

NEWS TODAY

INDIA TAKES ITS FIRST STEP TO INTRODUCE CONTROLLED HUMAN INFECTION STUDIES (CHIS)

- Indian Council of Medical Research's (ICMR) Bioethics Unit has introduced a consensus policy statement on **ethical conduct of CHIS in India**.
 - It aims to **address ethical issues of CHIS** so that research can be conducted without compromising on ethical principles while ensuring protection of human participants.
- CHIS refers to the research methodology that involves **intentionally exposing healthy human volunteers to a specific pathogen or infectious agent under controlled conditions**.
 - This is done for **developing models of infection**, understanding **host-pathogen interactions and/or testing vaccines and therapeutics**.
- **Need for CHIS in India:** Infectious disease contributes about 30% of disease burden in the country. So, CHIS can help in
 - **Advancing the scientific understanding of infectious diseases.**
 - **Accelerating** the development of **treatment strategies, diagnostic** methods etc.
 - Accurate observations and **early vaccine development**.
 - Development of **effective public health strategies**.
- **Ethical concerns associated with CHIS**
 - **Deliberate exposure** to pathogens contravening "Do no Harm" medical code.
 - **Long term health consequences**, third party infections or environmental risks.
 - Selection of **vulnerable participants** through inducement or coercion.
 - **Disproportionate payment** for participation.

FISHERS' ORGANIZATIONS ASK MINISTRY OF COMMERCE & INDUSTRY NOT TO RATIFY WTO PACT ON FISHERIES SUBSIDIES

- Agreement on Fisheries Subsidies was **concluded at 12th Ministerial Conference of WTO in Geneva in 2022** and it is now being ratified by members individually.
 - Agreement will **operationalize after ratification by two-thirds of WTO members**.
- **Key highlights of Agreement**
 - **Prohibits subsidies** for **Illegal, Unreported and Unregulated (IUU) fishing, overfished stocks and fishing on unregulated high seas**.
 - **No prohibition on providing subsidies** regarding overfished stocks as long as such subsidies are implemented to **rebuild stock to a biologically sustainable level**.
- **Issues raised by the fishers' organizations**
 - Comparison between nations should be done on **per fisher subsidies rather than total subsidies** provided by countries.
 - India gives a subsidy of **only \$15 per fisherman per year**, while Denmark and Sweden provide around \$42,000 and \$65,000 respectively.
 - **Special and Differential Treatment provisions** allow developing countries and LDCs a **two-year transition period** for overfishing subsidy prohibition, while **India requested at least 25-year exemption**.
 - Those nations that provided **huge subsidies in past** should **take more obligations** to prohibit subsidies.

MINISTRY OF DEFENCE (MoD) SEEKS TO BRING CANTONMENTS UNDER MUNICIPAL LAWS OF STATES

- Government has decided to consider excising civil areas of certain Cantonments and merging them with neighbouring local municipalities.
 - Under this, **civilian areas will be carved out of Military stations (areas) of cantonment.**
- **Cantonments** are notified under the **Cantonments Act, 1924** (succeeded by the **Cantonments Act, 2006**). Urban Self Governance of the Cantonments is part of the Union list (Schedule VII).
 - Currently, there are **61 Cantonments in the country.**
 - Overall municipal administration of the notified Cantonments is the **function of the Cantonment Boards.**
 - **Board** has equal representation of the **elected** and **nominated/ex-officio** members.
 - **Elected members have a tenure of 5 years** while nominated members hold office until their tenure in military station.
 - The **executive officer** of the **cantonment while nominated members hold office until their tenure in military station.**
- **Need for Reform:**
 - Step aimed at bringing **uniformity in municipal laws** governing these areas and adjoining municipal pockets.
 - Civilians in cantonment **are not getting access to state government welfare schemes** through the municipal corporations and municipalities.
 - MoD need to focus more on the **development of the military stations rather than civilian areas.**

FOOD AND AGRICULTURE ORGANIZATION (FAO) LAUNCHED ACTION PLAN (2022-25) FOR IMPLEMENTATION OF FAO STRATEGY ON CLIMATE CHANGE (2022-2031)

- Strategy, which was endorsed in 2022 by FAO, **envisages agrifood systems as sustainable, inclusive, resilient and adaptive** to climate change.
 - **Global agrifood systems** include the **production of food and non-food agricultural products**, as well as their storage, transportation, processing, distribution, marketing, disposal and consumption.
 - Currently, it is **responsible for about a third of total greenhouse gas emissions.**
- **FAO Action Plan is based on three pillars**

Three Pillars	Action Areas
Global and regional level: Strengthening global and regional climate policy and governance	<ul style="list-style-type: none">• Promoting Sustainable and Resilient Agrifood system.• Promoting innovative solutions like multi-hazard early warning systems; climate-proofing infrastructure etc.
Country Level: Developing countries' capacities for climate action	<ul style="list-style-type: none">• By enhancing access to climate financing.• Promoting integration of equality, inclusiveness and diversity in climate action.
Local Level: Scaling up climate action on ground	<ul style="list-style-type: none">• Empowering farmers and locals for climate action.• Increasing resilience to local communities with measures like insurance and social protection etc.

- **Impact of Climate change on Agrifood System**
 - Climate variability **adds pressure on land and water resources.**
 - Climatic conditions like extreme rainfall, heatwaves, and droughts can **negatively affect crops and harvests.**

TWO NEW HEALTH BILLS INTRODUCED IN LOK SABHA

- The **National Nursing and Midwifery Commission (NNMC) Bill, 2023** and the **National Dental Commission (NDC) Bill 2023** were introduced to improve quality education in the **paramedical (includes nurses and midwives) and dental** sector respectively.
 - **Bills are on the lines of the National Medical Commission (NMC)**, which aims to improve access to quality and affordable medical education.
- **NDC Bill, 2023** seeks to repeal the Dentists Act, 1948.
 - It proposes to set up the National Dental Commission (NMC) **to regulate dental education and the profession in the country.**
 - It provides **for an exit test for dentists** on the lines of the **National Exit Test.**
- **NNMC Bill** seeks to repeal the Indian Nursing Council Act, of 1947.
 - It provides for the establishment of the **NNMC** to frame policies and regulate standards for the governance of nursing and midwifery education and training.
 - It will provide a **uniform mechanism for admission into the nursing and midwifery institutions.**
- **Need of Bills:**
 - No nursing colleges in 40% of districts across India.
 - Nurse-to-population ratio is only 2.06:1000 against a global benchmark of 3:1000 etc.
 - Restructuring and revamping the Dental Council of India.

INDIAN SCIENTISTS HAVE EXPLORED NOVEL QUANTUM EFFECTS THAT COULD HELP UNDERSTAND UNIFICATION OF QUANTUM THEORY WITH GRAVITY

• This study can guide towards Unification of:

- **Quantum mechanics** which plays out at the smallest scales of matter and
- **The general theory of relativity** propounded by **Einstein** which is applicable at the **largest cosmological scales**.

• **Quantum theory** is the theoretical basis of modern physics that explains the nature and behavior of matter and energy on the **atomic and subatomic level**.

- **Unlike classical physics**, in which an object can exist in one place at one time, **quantum physics looks at the probabilities** of an object being at different points. Two principles in Quantum technology:
 - **Superposition** means that each quantum bits or qubit can represent both 1 and 0 at the same time.
 - **Entanglement** means that qubits in a superposition can be correlated with each other; i.e., state of one (whether it is a 1 or a 0) can depend on state of another.

• **Einstein's General theory of relativity**

- This theory predicted radical things, such as
 - **light is deflected by gravity**.
 - It showed that **space and time are malleable or flexible**, and ever expanding.
 - It also predicted the **existence of black holes**.

ABOUT BLACK HOLES

- **Black holes** are regions in space where an enormous amount of mass is packed into a tiny volume.
- This **creates a gravitational pull so strong** that not even light can escape.

ALSO IN NEWS



Zero FIR (First Information Report)

- Zero FIR **can be filed in any Police Station by victim, irrespective of their residence or place** of occurrence of crime, and then **transfers it to relevant police station** for further investigation.
 - **Purpose: Provide speedy redressal to victim** so that timely action can be taken after filing of FIR.
 - Concept of Zero FIR was introduced on **recommendation of Justice Verma Committee**.
 - No serial number is assigned to the case, instead the **FIR is given the number '0'** and hence the name.
- Term FIR is **not defined in any law** but in police regulations/rules, **information recorded under Section 154** of CrPC is known as FIR.



Friends of BRICS Meeting

- India's National Security Advisor has participated in **Friends of BRICS Meeting in Johannesburg, South Africa**.
 - BRICS **comprises Brazil, Russia, India, China and South Africa**.
 - In addition to BRICS, **Friends of BRICS countries** have participated in meeting. These are **Belarus, Burundi, Iran, UAE, Saudi Arabia, Egypt, Kazakhstan and Cuba**.
 - Objective of **Friends of BRICS** initiative is to **promote interaction of BRICS with close allies and enhance its influence**.
- India emphasized on **rising cyber risks** with the advent of **disruptive technologies** such as **Artificial Intelligence (AI), Big Data and Internet of Things**.



National Statistical Organisation (NSO)

- **Dr. Pronab sen panel** appointed by government to review the **methodology of NSO**.

National Statistical Organisation (NSO)



Ministry: Ministry of Statistics and Programme Implementation.

Functions:

- Acts as the **nodal agency** for planned development of the **statistical system** in the country.
- **Prepares national accounts** as well as publishes annual estimates of national product.
- Compiles and releases the **Index of Industrial Production**, conducts the **Annual Survey of Industries**.
- Conducts periodic **all-India Economic Censuses**.
- **Maintains liaison with international statistical organizations**, such as, the United Nations Statistical Division, the Economic and Social Commission for Asia and the Pacific (ESCAP) etc.



 <p>Income Tax Day (24th July)</p>	<ul style="list-style-type: none"> On 24th July 1860 Sir James Wilson introduced income tax for the first time in India. <ul style="list-style-type: none"> It is observed to spread awareness around the importance of taxes and encourage more and more people to pay taxes for the development of the nation. On the sideline of celebration, the Ministry of Finance directed the Income-Tax Department to prioritize transparency, objectivity, and taxpayer-friendliness to increase the tax base. Net Direct Tax Collections have increased by 160.17% from FY.2013-14 to F.Y. 2022-23.
 <p>Industrial License</p>	<ul style="list-style-type: none"> Department for Promotion of Industry and Internal Trade (DPIIT) has extended the period of validity of industrial license from existing three years to fifteen years to promote ease of doing business. <ul style="list-style-type: none"> Concerned administrative ministry can further grant a three years extension in case license holder has not commenced commercial production within 15 years of issue of license. Any industrial license, where commercial production has not started within extended period (15+3 years), shall be treated as automatically lapsed. In India, industrial licenses are issued under and are regulated by Industries (Development and Regulation) Act (IDRA), 1951.
 <p>Hygroelectricity</p>	<ul style="list-style-type: none"> Researchers have successfully developed this technology which can generate electricity from humid air. Hygroelectricity is proposed as a means to produce electric power from air by absorbing gaseous or vaporous water molecules, which are ubiquitous in the atmosphere. Advantages: Versatility, unlike other renewable energy sources such as solar and wind, air humidity is continuously available, making it a sustainable reservoir of energy. Challenges: Scaling up the technology to meet practical energy demands is a significant hurdle.
 <p>WHO released new scientific and normative guidance for Human Immunodeficiency Virus (HIV)</p>	<ul style="list-style-type: none"> New HIV guidelines on viral suppression unveiled at International AIDS Conference in Australia. World Health Organisation (WHO) Recommendations are <ul style="list-style-type: none"> Countries should integrate mpox detection, prevention, and care with existing HIV control programmes. Need to ensure the integration of HIV considerations in COVID-19 pandemic preparedness and response. Countries should expand use of HIV self-testing and promote testing through social networks to increase testing coverage.
 <p>Fluorochemicals</p>	<ul style="list-style-type: none"> Scientists have devised a new safer production method for fluorochemicals without use of hazardous Hydrogen Fluoride (HF) gas. <ul style="list-style-type: none"> New method takes inspiration from natural Biomineralisation process which forms teeth and bones. In this method, fluorochemicals are made directly from Fluorspar, bypassing production of HF. Fluorochemicals have a wide range of industrial applications including polymers, agrochemicals, pharmaceuticals, and lithium-ion batteries. <ul style="list-style-type: none"> Currently all fluorochemicals are generated from toxic and corrosive HF gas in a highly energy-intensive process. HF is produced by reacting Fluorspar (Calcium Fluoride) with sulfuric acid.
 <p>Places in news</p>	<p>Argentina (Capital: Buenos Aires)</p> <ul style="list-style-type: none"> India and Argentina have agreed to bilateral exchange of young researchers and Start-ups, particularly in Biotechnology and Agriculture field. <ul style="list-style-type: none"> India is 4th largest trading partner of Argentina. Political Boundaries <ul style="list-style-type: none"> Second-largest country in South America after Brazil. Bounded by Chile (south and west), Bolivia and Paraguay (north), and Brazil, Uruguay, and Atlantic Ocean (east). Geographical features <ul style="list-style-type: none"> Highest Peak: Mount Aconcagua or Cerro Aconcagua (also highest peak in Western Hemisphere) Grasslands: Pampas. Major Rivers: Parana, Uruguay, Colorado, Pilcomayo, etc. 