



News Analysis (21 Jun, 2021)

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Nutrient Loss in Wheat & Rice

Why in News

Recently, researchers from various institutes under the **Indian Council of Agricultural Research (ICAR)** and Bidhan Chandra Krishi Viswavidyalaya found **depleting trends in grain density of zinc and iron in rice and wheat** cultivated in India.

The researchers collected seeds of **rice (16 varieties)** and **wheat (18 varieties)** from the gene bank maintained at the **ICAR's Cultivar repositories**.

Indian Council of Agricultural Research

- It is an **autonomous organisation** under the **Department of Agricultural Research and Education (DARE)**, Ministry of Agriculture and Farmers Welfare.
- It is the **apex body for coordinating, guiding and managing research and education in agriculture** including horticulture, fisheries and animal sciences in the entire country.
- It was **established on 16th July 1929** as a registered society under the Societies Registration Act, 1860.
- It is **headquartered at New Delhi**. With **102 ICAR institutes and 71 agricultural universities** spread across the country this is one of the largest national agricultural systems in the world.
- **Cultivar repositories** are nodal institutes that preserve and archive the old cultivars or varieties from our country.

Key Points

- **Observation:**
 - **Concentrations in Rice:**
Zinc and iron concentrations in grains of rice cultivars released within the **1960s were 27.1 mg/kg and 59.8 mg/kg**. This **depleted to 20.6 mg/kg and 43.1 mg/kg, respectively within the 2000s**.
 - **Concentrations in Wheat:**
The concentrations of zinc and iron were **33.3 mg/kg and 57.6 mg/kg in cultivars of the 1960s**, dropped to **23.5 mg/kg and 46.4 mg/kg, respectively in cultivars released during the 2010s**.
- **Reason for the Decrease:**
 - **Dilution effect'** that is caused by **decreased nutrient concentration in response to higher grain yield**.
 - This means the **rate of yield increase is not compensated by the rate of nutrient take-up by the plants**. Also, the soils supporting plants could be low in plant-available nutrients.
- **Suggestions:**
 - Growing **newer-released (1990s and later) cultivars of rice and wheat cannot be a sustainable option** to alleviate zinc and iron malnutrition in Indian population.
Zinc and iron deficiency affects billions of people globally and the countries with this deficiency have diets composed mainly of rice, wheat, corn, and barley.
 - The **negative effects need to be circumvented by improving the grain ionome (that is, nutritional make-up)** while releasing cultivars in future breeding programmes.
 - There is a **need to concentrate on other options like biofortification**, where we breed food crops that are rich in micronutrients.

Biofortification

- **About:**

- **Initiatives Taken by India:**

- Recently, the Prime Minister **dedicated 17 biofortified varieties of 8 crops** to the nation. Some **examples**:
 - **Rice-** CR DHAN 315 has excess zinc.
 - **Wheat-** HI 1633 rich in protein, iron and zinc.
 - **Maize-** Hybrid varieties 1, 2 and 3 are enriched with **lysine and tryptophan**.
- **Madhuban Gajar**, a biofortified carrot variety, is benefitting more than 150 local farmers in Junagadh, Gujarat. It has higher **β-carotene and iron** content.
- ICAR has started **Nutri-Sensitive Agricultural Resources and Innovations (NARI) programme** for promoting family farming linking agriculture to nutrition, **nutri-smart villages** for enhancing nutritional security and **location specific nutrition garden models** are being developed to ensure access to locally available, healthy and diversified diet with adequate macro and micronutrients.
- The production of bio-fortified crop varieties will be upscaled and **linked with government programmes** of **mid-day meal, Anganwadi** etc. to reduce **malnutrition**.

- **Importance of Biofortification:**

- **Improved Health:**

Biofortified staple crops, when consumed regularly, will **generate measurable improvements in human health and nutrition**.

- **Higher Resilience:**

Biofortified crops are also often **more resilient to pests, diseases, higher temperatures, drought** and provide a high yield.

- **Greater Reach:**

Biofortification fills an important gap as **it provides a food-based, sustainable and low-dose alternative to iron supplementation**. It does not require behavior change, **can reach the poorest sections of the society, and supports local farmers**.

- **Cost Effective:**

After the initial investment to develop the biofortified seed, it can be replicated and distributed without any reduction in the micronutrient concentration. This makes it **highly cost-effective and sustainable**.

- **Challenges for Biofortification in India:**

- **Lack of Acceptance:**

Lack of consumer acceptance due to color changes (e.g. golden rice) and **last mile reach of fortified food remains a big challenge**.

- **Cost:**

Adoption by farmers and **cost involved in the process of fortification**.

- **Slow Process:**

Though biofortification can be done using non-genetically-modified methods it is a **slower process than genetic modification**.

Way Forward

- Because of the prevalence of diverse food practices in the country, **biofortification will need to achieve high rates of adoption and consumption** in geographically distinct areas.
- Strategies for delivery of biofortified crops must be **tailored to the local context for each crop–nutrient pair**.
- The **government should facilitate public-private partnerships**. Private sector engagement can leverage technological solutions for scaling up food fortification initiatives, and complement the government’s outreach efforts through mass awareness and education campaigns in communities.
- The lack of nutrition is not only a denial of a fundamental human right, but it is also poor economics. Biofortification is a partial solution, which must **go hand in hand with efforts to reduce poverty, food insecurity, disease, poor sanitation, social and gender inequality**.

Source: TH

Biotech-KISAN Programme

Why in News

The **Ministry of Science and Technology** has issued a **Special Call for the NorthEast Region** as a part of its **Mission Programme “Biotech-Krishi Innovation Science Application Network (Biotech-KISAN)”**.

Key Points

- **About:**
 - It is a **scientist-farmer partnership** scheme **launched in 2017**.
 - It is a **pan-India program**, following a **hub-and-spoke model** and stimulates entrepreneurship and innovation in farmers and empowers women farmers.
 - The **Biotech-KISAN** hubs are expected to fulfil the technology required to generate agriculture and bio-resource related jobs and better livelihood ensuring biotechnological benefits to small and marginal farmers.
 - Farmers are also **exposed to best global farm management and practices**.
- **Ministry:**

This is a farmer-centric scheme developed by and with farmers under the **Department of Biotechnology, Ministry of Science and Technology**.
- **Objective:**

It was **launched for agriculture innovation** with an objective to connect science laboratories with the farmers to find out innovative solutions and technologies to be applied at farm level.

- **Progress:**
 - **146 Biotech-KISAN Hubs** have been established covering all 15 agroclimatic zones and 110 Aspirational Districts in the country.
 - The scheme has benefitted **over two lakhs farmers** so far by increasing their agriculture output and income. **Over 200 entrepreneurs** have also been developed in rural areas.
- **About the Present Call:**
 - The present call specifically focuses on the **North East Region (NER)** as it is predominantly agrarian **with 70% of its workforce** engaged in agriculture and allied sector for livelihood.
 - The region produces **merely 1.5 %** of the country's food grain and continues to be a **net importer of food grains** even for its domestic consumption.
 - The **NER has untapped potential** to enhance the income of the farming population by promotion of location specific crops, horticultural and plantation crops, fisheries and livestock production.
 - The **Biotech-KISAN Hubs in NER** will collaborate with the top scientific institutions across the country as well as State Agricultural Universities (SAUs)/Krishi Vigyan Kendras (KVKs)/existing state agriculture extension services/system in the NER for demonstrations of technologies and training of farmers.

Biotechnology in Agriculture

- **Agricultural Biotechnology:**
 - Agricultural biotechnology is a **range of tools**, including traditional breeding techniques, that **alter living organisms, or parts of organisms**, to make or modify products; improve plants or animals; or develop microorganisms for specific agricultural uses.
 - Modern biotechnology today includes the tools of **genetic engineering**.
- **Examples:**
 - **Genetically Modified Organisms (GMO):** These are plants, bacteria, fungi and animals whose genes have been altered by manipulation. GM plants (Bt Cotton) have been useful in many ways.
 - **Biopesticide: Bacillus thuringiensis** is a naturally occurring soil bacterium that causes disease on insect pests. It is **accepted in organic farming and is considered ideal for pest management** due to its low cost, ease of application, high virulence and narrow host specificity.

- **Benefits:**
 - GMO leads to a number of advantages in the crops which include -there is **less loss after harvest**, the crops **can be modified to have additional nutrients value** for human welfare.
 - The use of some of these crops **can simplify work and improve safety for farmers**. This allows farmers to spend less of their time managing their crops and **more time on other profitable activities**.
- **Disadvantages:**
 - **Antibiotic Resistance:** There is a concern that new **antibiotic-resistant bacteria** could emerge which would be difficult to tackle with conventional antibiotics.
 - **Potential of 'superweeds':** The transgenic plants could pollinate with the unwanted plants (weeds) and thereby relay the gene of herbicide-resistance or pesticide-resistance into them, thereby converting them into '**superweeds**'.
 - **Loss of Biodiversity in Organisms:** The extensive use of agritech varieties of seeds have made some agriculturists fearful as this may hurt the biodiversity of plant species.

The extensive use of GMO varieties is because of the fact that they are more profitable and drought resistant which has made farmers abandon their traditional varieties of plants.

Source: PIB

Gain-of-function Research

Why in News

The **Wuhan Institute of Virology** was said to have conducted **gain-of-function research** on coronaviruses which may possibly have caused the lab-leak origin of the **SARS-CoV-2 (Covid-19 pandemic)**.

Key Points

- **Gain-of-function Research:**

- **About:**

- In virology, gain-of-function research involves **deliberately altering an organism in the lab, altering a gene, or introducing a mutation** in a pathogen to study its transmissibility, virulence and immunogenicity.
 - This is done by **genetically engineering the virus** and by allowing them to grow in different growth mediums, a technique called **serial passage**.

- **Serial Passage** refers to the process of growing bacteria or a virus in iterations. For instance, a virus may be grown in one environment, and then a portion of that virus population can be removed, and put into a new environment.

- **Significance:**

- This would allow researchers to study **potential therapies** and **ways to control the disease** better in future.
 - Gain-of-function studies, which enhance viral yield and immunogenicity (relating to immune response), are **required for vaccine development**.

- **Issues:**

- Gain-of-function research involves manipulations that make certain pathogenic **microbes more deadly or more transmissible**.
 - There is also '**loss-of-function**' research, which involves **inactivating mutations**, resulting in a **significant loss of original function**, or no function to the pathogen.

- When mutations occur, they **alter the structure** of the virus, resulting in **altered functions** which might weaken the virus or enhance its function.

- Gain-of-function research reportedly carry inherent **biosafety and biosecurity risks** and are thus referred to as '**dual-use research of concern**' (**DURC**).

- This indicates that while the research may result in benefits for humanity, there is also the potential to cause harm — accidental or deliberate escape of these altered pathogens from labs may even cause pandemics (Like it is said to be in case of **Covid-19**).

- **Situation in India:**

- All activities related to genetically engineered organisms or cells and hazardous microorganisms and products are regulated as per the "**Manufacture, Use, Import, Export and Storage of Hazardous Microorganisms/Genetically Engineered Organisms or Cells Rules, 1989**".
 - In 2020, the Department of Biotechnology issued guidelines for the establishment of containment facilities, called '**Biosafety labs**'.

- The notification provides operational guidance on the **containment of biohazards and levels of biosafety** that all institutions involved in research, development and handling of these microorganisms must comply with.

- **Debate over Gain-of-function:**

- **Proponents:**

- It makes science and governments **battle-ready for future pandemics**.
- Proponents of gain-of-function research believe that “nature is the ultimate bioterrorist and we need to do all we can to stay one step ahead”.

- **Critic:**

- After the Covid-19 pandemic, more concerns are raised on carrying out such kinds of research.
- This may cause the extinction of the living things or may change their genetic makeup forever.

Way Forward

- The **World Health Organization (WHO)** should lead activities on DURC.
- There should be **responsible use** of life sciences research, focusing on mitigation and prevention of bio-risks and associated ethical issues.
- Develop a **Global Guidance Framework for** countries to follow.
- There is a need to ensure greater transparency about such research.

Source:TH

Strategy to Promote Medical, Rural and MICE Tourism

Why in News

The **Ministry of Tourism** has formulated three **draft strategies with roadmaps** for promoting **Medical and Wellness Tourism**, for **development of Rural Tourism** and for **promotion of MICE Industry** in India.

India has been **ranked 34th** out of 140 countries on the **World Travel and Tourism Competitiveness Index** 2019, released by the **World Economic Forum (WEF)**.

Key Points

- **Medical and Wellness Tourism (MWT):**

- About:

- Describes the rapidly growing practice of **travelling** across international borders **to obtain healthcare services**.
- It may be broadly classified into three categories - Medical Treatment, Wellness & Rejuvenation and Alternative Cures. Now it is often referred to as **Medical Value Travel (MVT)**.

- **Scope in India:**

- **State of the Art Medical Facilities:** Top of the line medical and diagnostic equipment from global international conglomerates are available.
- **Reputed Healthcare Professionals:** Reputation for high-quality medical training and also fluent in English to converse with foreigners.
- **Financial Savings:** The cost of quality of medical procedures and services are low in India.
- **Alternative Cures:** India has a unique advantage of offering **Yoga, Ayurveda & Naturopathy** for treatment.

- **Major Strategy:**

- **“Heal in India” Brand** for promoting India as a MVT destination.
- **Capacity building of MVT facilitator**, enterprises and staff.
- **Setting up of an online MVT Portal** to provide one stop solution to facilitate international patients.
- **Convergence** of Wellness, Hospitality and Travel businesses.

- **Rural Tourism:**
 - **About:**
 - Any form of tourism that showcases the **rural life, art, culture, and heritage at rural locations**, thereby benefiting the local community economically and socially.
 - It offers an opportunity to promote **sustainable and responsible tourism** and fulfill the vision of **Atmanirbhar Bharat**.
 - **Scope in India:**
 - Indian villages have unparalleled **culture, craft, music, dance and heritage** to offer to the visitors.
 - **Well-developed agriculture and farms** to provide stay facilities and experiences.
 - Beautiful **climate conditions and Biodiversity**.
 - India has **coastal, Himalayan, desert, forest and tribal areas** amongst others for tourists.
 - **Major Strategy:**
 - **State Assessment and Ranking** as a tool for Capacity Building (including that of **Panchayati Raj Institutions**).
 - **Enabling Digital Technologies for Rural Tourism** like enabling broadband internet infrastructure to rural areas having tourism potential.
 - Developing **clusters** for rural tourism.
- **MICE (Meetings, Incentives, Conferences and Exhibitions):**
 - **About:**
 - The main purpose is to create a networking **platform for business, industry, government and Academic Community** and engage in meaningful conversations.
 - MICE is also known as ‘Meetings industry’ or ‘Events industry’.
 - **Scope in India:**
 - Core MICE infrastructure amenities are **at par with most developed countries**.
 - India has **consistently improved its rank in World Bank Ease of Doing Business and WEF Travel and Tourism Competitiveness Rank**.
 - Growing Economic Strength of India.
 - India has progressed rapidly in the areas like Information Technology, and Scientific Research.
 - **Major Strategy:**
 - **“Meet in India” Brand** for promoting MICE Industry.
 - Providing **Infrastructure status** for **financing of MICE infrastructure**.
 - **Skill development** for the MICE industry.

Significance

- **Multiplier Effect:** Not only does the tourism sector **provide high-quality jobs**, it also enhances **investment in India, accelerates development**.
- **Push to the Service Sector:** A large number of businesses engaged in the service sector such as airlines, hotels, surface transportation, etc. grows with the growth of the tourism industry.
- **Preservation of National Heritage and Environment and Renewal of Cultural Pride.**
- **Soft Power:** Tourism helps in **promoting cultural diplomacy**, people to people connect and thereby promotes friendship and cooperation between India and other countries.
- **Boost to Other Forms of Tourism:** India has huge potential for related areas such as **Eco-tourism, Nature Reserves, Wildlife tourism, Himalayan tourism**. India has 38 **world heritage sites** that include 30 Cultural properties, 7 Natural properties and 1 mixed site.

Constraints

- **Infrastructure and Connectivity:** Deficiencies in infrastructure and inadequate connectivity hamper tourist visits to some sites.
- **Promotion and Marketing:** Although it has been increasing, online marketing/branding remains limited and campaigns are not coordinated.
- **Tourist information centers** are poorly managed, making it difficult for domestic and foreign tourists to access information with ease.
- **Lack of Skills:** A limited number of multilingual trained guides, and the limited local awareness and understanding of the benefits and responsibilities associated with tourist growth.
- **Others:**
 - There is a perception about India **not being a very hygienic country**. This impacts the choice of India as a medical destination.
 - **Lack of prioritization for rural tourism** at the State and National level.
 - **Lack of focussed approach on MICE** as an industry.

Major Schemes of the Ministry of Tourism

- **Iconic Tourist Sites Initiative**
- **DekhoApnaDesh Campaign**
- **PRASHAD Scheme**
- **Swadesh Darshan Scheme**

Way Forward

- **‘One India One Tourism’ Approach:** Tourism encompasses multiple ministries and takes place in and within many states and thus requires collective efforts and cooperation with centre and other states.

- **Promoting Ease of Tourism:** To truly ensure a seamless tourist transportation experience we need to standardize all interstate road taxes and make them payable at a single point which will facilitate the ease of doing business.

Source:PIB

World Sickle Cell Disease Day 2021

Why in News

To commemorate the **World Sickle Cell Disease (SCD) Day** on **19th June**, the **Ministry of Tribal Affairs (MOTA)** flagged off mobile vans under the **Unmukt project** for strengthening screening and timely management of SCD in tribal districts of Jharkhand and Chhattisgarh.

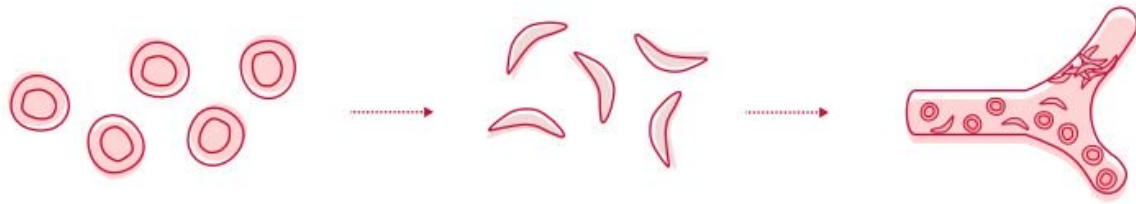
- **The United Nations General Assembly (UNGA)** adopted a resolution recognising SCD as a public health problem on **22th December, 2008**.
- The UNGA also recognised SCD as one of the first **genetic diseases**.

Key Points

Sickle Cell Disease:

- It is **an inherited blood disease** which is most common among people of African, Arabian and Indian origin.
- It is a group of disorders that **affects hemoglobin, the molecule in red blood cells that delivers oxygen** to cells throughout the body.
- People with this disease have atypical hemoglobin molecules called **hemoglobin S, which can distort red blood cells into a sickle**, or crescent shape.
This **blocks blood flow and oxygen from reaching all parts of the body**.

What is Sickle Cell Disease?



SCD is a blood disorder

Sickle Cell Disease (SCD) is an **inherited blood disorder** that affects red blood cells. Normal red blood cells are round and flexible, which lets them travel through small blood vessels to deliver oxygen to all parts of the body.

Causing misshapen blood cells

SCD causes red blood cells to **form into a crescent shape**, like a sickle.

Creating painful complications

The sickle-shaped red blood cells break apart easily, clump together, and stick to the walls of blood vessels, **blocking the flow of blood**, which can cause a range of serious health issues.

- **Symptoms:**

- It can cause **severe pain**, referred to as sickle cell crises.
- Over time, people with sickle cell disorders can experience **damage to organs including the liver, kidney, lungs, heart and spleen**. Death can also result from complications of the disorder.

- **Treatment:**

Medication, blood transfusions and rarely a bone-marrow transplant.

- **Related Data:**

- India alone is home to about **1,50,000 patients with SCD and about 88% of Sickle Cell Anemia (SCA) cases in Asia**.
- The disease in India occurs predominantly in eastern **Gujarat, Maharashtra, Madhya Pradesh, Chhattisgarh, western Odisha** and in pockets of the **Nilgiri Hills in north Tamil Nadu and Kerala**.
- The disease is **prevalent among tribal communities** (including children).
As per MOTA, SCD is affecting more women and children and nearly **20% of tribal children with SCD die before reaching the age of two**, and **30% children die before reaching adulthood**.

- **Challenges:**
 - **Social Stigma and Prevalence among Tribal Population** (where access to care for SCD is limited).
 - **School Drop Out:**
 - Children with sickle cell disease often have to drop out from school.
 - **Policy Issue:**
 - The delayed implementation of the **2018 draft policy on haemoglobinopathies.**
 - The policy aims to provide evidence-based treatment for patients and reduce the number of new-born children with sickle cell disease through initiatives such as the Sickle Cell Anaemia Control Program, screening and prenatal diagnosis.
- **Initiatives by India:**
 - **Initiative by the Ministry of Tribal Affairs:**
 - **SCD Support Corner**, a portal to collect real time data and provide relevant information related to Sickle Cell.
 - It will help in making a **Central Repository of data.**
 - An **'Action Research' project** under which Yoga dependent lifestyle is promoted to reduce the complications in the patient suffering from this disease.
 - **Expanded Screening:**
 - Certain states, such as Chhattisgarh and Gujarat, have **expanded their screening programmes from hospital to school-based screenings.**
 - Extrapolating such screening efforts and implementation strategies to other states will help **map the prevalence of the disease.**
 - **Disability Certificate:**
 - The Ministry of Social Justice and empowerment has increased the validity of disability certificates for SCD patients from **1 year to 3 year.**

Source: PIB

Summer Solstice: 21st June

Why in News

21st June is the **longest day** in the Northern Hemisphere, technically this day is referred to as **Summer solstice**. In **Delhi**, the **day length** is around **14 hours**.

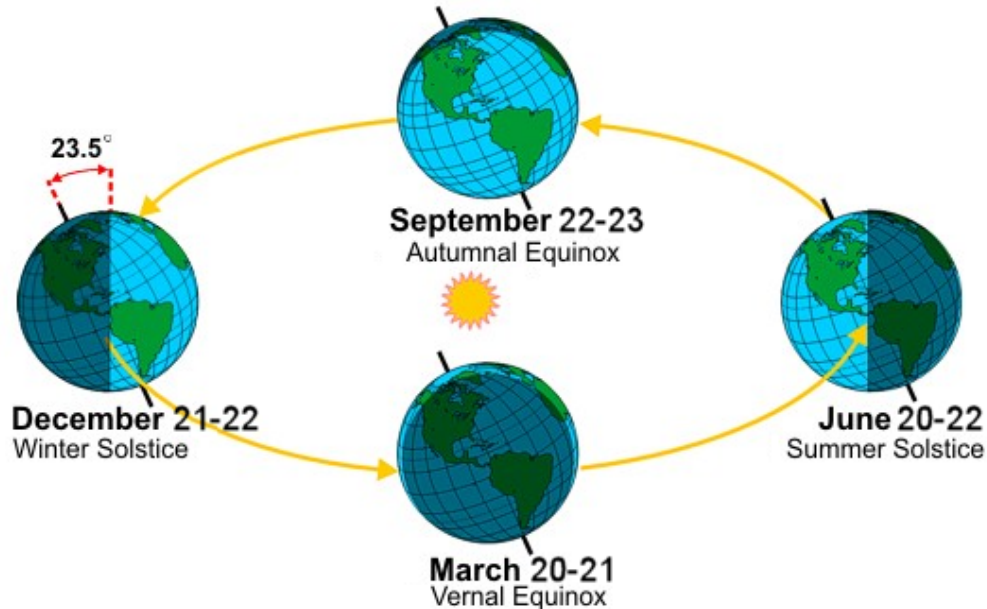
- The amount of light received by a **specific area** in the **Northern Hemisphere** during the summer solstice depends on the **latitudinal location** of the place.
- 21st June is also observed as the **International Yoga Day**.

Key Points

- **Meaning of the Word ‘Solstice’:**

It is a Latin word that means ‘**stalled sun**’. It is a natural phenomenon that **occurs twice every year**, once in the summer and again during winter, in **each hemisphere of the earth - Summer and Winter Solstice**.

- **About Summer Solstice:**



- It is the **longest day and shortest night** of the year in the **Northern Hemisphere**.
- During this, **countries in the Northern Hemisphere are nearest to the Sun** and the **Sun shines overhead on the Tropic of Cancer (23.5° North)**.
 - At latitudes of 23.5° are the Tropics of Cancer and Capricorn, north and south of the Equator.
 - At 66.5° are the Arctic and Antarctic Circles, to the north and south.
 - Latitudes are a measure of a location's distance from the Equator.
- During the solstice, the **Earth's axis — around which the planet spins, completing one turn each day — is tilted in a way that the North Pole is tipped towards the sun** and the South Pole is away from it.
- Typically, this imaginary axis passes right through the middle of the Earth from top to bottom and is always **tilted at 23.5 degrees with respect to the sun**.
- At the **Arctic Circle**, the **sun never sets during the solstice**.

- **Greater Amount of Energy:**
 - This day is characterised by a greater amount of energy received from the sun. According to **NASA (National Aeronautics and Space Administration)**, the amount of incoming energy the Earth received from the sun on this day is 30% higher at the North Pole than at the Equator.
 - The maximum amount of sunlight received by the Northern Hemisphere during this time is usually on June 20, 21 or 22. In contrast, the **Southern Hemisphere receives most sunlight on December 21, 22 or 23** when the northern hemisphere has its longest nights– or the **winter solstice**.
- **Geography Behind:**
 - The **reason behind the changing lengths of the days** is the **Earth's tilt**.
 - The Earth's axis of rotation is tilted at an angle of 23.5° to its orbital plane. This tilt, **combined with factors such as Earth's spin and orbit**, leads to variations in the duration of sunlight, due to which any location on the planet receives different lengths of days.
 - The Northern Hemisphere spends half the year tilted in the direction of the Sun, getting direct sunlight during long summer days. During the other half of the year, it tilts away from the Sun, and the days are shorter.
 - The tilt is **also responsible for the different seasons on Earth**. This phenomenon causes the movement of the Sun from the northern to the southern hemisphere and vice versa bringing in seasonal changes in the year.

The Equinox

- **Twice each year**, during the equinoxes ("equal nights"), Earth's axis is **not pointed toward our Sun, but is perpendicular to the incoming rays**.
- It results in a "nearly" **equal amount of daylight and darkness at all latitudes**.
- The **vernal or spring equinox** occurs in the northern hemisphere on March 20 or 21. September 22 or 23 marks the northern hemisphere **autumnal or fall equinox**.

Source: IE

Black Softshell Turtle

Why in News

Recently, the **Assam forest department** has signed a **Memorandum of Understanding (MoU)** with two **Non-governmental Organizations** (NGOs) and adopted a **Vision Document to raise at least 1,000 black softshell turtles by 2030**.



Key Points

- **About Black Softshell Turtle:**

- **Scientific Name:** Nilssonia nigricans

- **Features:**

They look almost the same as the Indian peacock softshell turtle (*Nilssonia hurum*), which is classified as **Endangered** in the **IUCN Red List**.

- **Habitat:**

- A **freshwater species** and there are 29 species of freshwater turtles and tortoises found in India.
- They are found in **ponds of temples** in **northeastern India and Bangladesh**. Its distribution range also includes the Brahmaputra River and its tributaries.

- **Protection Status:**

- **Threats:**

Consumption of turtle meat and eggs, silt mining, encroachment of wetlands and change in flooding pattern.

- **Sea Turtles of Indian Waters:**

There are five species in Indian waters i.e.

- The **Olive Ridley, Leatherback and Loggerhead** are listed as '**Vulnerable**' on the IUCN Red List of Threatened Species.
- The **Hawksbill turtle** is listed as '**Critically Endangered**' and **Green Turtle** is listed as '**Endangered**' on the IUCN Red List of Threatened Species.

They are protected in **Indian Wildlife Protection Act of 1972**, under **Schedule I**.

- **Turtle Conservation:**

- **National Marine Turtle Action Plan:**

It contains ways and means to not only **promote inter-sectoral action for conservation** but also guide improved coordination amongst the government, civil society and all relevant stakeholders on the response to cases of stranding, entanglement, injury or mortality of marine mammals and also conservation of marine turtles.

- **Indian Ocean Sea Turtle Agreement (IOSEA):**

- India is a signatory to the **Indian Ocean Sea Turtle Agreement (IOSEA)** of the **Convention on Migratory Species (CMS)**, a **United Nations backed initiative**.
- It puts in place a **framework** through which **States of the Indian Ocean and South-East Asian region**, as well as other concerned States, can work together to conserve and replenish depleted **marine turtle populations** for which they share responsibility.

- **KURMA App:**

- It has a built-in digital field guide covering 29 species of freshwater turtles and tortoises of India.
- It was developed by the **Indian Turtle Conservation Action Network (ITCAN)** in collaboration with the **Turtle Survival Alliance-India** and **Wildlife Conservation Society-India**.

- **World Turtle Day** is observed every year on **23rd May**.

Source: TH

7th International Day of Yoga

Why in News

Seventh International Day of Yoga (21st June 2021) is being celebrated by the Ministry of Culture at 75 **cultural heritage** locations across the country.

Key Points

- **Proposed by India:**

- The idea of **International Day of Yoga (IDY)** was **proposed by India** during the opening of the 69th session of the **United Nations General Assembly (UNGA)**, held in 2014.
- The UN proclaimed 21st June as IDY by passing a resolution in December, 2014.
- The **first Yoga Day celebrations in 2015** at Rajpath in New Delhi created **two Guinness World Records**.
 - It was the world's largest yoga session with 35,985 people.
 - 84 nationalities participated in it.

- **About Yoga:**

- Yoga is an ancient physical, mental and spiritual practice that **originated in India**.
- The word '**yoga**' is **derived from Sanskrit** and means to join or to unite, symbolizing the union of body and consciousness.
- Today it is practiced in various forms around the world and continues to grow in popularity.
- Yoga plays an important role in the **psycho-social care and rehabilitation of Covid-19 patients** in quarantine and isolation.
- The **World Health Organisation (WHO)** has also asked its member states to practice Yoga and has included it in its **Global Action Plan for physical activity 2018-30**.

- **IDY - 2021:**

- This year's theme is "**Yoga for wellness**".
- The extensive drive (Yoga at 75 cultural heritage) has been titled "**Yoga, An Indian Heritage**", and is part of India's "**Azadi ka Amrit Mahotsav**" campaign.

Some places in the list of 75 sites are the **Agra Fort** in Uttar Pradesh, **Shanti Stupa** in Ladakh, **Ellora Caves** in Maharashtra and Nalanda in Bihar, **Rajiv Lochan Temple**, Raipur, **Sabarmati Ashram** in Gujarat, and **Akhnoor Fort in Jammu**.
- The Prime Minister announced the **M-Yoga App** which will help in achieving '**One World One Health**'.
 - The app is a work of collaboration between the World Health Organisation (WHO) and the Ministry of Ayurveda, Yoga & Naturopathy, Unani, Siddha and Homoeopathy (**Ministry of AYUSH**), Government of India.
 - In the M-Yoga App, there will be **yoga training videos and audio sessions** in different languages for people across the world which will play a 'great role' in **expanding yoga across the globe**.
 - The app is currently available in **English, Hindi and French**. It will be available in **other UN languages in the upcoming months**.

- **Other Initiatives by India:**

- The **Ministry of AYUSH** in its '**Common Yoga Protocol**' has listed Yama, Niyama, Asana, etc. among **popular yoga 'sadhanas'**.

- The **Beauty & Wellness Sector Skill Council (B&WSSC)** has **vocational education courses** in Yoga for CBSE schools.

B&WSSC is established as a non-profit organization under the aegis of **National Skill Development Corporation**, Ministry of Skill Development and Entrepreneurship.

- Thousands of candidates have been trained as **yoga instructors and trainers** through various skilling initiatives like the **Pradhan Mantri Kaushal Vikas Yojana (PMKVY)**.

PMKVY is the flagship scheme of the Ministry of Skill Development and Entrepreneurship.

- Yoga is also a **part of the Fit India Movement**.

Fit India Movement is a nation-wide campaign that aims at encouraging people to include physical activities and sports in their everyday lives.

Source: IE
