

Current Affairs search results for tag: Environment

### **1. Improvement in the ground water conditions in 909 assessment units as compared to 2107: Jal Shakti ministry report ( Nov. 9, 2022 )**

Dynamic Ground Water Resource Assessment Report 2022

According to the **Dynamic Ground Water Resource Assessment Report 2022**, there has been an improvement in ground water condition in the **909 assessment units** of the country as compared to the assessment done in 2017.

The Dynamic Ground Water Resource Assessment Report 2022 was released by the Union Jal Shakti minister **Gajendra Singh Shekhawat** on 9 November 2022 at New Delhi. The assessment was carried out jointly by the Central Ground Water Board (CGWB) and with the State and Union Territories.

Such joint exercises between CGWB and the State and Union Territories government were carried out earlier in **1980, 1995, 2004, 2009, 2011, 2013, 2017 and 2020.**

India is the **largest user of groundwater** in the world. Ground water is a major source of drinking water and for irrigation in India.

#### **Highlights of the 2022 report**

- As per the 2022 assessment report, the total annual ground water recharge for the entire country is **437.60 billion cubic meters** (BCM)
- The annual ground water extraction for the entire country is 239.16 BCM.
- Out of the total 7089 assessment units in the country, **1006 units** have been categorized as 'Over-exploited'. ( It means that the rate at which water is extracted exceeds the rate at which the aquifer is able to recharge)
- Analysis indicates improvement in ground water conditions in 909 assessment units in the country compared with 2017 assessment data
- Assessment indicates an **overall increase** in ground water recharge

#### **Reason for increase in ground water recharge**

According to the report following were the reasons for increase in ground water recharge:

- increase in recharge from canal seepage,
- return flow of irrigation water and
- Recharges from water bodies/tanks & water conservation structures.

#### **What is Groundwater?**

Groundwater is freshwater (from rain or melting ice and snow) that soaks into the soil and is stored in the tiny spaces (pores) between rocks and particles of soil.

It is also called subsurface water to distinguish it from surface water, which is found in large bodies like the oceans or lakes or which flows overland in streams.

## **2. Uttar Pradesh government to make Vrindavan -Mathura pilgrimage center carbon neutral by 2041 ( Nov. 9, 2022 )**

Vrindavan -Mathura pilgrimage center carbon neutral by 2041

The Uttar Pradesh government has made an ambitious plan to make the **Vrindavan - Mathura** tourist pilgrimage center carbon neutral by **2041**. This will be the **first tourist center** in India to plan for a carbon neutral status.

The government expects the tourist arrival in the Mathura Vrindavan region to increase from the present 2.3 crore per year to around 6 crore in 2041. To deal with the expected increase in footfall and increase in carbon footprint, the government has made a plan to make the region carbon neutral by 2041,

### **Plan of the government**

- The entire pilgrimage region will be divided into four clusters each containing two of the eight key cities.
- The plan proposes to form small circuits called 'Parikrama Paths' which the pilgrim can undertake either on foot or using electric vehicles.
- To reduce the carbon emission the government intends to ban the use of private tourist vehicles in the entire Braj region
- Only electric public transport will run in the identified region
- All the 252 water bodies and 24 forests in the area will be revived so that they can act as a **carbon sink**.

### **Mathura -Vrindavan region and its significance**

- The city of Mathura and Vrindavan is associated with Lord Krishna's birth and childhood.
- Both the cities are situated along the river **Yamuna**.
- Mathura is mentioned in Ramayana and was one of the capitals of the **Kushan King Kanishka (130AD)**.
- Some of the famous temples of the region are: Govind Dev Temple, Rangaji Temple, Dwarkadhish Temple, Bankey Bihari Temple and the ISKCON Temple.
- Gokul, Barsana and Govardhan are the other townships associated with the legend of Lord Krishna.

### **What is Carbon Neutral and Net Zero?**

Carbon neutral refers to the removal of the same amount of **carbon dioxide** from the atmosphere by various means as the amount of carbon dioxide which is released in the atmosphere leaving a Zero balance or zero carbon.

Net Zero means the removal of the same amount of **Greenhouse gasses** (eg CO<sub>2</sub>, methane, CFC etc. ) from the atmosphere by various means as the amount of Greenhouse gasses which is released in the atmosphere leaving a Zero balance or net Zero.

### **Important to Know**

India has set a target to become zero net emission country **by 2070**.

**Palli panchayat** in Samba district of Jammu is the **first carbon neutral panchayat in India**.

### **3. UN chief calls for a climate solidarity pact between developed and emerging economies ( Nov. 8, 2022 )**

climate solidarity pact

**UN Secretary-General Antonio Guterres** has called for a **climate solidarity pact** in which developed and emerging economies unite around a common strategy and mobilise resources to address the climate crisis.

#### **Important facts**

- At the opening of the COP27 United Nations Climate Summit of the Parties in Egypt on 7 November, he said the proposed treaty would give all countries additional efforts to reduce carbon emissions.
- He said the international financial system must be reformed to support **low-income countries**.
- At the inaugural session of world leaders at COP27, he said all countries should make "**extra effort**" to cut emissions and end the construction of coal plants.
- He said the two largest economies — the **United States and China** — have a particular responsibility to join efforts to make this pact a reality.
- Chinese President **Xi Jinping** did not attend COP27, although China has sent a delegation of negotiators.
- Guterres also launched a plan for a **global early warning system** for extreme weather events, a project that would cost \$3.1 billion over the first five years.
- It will also deliver advance warnings about any extreme weather on the planet such as **storms and heat waves**.
- COP27 is the **27th annual meeting** of the United Nations on Climate. It is taking place in **Sharm El Sheikh** until 18 November.

### **4. World Heritage glaciers to disappear by 2050 : UNESCO ( Nov. 8, 2022 )**

World Heritage glaciers to disappear by 2050

According to new **UNESCO data**, by 2050, **one-third of the World's Heritage Sites of Glaciers** will disappear.

#### **Key points of the UNESCO report**

- The report highlights the accelerated melting of glaciers regardless of efforts to limit temperature rise.
- The report says that it is still possible to save the other two thirds of glaciers, if the rise in global temperatures does not exceed **1.5°C** compared to the pre-industrial period.

- The study, conducted by UNESCO in partnership with the IUCN, shows that these glaciers have been shrinking at an accelerated rate since 2000 due to **CO2 emissions and higher temperatures**.
- Each year, glaciers are currently losing **58 billion tons of ice**.
- This is equivalent to the combined annual water use of France and Spain and is responsible for about **5% of the global sea-level rise**.

### **Reducing Carbon Dioxide Emission**

- The study suggests that the only effective solution to this environmental threat is to reduce **carbon dioxide** emissions as quickly as possible.
- The report calls for a rapid reduction in CO2 emissions to save the glaciers and the biodiversity it supports.
- In addition to reducing carbon emissions, UNESCO also advocated the creation of an **international fund for glacier monitoring and conservation**.

### **Some of the endangered glaciers**

- Kilimanjaro National Park and Mount Kenya (**Africa**)
- Glaciers in Western Tien-Shan (**Kazakhstan, Kyrgyzstan, Uzbekistan**) that have shrunk by 27% since 2000
- The Dolomites (**Italy**) (**Europe**),
- Yellowstone National Park (**North America**).

### **Importance of Glaciers**

- Glaciers are important for survival. Half of humanity is directly or indirectly dependent on glaciers as a water source for domestic use, agriculture and electricity.
- Glaciers are also supporters of biodiversity, which keeps many ecosystems alive.
- Due to the melting of glaciers, people will have to face other challenges including water scarcity, increasing number of disasters, and loss of biodiversity.

## **5. 8 years expected to be warmest from 2015 to 2022: WMO Report ( Nov. 8, 2022 )**

8 years expected to be warmest from 2015 to 2022

The report titled '**WMO Provisional State of the Global Climate 2022**' released at the 27th Conference of Parties to the UNFCCC on 6 November.

### **Key features of the report**

- The global mean temperature in 2022 is projected to be **1.15 °C** above the **pre-industrial (1850-1900) average**, with 2015 to 2022 (eight years) likely to be the warmest on record.
- Report stated that the rate of sea level rise has **doubled since 1993** and has risen by nearly **10 mm** since January 2020 to a new record high this year.
- Concentrations of the main greenhouse gases – **carbon dioxide, methane and nitrous oxide** – hit record levels once again in 2021.
- The annual increase in methane concentrations was the highest on record.
- Flood events occurred at various stages during the monsoon season in India, especially in the Northeast in June.

### **About the report**

- The WMO State of the Global Climate Report is released annually.
- It provides an authoritative voice on the current state of the climate using key climate indicators and reporting on extreme events and their impacts.
- The temperature figures used in the tentatively 2022 report are as of the end of September. Its final version will be released in April next year.

### **World Meteorological Organization (WMO)**

- It is an intergovernmental organisation with a membership of **193 member states and territories**.
- It was established by ratification of the **WMO Convention** on **23 March 1950**.
- The first State of Climate Report was released in 1993.
- Headquartered - **Geneva**
- Its supreme body - **the World Meteorological Congress**

## **6. COP27: First time Compensating poor countries for climate disasters ( Nov. 8, 2022 )**

### **COP27**

The **27th Conference of the Parties 9COP)** to the United Nations Framework Convention on Climate Change (UNFCCC) (COP27) is being held in **Sharm el-Sheikh, Egypt** on 31 October to 13 November 2022.

### **Important facts**

- In this, various countries have agreed to provide financial assistance to poor countries to deal with the loss and damage caused by climate change.
- The participating countries agreed on a **20-point provisional agenda**.

### **What is Loss and Damage?**

- It refers to the economic and non-economic impacts of climate change, including extreme events in countries that are particularly vulnerable to the adverse effects of climate change.
- The demand for loss and damages is quite old, but it has faced strong resistance from rich and developed countries.
- The term was introduced in 1991 as a demand by the island country of Vanuatu, representing the Alliance of Small Island States (AOSIS).

### **What is Conference of Parties (COP)?**

- The United Nations Conference on Environment and Development (**UNCED**), also known as the '**Earth Summit**', was held in Rio de **Janeiro, Brazil**, from 3-14 June 1992.
- The conference focused on the impact of human socio-economic activities on the environment.
- The countries assembled here agreed to work together to deal with issues of sustainable development and climate change .
- The Rio Earth summit agreed to create the United Nation Framework Convention on Climate Change (UNFCCC) where the member countries can discuss issues related to global warming and climate change and take steps to deal with these problems .
- It entered into force on 21 March 1994, and has been ratified by 197 countries and territories .
- The countries which has ratified the UNFCCC are called as Parties
- Every year they meet to discuss climate change related issues . These meetings are called Conference of Parties(COP) .
- The first COP was held in 1995 in Berlin, Germany .

## **7. Union Environment minister Bhupendra Yadav to lead Indian delegation at the COP27 meeting in Egypt ( Nov. 4, 2022 )**

### **COP27 meeting in Egypt**

Union Minister of Environment, Forest and Climate Change, **Bhupender Yadav** will be leading the Indian delegation to attend the 27th Session of Conference of Parties of the UNFCCC (COP 27) scheduled to be held at **Sharm El-Sheikh**, Egypt from 6-18 November,

2022. The last , COP 26 was held in **Glasgow**, United Kingdom from 31 October to 13 November 2021.

The COP 27 conference is being organized by the **Bonn**, Germany based **United Nation Framework Convention on Climate Change (UNFCCC)** with Egypt being the host country.

### **Agenda of the conference**

The COP 27 will focus on delivering action on a number of issues critical to tackling the climate emergency like;

- urgently reducing greenhouse gas emissions,
- building resilience and adapting to the inevitable impacts of climate change, and
- delivering on the commitments to finance climate action in developing countries.

The **theme** of the COP 27 is **Delivering for People and Planet**.

### **What is Conference of Parties (COP)?**

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- The first COP was held in 1995 in Berlin, Germany .
- The next COP 27 will be held in **Sharm el-Sheikh ,Egypt in 2022**.

## **8. India's per capita Greenhouse gas emissions below world average: UNEP ( Oct. 28, 2022 )**

India's per capita Greenhouse gas emissions

According to the [United Nations Environment Programme](#) (UNEP)report “**Emissions Gap Report 2022: The Closing Window**”, India's per capita greenhouse gas emissions were far below the world's average per capita greenhouse emission average (including land use, land-use change, and forestry—LULUCF) of **6.3 tCO<sub>2</sub>e** (tonne carbon dioxide equivalent) in 2020.

The report released on 27 October 2022 said that India's average greenhouse gas emission was **2.4 tCO<sub>2</sub>e** (tonne carbon dioxide equivalent) in 2020.

### **Highest per capita emitter of greenhouse gasses**

The highest per capita emission was of the **United States of America** at 14 tCO<sub>2</sub>e, followed by 13 tCO<sub>2</sub>e in the Russian Federation, 9.7 tCO<sub>2</sub>e in China, about 7.5 tCO<sub>2</sub>e in Brazil and Indonesia, and 7.2 tCO<sub>2</sub>e in the European Union.

India's contribution to historical cumulative CO<sub>2</sub> emissions (excluding LULUCF) is three per cent, whereas the US and the EU have contributed 25 per cent and 17 per cent respectively to total fossil CO<sub>2</sub> emissions from 1850 to 2019.

China contributed 13 per cent, the Russian Federation seven per cent, and Indonesia and Brazil one per cent each. Least developed countries contributed only 0.5 per cent to historical CO<sub>2</sub> fossil fuel .

The report has been released by the UNEP on the eve of the UN Climate Change conference (COP27) in Egypt next month. The report said that the International community is still far off its Paris climate summit 2015 goal of "limiting global temperature rise to below 2 degree Celsius" to the pre industrial level .

However, in absolute terms the largest emitter of greenhouse gasses in the world is **China** followed by the United States of America , India ,Russia and Japan .

### **United Nation Environment Programme (UNEP)**

The United Nations Environment Programme was set up in 1972 after the United Nation Conference on Human Environment was held in Stockholm, Sweden in 1972.

In 1988 it set up Intergovernmental Panel on Climate Change (IPCC) with World Meteorological Organisation

Headquarters : **Nairobi, Kenya**

Director: **Inger Andersen**

## **9. GEAC approves Genetically Modified mustards for field trials ( Oct. 28, 2022 )**

GEAC approves Genetically

The **Genetic Engineering Appraisal Committee (GEAC)**, under the Union Ministry of Environment, Forest and Climate Change has recommended "environmental release (larger field trials)" of a transgenic mustard hybrid.

The regulator has given approval for field trials of GM mustard for four years and is renewable for two years at a time based on compliance reports. However the final decision will be taken by the ministry of environment and forests and climate change.

### **Who has developed the GM mustard seed?**

The GM mustard seed DMH 11 was developed by the Centre for Genetic Manipulation of Crop Plant (CGMCP) of Delhi University.

Patent on indigenously developed GM mustard is jointly held by **National Dairy Development Board** and the **University of Delhi under Deepak Pental**.

If the trial is successful then it will be the **first genetically modified food crop** to be cultivated in India.



## **Genetic Crops in India**

The first transgenic crop to be approved in India was **Bt.Cotton in 2002**, which has led to a massive jump in the production of cotton in India. India is now the largest producer of cotton in the world.

The second crop which was approved for field trial was **Bt. Brinjal** in 2009. However, the decision was later stayed by the then environment minister Jairam Ramesh on grounds of “insufficient scientific evidence about safety”.

## **What is a transgenic crop?**

A transgenic crop is a genetically modified organism (GMO). Here transgenic means that one or more genes of a different unrelated plant or from different species is inserted artificially in a crop using recombinant DNA technology. This is done to introduce desired quality in the crop and improve its productivity.

## **Benefits of GM Crops**

### **Improve crop protection and production**

- One of the objectives for developing plants based on GM organisms is to improve crop protection. It can be used to modify the genes of the crops so as to increase the resistance of plants to specific insects and diseases, thus increasing the production. For example Resistance against insects is achieved by incorporating into the food plant the gene for toxin production from the bacterium *Bacillus thuringiensis* (Bt).
- This helps in reducing the consumption of the insecticides and herbicides saving money for the farmers.
- It can help in creating plants which are more tolerant to cold, frost, or drought. It will make crops grow in harsh climatic conditions and will be extremely helpful in a constantly changing environment.
- It also helps in increasing the production of crops as they grow faster than the traditional crops and also taste better. This will in turn lower the prices of the crop produced.
- Genetically engineered foods are reported to be high in nutrients and contain more minerals and vitamins than those found in traditionally grown foods.
- Genetically engineered foods have an increased shelf life and hence there is less fear of foods getting spoiled quickly.

## **Problems with Transgenic crops**

### **Fear of adverse effect on Human health**

The consumption of transgenic foods is believed to have a harmful effect on the human body as it can cause the development of diseases which are immune to antibiotics.

The long term effect of these foods on human beings is not known.

### **Fear of MNC controlling food production**

The process to develop such transgenic crops needs resources, qualified personnel and technology which is mainly with large multinational corporations. The seeds of the transgenic crops can be used only once. Hence the farmers have to buy the seed again and again from the company which holds the patent of the crop. This makes the farmers and developing countries dependent on the company which can be a serious threat to the food system and economy of the developing countries.

## **Religious and cultural reasons**

Many religious and cultural communities are against such foods because they see it as an unnatural way of producing foods. Many people are also not comfortable with the idea of transferring animal genes into plants and vice versa.

## **Unknown impact on Ecosystem**

The introduction of a new crop in the ecosystem having foreign genes can have unpredictable consequences for the ecosystem. An ecosystem develops symbiotic relationships amongst its organism over a long period of time. Introduction of a new species with foreign genes can disrupt the ecosystem with unpredictable consequences.

Union Minister for Environment ,Forest and Climate Change : **Bhupendra Yadav**

## **10. Thundi and Kadmat beaches receives Blue Beaches certification ( Oct. 26, 2022 )**

Blue Beaches

In a tweet on 26 October 2022, the Union Environment Minister Bhupender Yadav said that **Thundi** and **Kadmat** beaches in Lakshadweep have received the prestigious Blue Flag certification. Now there are **12 Blue beaches** in India.

## **What is Blue Beach?**

The Blue Beach certificate is given by Copenhagen, Denmark based organisation Foundation for Environmental Education (FEE). It is an eco-label given to the cleanest beaches in the world.

The beaches have to meet the about 33 stringent requirements or criteria which includes environmental, educational, access and safety-related criteria.

## **Indian beaches which has been given the certification**

**Puri's Golden Beach** in Odisha is the first Indian as well as Asia's first Blue Flag certified beach.

Other Beaches are **Shivrajpur Beach** (Gujarat), **Kappad Beach** (Kerala), **Ghoghla Beach** (Diu), **Radhanagar Beach** (Andaman and Nicobar), **Kasarkod Beach** (Karnataka), **Padubidri Beach** (Karnataka), **Rushikonda Beach** (Andhra Pradesh), **Kovalam Beach** (Tamil Nadu) and **Eden Beach** (Puducherry).

Last year, the certification was given to **Kovalam** beach in Tamil Nadu and **Eden beach** in Puducherry.