individuals lack regular access to safe drinking water.
- **By 2050, the number of people residing in countries** facing severe ecological threats is expected to reach 2.8 billion, an increase from the current 1.8 billion.

Ecological Threat Report 2023

- **About**: This is the fourth edition of the Ecological Threat Report (ETR), which analyses ecological threats in 221 independent states and territories.
- **Produced by:** The Institute for Economics & Peace (IEP).
- **Coverage**: 3,594 sub-national areas which account for 99.99 per cent of the world's population. The ETR assesses threats relating to food insecurity, water risk, natural disasters, and demographic pressure.

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