

Prelim Bits 11-10-2021 | UPSC Daily Current Affairs

Ecological Threat Report 2021

The 'Ecological Threat Report (ETR) 2021: Understanding ecological threats, resilience and peace' was released by the Institute of Economics and Peace.

- It assessed the data from sub-national administrative units in 178 countries for threats relating to **food risk, water risk, rapid population growth, temperature anomalies & natural disasters**.
- **Findings** - Of the 178 countries in the ETR,
 - a. 30 were identified as hotspots for having low levels of resilience and a medium to extremely high catastrophic threat score.
 - b. 13 faced extremely high ecological threats and
 - c. 34 others faced high ecological threats.
- The 30 hotspot countries are least likely to be able to mitigate and adapt to new ecological threats, leading to mass displacement.
- The most vulnerable countries are clustered in the Middle East and North Africa, sub-Saharan Africa and South Asia.

Ecological degradation and conflict work in a vicious circle, whereby one degradation of resources leads to conflict and vice versa.

Climate change will have an amplifying effect, causing further ecological degradation and pushing some countries through violent tipping points.

- Of the 15 countries most threatened, 3 are in south Asia. As a region, south Asia is the worst-placed, with water and food risks driving the average ETR score in the region.
- Global food insecurity has increased by 44% since 2014, affecting 30.4% of the world's population in 2020, and is likely to rise further.
- From 1990 to 2020, a total of 10,320 natural disasters occurred globally.
 - Flooding has been the most common natural disasters, accounting for 42% of the total disaster count.
- In 2020, 177 countries and territories recorded a warmer average temperature compared to their historical average temperatures.
- The report recommended a policy to combine health, food, water, refugee relief, finance, agricultural and business development into one integrated agency in high-risk areas and empowering local communities.

Clean, Healthy and Sustainable Environment - A Universal Right

The UN Human Rights Council unanimously voted for recognising a clean, healthy and sustainable environment as a universal human right.

- If formally recognised by all, this right would be the first of its kind in more than 70 years since the Universal Declaration of Human Rights was adopted by the UN General Assembly in 1948.
- The resolution emphasises the rights to life, liberty and security of Environmental Human Rights Defenders (EHRDs).
- This resolution was adopted by a vote of 43 in favour, none against and 4 abstentions.
 - China, **India**, Japan and Russian Federation, abstained from voting on the resolution.

Right to a clean environment was rooted in the 1972 Stockholm Declaration.

Environmental Human Rights Defenders

- EHRDs are the human rights defenders working in environmental matters.
- Environmental defenders across the globe are subject to constant physical attacks, detentions, arrests, legal action and smear campaigns.
- Some 200 environmental defenders have been murdered in 2020 alone.

Geographical Indication Tag

Recently, certain products from Tamil Nadu have received the Geographical Indication (GI) Tags.

GI Product	Geographical Location
Kalamkari Paintings	Karuppur, Tamil Nadu
Wood Carvings	Kallakurichi, Tamil Nadu
Clove	Kanniyakumari, Tamil Nadu

- Documentary evidence shows that Karuppur Kalamkari paintings evolved under the patronage of Nayaka rulers in the early 17th century.
- Wood carving skill evolved as an indigenous art when Madurai was an important town in the ancient times.
- In the course of time, woodcarving craftsmen migrated to other towns, and each of them evolved their own style like Kallakurichi woodcarving.
- To know more about Geographical Indication Tag, click [here](#) and [here](#).

Kanniyakumari Clove

- This clove is being grown in the densely wooded areas of hilly regions of the district and it is known for its rich aromatic oil content.
- The district represents about 73% of the area under clove in Tamil Nadu.

Clove is native to the Moluccas, a chain of small islands that are now part of Indonesia and were formerly known as the Spice Islands.

Of the total production of 1,100 tonnes of cloves in India, Tamil Nadu accounts for 1,000 tonnes, of which over 65% is grown in Kanniyakumari district.

- **Geographical suitability** - The hilly regions of Kanniyakumari district is ideal for clove cultivation, as it benefits from **both the monsoons**.
- **'Sea mist'** comes in and works up the moisture needed for the crop.
- **Black soil** here, rich in organic nutrients, is suitable for clove cultivation. This makes the

cloves grown in the region unique.

- **Oil** - With the highest percentage of volatile oil content present in the clove buds, the crop being grown in the district is much sought-after.
- Furthermore, drying happens naturally at the plantations located at an altitude of 800 metres and having moderate temperature. This means a limited loss of essential oils and an increase in their concentration.
- Flower buds, stalks and fallen leaves are used to prepare essential oils.
- The clove bud and its oils are also used in the medical, pharmaceutical and perfumery industries.
- 'Sea mist' also helps with **eugenol**. The eugenol acetate content in the oil is higher, lending better aroma and flavour to the clove buds.

Eugenol

- One of the major components of clove oil is phenylpropanoids, and eugenol is the reduced version of it.
- Eugenol, also called **clove oil**, is the major constituent [70% to 90%] in the aromatic oil extract from cloves. It is also found in lower concentrations in cinnamon and other aromatic spices.
- Eugenol is a **weak acid** that is used as
 - a. Aromatic oil that is used widely as a flavoring for foods & teas and
 - b. Herbal oil used topically to treat toothache and more rarely to be taken orally to treat gastrointestinal and respiratory complaints.
- But, ingestions of Eugenol in high doses can cause severe liver injury.

Hydroponics

As part of Green Action Week (GAW), observed annually in the first week of October as part of a global campaign to promote sustainable consumption, the Madurai chapter focused on hydroponics.

- Hydroponics is a type of horticulture, a subset of hydroculture and the art of gardening in water without soil.
- [Geoponics is the method of growing plants in normal soil.]
- Hydroponics (Latin word meaning 'working water') involves growing plants without soil, by using nutrient-rich solutions, oxygen, and water.
- **Advantages** -

WHY HYDROPONICS?

Hydroponics is the method of growing plants in a nutrient-rich water-based environment. It comes with many incredible benefits over traditional gardening:



Zero soil



2x growth rate



80% Less water



No weeds



Nutrient efficiency



Fewer pesticides

- **Disadvantages** - Expensive, Vulnerable to power outages and water-borne diseases, Requires constant monitoring and maintenance, Problems affect plants quicker.

Method	Definition
Hydroponics	Art of gardening without soil, in nutrient-rich water
Aquaponics	Integration between fish farming (Aquaculture) and hydroponics
Aeroponics	Art of gardening without soil, where the roots are exposed to the air

Green Action Week Campaign

- It is an initiative of Swedish Society for Nature Conservation.
- It is run by 60 organisations across 40 countries.
- India co-ordinator, CUTS International, is partnering with organisations across 12 States to collectively work to change consumption patterns among people for a sustainable living in the future.

RBI suspends GSAP

The Reserve Bank of India (RBI) was halting its bond buying under the G-Sec Acquisition Programme (GSAP).

- The GSAP, as an Open Market Operation (OMO), had succeeded in the past by ensuring adequate liquidity and stabilising financial markets.
- To know more about the G-Sec Acquisition Programme, click [here](#).

Source: PIB, The Hindu, The Indian Express, Down To Earth

