



SOCIAL ISSUES

Higher Education Leadership Development Programme

Context:

- ★ The Ministry of Human Resource Development (MHRD) has launched 'Higher Education Leadership Development Programme for Administrators' in New Delhi.

Details:

- ★ The programme is a joint initiative of University Grants Commission (UGC) and the British Council under the auspices of UK India Education and Research Initiative (UKIERI).
- ★ **Objective:** To train the senior and middle level academic administrators to enable them to bring about systemic changes with renewed approaches, capacity, tools and skill in Universities in India.
- ★ The programme is a step towards institutional development in line with Governments' commitment to improve the quality of education being imparted in Universities.
- ★ The UGC will conduct this program in collaboration with Advance HE as the training partner with globally recognized institutional expertise and leadership excellence from the UK, which is being enabled by the British Council in India.

UK-India Education and Research Initiative:

- ★ UK-India Education and Research Initiative (UKIERI) was started in April, 2006 with the aim of enhancing educational linkages between India and the UK.
- ★ UKIERI has been recognized as a key multi stakeholder programme that has strengthened the research, leadership, education and now skill sector relations between the two countries.

- ★ UKIERI Phase 3 (2016-2021) aims to promote institutional and individual excellence in educational practices, research, and employability.

University Grants Commission:

- ★ The UGC was established in 1953 and made into a statutory organisation with the UGC Act in 1956.
- ★ UGC is responsible for coordinating, determining and maintaining standards of higher education.
- ★ The University Grants Commission provides recognition to universities in India and disburses funds to such recognised universities and colleges.
- ★ The UGC has its Head Office in New Delhi and six regional offices:
 - ◆ Bengaluru
 - ◆ Bhopal
 - ◆ Guwahati
 - ◆ Hyderabad
 - ◆ Kolkata
 - ◆ Pune

State of Pneumonia in India

Context:

- ★ According to a recently released report by Institute for Health Metrics and Evaluation, 14% of under-five deaths in India - approximately 1,27,000 deaths annually - happen due to pneumonia.
- ★ According to the report, the current pneumonia mortality rate in India is five per 1,000 live births and the target is to reduce this to less than three by 2025.

Current scenario:

- ★ 14% of under-five deaths in India - approximately 1,27,000 deaths annually - happen due to pneumonia.

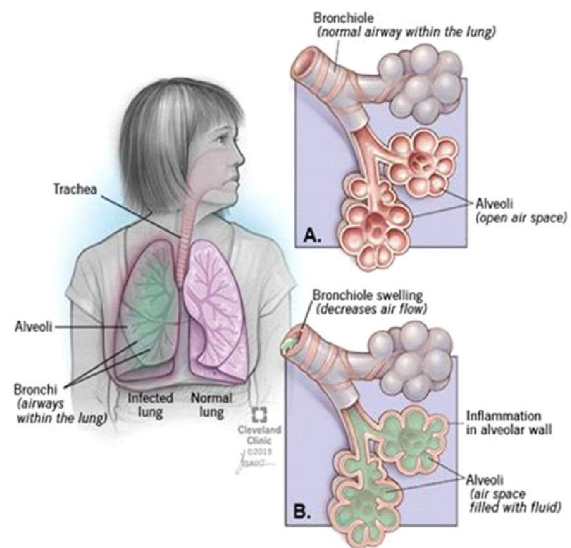
- ★ India had the second-highest number of deaths of children under the age of five in 2018 due to pneumonia
- ★ The years have seen some positive improvement, and the numbers have lowered a little from 1,78,000 in 2013.
- ★ It is estimated that half of these deaths are in the northern belt of the country.
- ★ According to a study by the Institute for Health Metrics and Evaluation, outdoor air pollution contributes to 17.5 % or nearly one in five pneumonia deaths among children under five worldwide.
- ★ Household pollution from the indoor use of solid cooking fuels contributes to an additional 1,95,000 (29.4 %) deaths.

Need of the hour:

- ★ Right diagnosis and prescribing the right treatment would create 'a ripple effect' that would prevent 5.7 million extra child deaths from other major childhood diseases at the same time, underscoring need for integrated health services.
- ★ Right treatment also means addressing the major causes of pneumonia deaths like malnutrition, lack of access to vaccines and antibiotics, and tackling the more difficult challenge of air pollution.
- ★ Only a cost-effective, protective, preventative treatment which are able to reach children where they are will be able to truly save millions of lives.

About Pneumonia:

- ★ **Pneumonia** is a form of acute respiratory infection that affects the lungs.
- ★ **Vulnerability:** The children whose immune systems is weakened by other infections like HIV or by malnutrition, and those living in areas with high levels of air pollution and unsafe water, are at far greater risk.



- ★ While the disease can be prevented with vaccines, and easily treated with low-cost antibiotics if properly diagnosed, yet tens of millions of children are still going unvaccinated and one in three with symptoms do not receive essential medical care.

Classical Swine fever vaccine

Context:

- ★ The Indian Institute of Veterinary Research (IVRI) of the Indian Council of Agricultural Research (ICAR) has developed an indigenous vaccine to control Classical Swine fever.

Classical Swine fever (CSF):

- ★ Classical Swine fever (CSF) is a contagious viral disease of domestic and wild swine that causes a high mortality rate of swine in India.

- ★ India has been using UK based swine fever vaccine since 1964. The traditional vaccine is a lapinized CSF vaccine which is manufactured from rabbits.
- ★ CSF has high mortality rate with annual loss of about Rs 4.29 billion to India. Moreover, against the annual requirement of 20 million doses, the availability is only 1.20 million doses.

Transmission:

- ★ The most common method of transmission is through direct contact between healthy swine and those infected with CSF virus. The virus is present in bodily secretions and faeces.
- ★ CSF virus can survive in pork and processed pork products for months when meat is refrigerated and for years when it is frozen.
- ★ The disease has been spread through legal and illegal transport of animals, and by feeding swill containing infective tissues to pigs.

Indigenous vaccine for Swine fever:

- ★ The new vaccine has been developed using Indian strain and lakhs of doses can be produced very easily using the cell culture technology and the country's requirement can be easily fulfilled.
- ★ The new vaccine will provide two years of immunization capacity, contrary to the existing vaccine which provided 3 to 6 months of immunization capacity.
- ★ The cell cultured vaccine will do away with the sacrificing of rabbits.
- ★ The new vaccine is quite economical, and will be ready for commercial production within a year.

Codifying laws to ban child pornography

Context:

- ★ A parliamentary panel has recommended a code of conduct for Internet service providers (ISPs) and strengthening the National Commission for Protection of Child Rights to curb child pornography.

- ★ The report, was prepared by an ad hoc committee set up by the Rajya Sabha and led by Congress MP was submitted to the Chairman of the House on January 25 and was tabled by Women and Child Development Minister Smritilrani recently.

Recommendations:

- ★ The report recommends a multi-pronged strategy detailing technological, institutional, social and educational as well as State-level measures.
- ★ Among its key recommendations is a code of conduct or a set of guidelines for ensuring child safety online.
- ★ It puts a greater onus on ISPs to identify and remove child sexual abuse material (CSAM) as well as report such content and those trying to access them to the authorities under the national cybercrime portal.
- ★ It called for strengthening the National Commission for Protection of Child Rights (NCPCR) so that it can serve as the nodal body for curbing child pornography.



- ★ The capabilities required in the NCPCR should include technology, cyber policing and prosecution.
- ★ The committee has delved into great detail in using technology to curb circulation of child porn such as breaking end-to-end encryption to trace its distributors of child pornography, mandatory applications to monitor children's access to pornographic content, employing photo DNA to target profile pictures of groups with CSAM.

National Deworming Day

Context:

- ★ The National Deworming Day (NDD) is being observed across the country on 10th February.

About National Deworming Day:

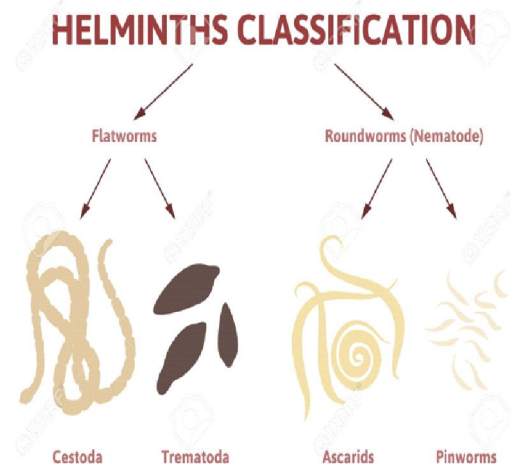
- ★ The National Deworming Day is an initiative of Ministry of Health and Family Welfare, Government of India to make every child in the country worm free.
- ★ It is held on 10 February and 10 August each year.
- ★ The objective of National Deworming Day is to deworm (albendazole tablets) all preschool and school-age children (enrolled and non-enrolled) between the ages of 1-19 years through the platform of schools and Anganwadi Centers in order to improve their overall health, nutritional status, access to education and quality of life.
- ★ The Ministry of Health & Family Welfare, Government of India is the nodal agency for providing all States/UTs with guidelines related to National Deworming Day (NDD) implementation at all levels.
- ★ The programme is being implemented through the combined efforts of Department of School Education and Literacy under Ministry of Human Resource and Development, Ministry of Women and Child Development and Ministry of Drinking Water and Sanitation.
- ★ Ministry of Panchayati Raj, Ministry of Tribal Affairs, Ministry of Rural Development, Ministry of Urban Development, and Urban Local Bodies (ULBs) also provide support to deworming program.
- ★ To increase programme outreach to private schools and maximize deworming benefits for large number of children various awareness activities (media mix) are involved under the programme.
- ★ The awareness campaign spreads

awareness about importance and benefits of deworming, as well as prevention strategies related to improved behaviours and practices for hygiene and sanitation.

- ★ According to World Health Organization 241 million children between the ages of 1 and 14 years are at risk of parasitic intestinal worms in India, also known as Soil Transmitted Helminths.

About Soil Transmitted Helminths:

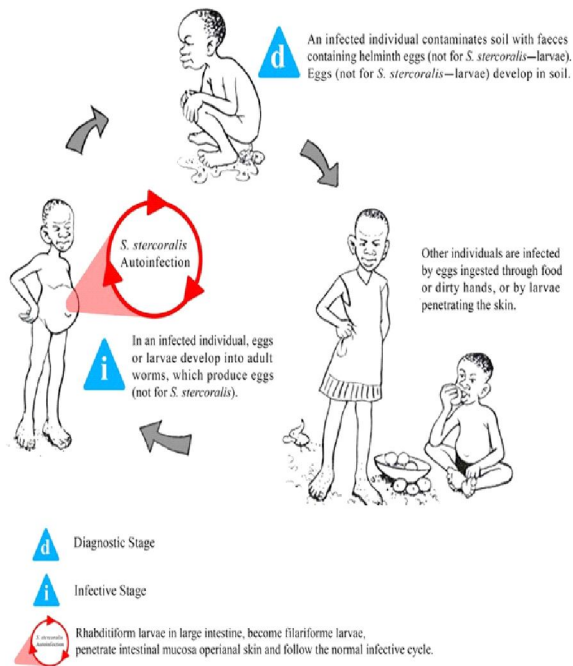
- ★ Helminths (worms) which are transmitted through soil contaminated with faecal matter are called soil-transmitted helminths (Intestinal parasitic worms).



- ★ Roundworm (*Ascarislumbricoides*), whipworm (*Trichuristrichiura*) and hook-worms (*Necatoramericanus* and *Ancylo-stomaduodenale*) are worms that infect people.
- ★ STH infections can lead to anemia, malnutrition, impaired mental and physical & cognitive development, and reduced school participation.
- ★ Helminths also commonly known as parasitic worms, are large multicellular organisms, which when mature can generally be seen with the naked eye.

STH transmission:

- ★ Adult worms live in human intestines for food and survival and produce thousands of eggs each day.



- ★ Eggs are passed in the faeces of infected person.
- ★ Infected people who defecate outdoors spread worm eggs in the soil.
- ★ Eggs contaminate the soil and spread infection in several ways: ?
- ★ Ingested through vegetables that are not carefully cooked, washed or peeled;
- ★ ingested from contaminated water sources;
- ★ ingested by children who play in soil and then put their hands in their mouths without washing them.

National Deworming Day (NDD) Implementation:

- ★ NDD (first round) is conducted on February 10 each year.
- ★ Bi-annual round of deworming is recommended in the States where prevalence of STH infection is more than 20% and annual round in other (less than 20% prevalence) states.
- ★ Only two States namely Rajasthan and Madhya Pradesh have reported less than 20% prevalence and recommended for annual round.
- ★ All the remaining States/UTs are implementing bi-annual round of deworming.

Background:

- ★ The first round of NDD was conducted in February 2015 and 8.9 crore children were administered the deworming tablet across 11 states/UTs by achieving 85% coverage.
- ★ Thereafter 88%, 77%, 88% children were covered against the set targets in February 2016, August 2016 and February & August 2017 rounds of NDD respectively.
- ★ 26.68 crores children have been administered albendazole till February 2018, and more than 114 crore doses of albendazole were administered to children 1-19 years, since 2015.

HAPPINESS CURRICULUM

Context:

- ★ US First Lady Melania Trump attended a 'Happiness Class' at a government school in South Delhi.

Details:

- ★ The curriculum is one of the flagship schemes of the Delhi government in the education sector launched in July 2018 in all government schools.
- ★ Citing the World Happiness Report, 2018, in which India ranked 133 among 155 nations in the global rankings, the curriculum calls for schools in India to promote development in cognition, language,

literacy, numeracy and the arts along with addressing the well-being and happiness of students.

- ★ It further says that future citizens need to be "mindful, aware, awakened, empathetic, firmly rooted in their identity..." based on the premise that education has a larger purpose, which cannot be in isolation from the "dire needs" of today's society.

Objectives:

- ★ Developing self-awareness & mindfulness,
- ★ Inculcating skills of critical thinking and inquiry,
- ★ Enabling learners to communicate effectively
- ★ Helping learners to apply life skills to deal with stressful and conflicting situations around them.

How is the curriculum implemented?

- ★ The curriculum is designed for students of classes nursery through the eighth standard.
- ★ Group 1 consists of students in nursery and KG, who have bi-weekly classes (45 minutes each for one session, which is supervised by a teacher) involving mindfulness activities and exercise. Children between classes 1-2 attend classes on weekdays, which involves mindfulness activities and exercises along with taking up reflective questions. The second group comprises students from classes 3-5 and the third group is comprised of students from classes 6-8 who apart from the aforementioned activities, take part in self-expression and reflect on their behavioural changes.
- ★ The learning outcomes of this curriculum are spread across four categories:
 - ◆ Becoming mindful and attentive (developing increased levels of self-awareness, developing active listening, remaining in the present);
 - ◆ Developing critical thinking and reflection (developing strong abilities to reflect on one's own thoughts and behaviours, thinking beyond stereotypes and assumptions);
 - ◆ Developing social-emotional skills

(demonstrating empathy, coping with anxiety and stress, developing better communication skills)

- ◆ Developing a confident and pleasant personality (developing a balanced outlook on daily life reflecting self-confidence, becoming responsible and reflecting awareness towards cleanliness, health and hygiene).
- ★ For the evaluation, no examinations are conducted, neither will marks be awarded. The assessment under this curriculum is qualitative, focusing on the "process rather than the outcome" and noting that each student's journey is unique and different.

International Day of Women and Girls in Science

Context:

- ★ The International Day of Women and Girls in Science, celebrated on 11 February to recognize the critical role women and girls play in science and technology.



- ★ It is implemented by UNESCO and UN-Women in collaboration institutions and civil society partners that aim to promote women and girls in science.
- ★ This Day is an opportunity to promote full and equal access to and participation in science for women and girls.

Global statistics and concern:

- ★ While some of the greatest scientists and mathematicians have been women, they remain under-represented in comparison to their male counterparts in higher studies involving science, as well as among the top scientific achievers.
- ★ According to a 2018 report by UNESCO, just 28.8% of researchers are women. In India, this drops to 13.9%.

- ★ Between 1901 and 2019, 334 Nobel Prizes have been awarded to 616 Laureates in Physics, Chemistry and Medicine, of which just 20 have been won by 19 women. Just three women have won Nobel in Physics, five in Chemistry, while 12 women have won the Medicine Nobel.
- ★ UNESCO data from 2014-16 show that only around 30% of female students select STEM (science, technology, engineering and mathematics)-related fields in higher education. Female enrolment is particularly low in information technology (3%), natural science, mathematics and statistics (5%) and engineering and allied streams (8%).
- ★ In 2015-16, 9.3% of female students in undergraduate courses were enrolled in engineering, compared to 15.6% across genders. Conversely, 4.3% of female students were enrolled in medical science, compared to 3.3% across genders.
- ★ The report found that in over 620 institutes and universities, including IITs, NITs, ISRO, and DRDO, the presence of women was 20.0% among Scientific and Administrative Staff, 28.7% among Post-Doctoral Fellows, and 33.5% among PhD scholars.

Significance:

- ★ Science and gender equality are both vital for the achievement of the internationally agreed development goals, including the 2030 Agenda for Sustainable Development.
- ★ Over the past 15 years, the global community has made a lot of effort in inspiring and engaging women and girls in science, and science day is a step to achieve the same.



COVID-19

Context:

- ★ The World Health Organization (WHO) officially announced COVID-19 as the name for the disease caused by the novel coronavirus.
- ★ The WHO had to come up the name in line with the 2015 guidelines between the global agency, the World Organisation for Animal Health and the Food and Agriculture Organization (FAO).

What does COVID-19 stand for?

- ★ The "CO" in COVID stands corona, while "VI" is for virus and "D" for disease.
- ★ The number 19 stands for the year 2019 when the outbreak was first identified.
- ★ The Coronavirus Study Group of the International Committee on Taxonomy of Viruses has named the virus as "Severe acute respiratory syndrome coronavirus 2", or "SARS-CoV-2".
- ★ The Coronavirus Study Group is responsible for developing the official classification of viruses and taxa naming of the Coronaviridae family.

UPDATE

Update: The new coronavirus disease that was first identified in Wuhan has now received its official name from the World Health Organization: "COVID-19." "COVI" comes from CoronaVirus. The "D" stands for disease. The 19 represents 2019, the year the virus was first identified, in December.



What was the hurry to name the disease?

- ★ The urgency to assign a name to the disease is to prevent the use of other names that can be "inaccurate or stigmatising".
- ★ People outside the scientific community tend to call a new disease by common names. But once the name gets established in common usage through the Internet and

social media, they are difficult to change, even if an inappropriate name is being used.

- ★ Therefore, as per the WHO 2015 guideline, it is important that whoever first reports on a newly identified human disease uses an appropriate name that is scientifically sound and socially acceptable.
- ★ The year is used when it becomes "necessary to differentiate between similar events that happened in different years".
- ★ In the case of COVID-19, coronavirus has caused other diseases such as the Severe acute respiratory syndrome (SARS) and Middle East Respiratory Syndrome (MERS).

Neonatal mortality in India

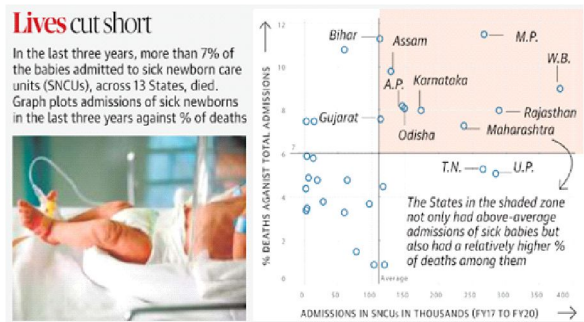
Context:

- ★ According to the National Health Mission (NHM), Madhya Pradesh has recorded the highest percentage of new-born deaths of 11.5% against the total admissions to government-run sick new-born care units (SNCUs) in the past three years across the country, far above the country's average of 7%.



Major Highlights of the report:

- ★ Although admissions of neonates (under 28 days) in the Madhya Pradesh have dropped from April 2017 to December 2019 - remaining lower than West Bengal, Rajasthan and Uttar Pradesh but the percentage of deaths at 12.2% surpassed Bihar's last year.
- ★ Meanwhile, West Bengal, where 34,344 neonatal deaths occurred in the period, the most in the country, the declining percentage of deaths from 9.2% in 2017 to 8.9% in 2019 coincided with a slump in admissions.



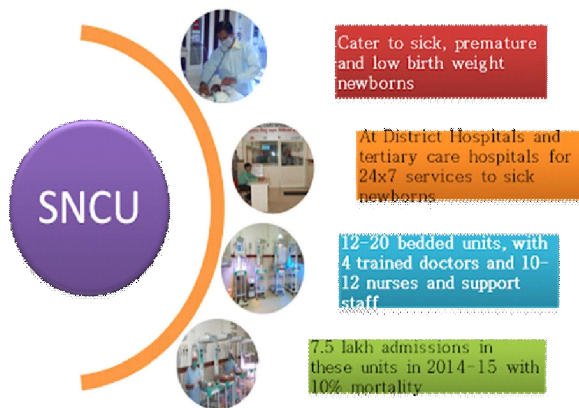
- ★ In Bhopal, one in every five children admitted to a unit died in the three years - the highest death percentage of 19.9% in the State, ten times above the NHM's mandated key performance indicator of below 2%.
- ★ Madhya Pradesh has also recorded an abysmal sex ratio in admissions - of 663 (number of girls admitted against 1,000 boys) in the three years against the country average of 733, though its sex ratio was 931 as per the 2011 census.

What is Neonatal mortality?

- ★ The number of neonatal deaths per 1000 live births.
- ★ A neonatal death is defined as a death during the first 28 days of life (0-27 days).

Factors responsible for Neonatal mortality:

- ★ Staff crunch, low community referrals, absence of a special neonatal transport service to health centres, reliance on units in cities as last resort and the non-availability of enough units to cater to increasing institutional deliveries had contributed to the spike in the percentage of deaths.
- ★ Other factors included shortfall of surgeons, gynaecologists, physicians and paediatricians is available at hospitals.
- ★ The reasons for neonatal deaths are more clinical than other child deaths.
- ★ With increasing institutional deliveries in the State (80.8% as per the National Family Health Survey-4, 2015-2016), the number of neonatal care units, being optimally utilised, had not been increased proportionally.
- ★ The major challenge, however, remained community referrals, significantly aided by ASHA workers - only one in ten sick neonates born outside a hospital is taken to an SNCU.



- ★ This is due to the absence of transport, inability to identify a disease by parents, and lack of awareness.
- ★ Urban areas report a higher death percentage as they offer tertiary care, and admit several serious cases from peripheral districts.
- ★ When the number of institutional deliveries are increasing, the child is the unit's responsibility. Blaming everything on the community and lack of awareness is a convenient way out for the NHM.

Neonatal mortality in India:

- ★ According to the Sample Registration System, neonatal deaths in India mainly occur owing to premature births and low birth weight (35.9%), pneumonia (16.9%), birth asphyxia and birth trauma (9.9%), other non-communicable diseases (7.9%), diarrhea (6.7%), congenital anomalies (4.6%) and infections (4.2%).
- ★ Under the United Nations' Sustainable Development Goals, each country, including India, has aimed to bring down neonatal mortality to at least 12 per 1,000 live births.
- ★ In 2018, neonatal mortality stood at 23 per 1,000 live births for India.

Assisted Reproductive Technology Regulation Bill 2020

Context:

- ★ The Union Cabinet approved the Assisted Reproductive Technology (Regulation) Bill, 2020 for the welfare of Women and to protect women's reproductive rights in the Country.

Aim of the Bill:

- ★ The bill aims to regulate the market as IVF clinics have mushroomed all over the country.
- ★ India has become a hub of cheap fertility clinics owing to large population which is suffering from infertility.

Provisions under the Bill:

- ★ To set up a national level registry and regulator which will oversee all the IVF clinics and procedures. It will be mandatory for the such clinics to register with the national and state level boards.
- ★ The bill is setting upper limit of a woman undergoing IVF as 50 years.
- ★ A national board will be set up, which will lay down code of conduct to be observed by persons working at clinics, besides ensuring minimum standards of physical infrastructure, laboratory and diagnostic equipment and expert manpower to be employed by clinics and banks.
- ★ A national registry and registration authority to maintain a Central database and assist the national board in its functioning.
- ★ The bill also proposes for a stringent punishment for those practicing sex selection, sale of human embryos or gametes, running agencies/rackets/organizations for such unlawful practices.
- ★ It will regulate the Assisted Reproductive Technology services in the country. Consequently, infertile couples will be more ensured/confident of the ethical practices in ARTs.
- ★ The bill intends to make genetic testing of the embryo mandatory before implantation for the benefit of the child born through ART, besides streamlining the cryo-preservation processes for sperm, oocytes and embryo.

Need:

- ★ India has become one of the major centres of this global fertility industry, with reproductive medical tourism becoming a significant activity.
- ★ As the clinics in India offer nearly all the ART

services-gamete donation, intrauterine insemination (IUI), IVF, ICSI, PGD and gestational surrogacy; there is a need for a standardized protocol.

- ★ The ART services are need to be regulated to protect the affected women and children from exploitation.

Steps towards Women's reproductive rights:

- ★ The bill was introduced after the introduction in Parliament of the Surrogacy Regulation Bill, 2020, and the approval of the Medical Termination of Pregnancy Amendment Bill, 2020.
- ★ This is the third proposed legislation which the government has cleared to protect the reproductive rights of women.
- ★ These legislative measures are path breaking steps to protect women's reproductive rights.

Assisted Reproductive Technology (ART):

- ★ Assisted reproductive technology includes medical procedures used primarily to address infertility.
- ★ It involves procedures such as in vitro fertilization, intracytoplasmic sperm injection, cryopreservation of gametes or embryos, and/or the use of fertility medication.

Worldwide Educating for the Future Index 2019

Context:

- ★ India jumped five ranks in the Worldwide Educating for the Future Index (WEFFI) 2019, as per a report published by The Economist Intelligence Unit.

About the report:

- ★ The index ranks countries based on their abilities to equip students with skill-based education.
- ★ The report analyses education system from the perspective of skill-based education "in areas such as critical thinking, problem-solving, leadership, collaboration, creativity and entrepreneurship, as well as digital and technical skills.

- ★ it is an annual report released by the Economist Intelligence Unit (EIU).

Major highlights of the report:

- ★ India ranked 35th on the overall index in 2019 with a total score of 53, based on three categories - policy environment, teaching environment and overall socio-economic environment.
- ★ The country had ranked 40th in 2018.

Policy changes in education:

- ★ The report attributed India's growth to the new education policy introduced by the government.
- ★ India has made particular strides in the policy environment, with a new national education policy published in early 2019 that explicitly mentions future-oriented skills such as critical thinking, communication and entrepreneurship.
- ★ New Education Policy is to be announced soon under 'Aspirational India' that will focus on greater inflow of finance to attract talented teachers, innovate and build better labs.
- ★ FM had promised allocation of ₹99,300 crores to education and ₹3,000 crores for skills.
- ★ The Ministry has proposed to start degree level full-fledged online education programme along with apprenticeship embedded degree or diploma courses in 150 higher educational institutions which will begin by March 2021.

Shortcomings in India's education system:

- ★ Inability to utilise the opportunity of internationalising its higher education system.
- ★ A decentralised education system is another shortcoming of India's education policy.

Global Health Security Index

Context:

- ★ The GHS Index is a comprehensive assessment of global health security capabilities in 195 countries.

**Developed by:**

- ★ The GHS Index is a project of the Nuclear Threat Initiative and the Johns Hopkins Centre for Health Security and was developed with the Economist Intelligence Unit.

Major Highlights of the index:

- ★ The 2019 Global Health Security Index report examined the ability of 195 countries to prevent, detect and rapidly respond to public-health emergencies.
- ★ It was found that the national health security of various countries is fundamentally weak and that no country is fully prepared for epidemics or pandemics.
- ★ The average overall global health security (GHS) score, based on 140 parameters evaluated in all countries, was only 40.2 out of 100.
- ★ More importantly, 116 high- and middle-income countries scored 50 or below; India scored 46.5 - placing it 57th in the ranking.
- ★ In Southeast Asia, Thailand and Indonesia performed better than India with scores of 73.2 (6th) and 56.6 (30th), respectively.
- ★ Following are the top 10 countries in the GHS index, their rank and their scores: United States (1), 83.5; United Kingdom (2), 77.9; Netherlands (3), 75.6; Australia (4), 75.5; Canada (5), 75.3; Thailand (6), 73.2; Sweden (7), 72.1; Denmark (8), 70.4; South Korea (9), 70.2; and Finland (10), 68.7.
- ★ China, where the Wuhan coronavirus originated, is ranked 51st, with a score of 48.2.
- ★ Vietnam preceded it at 50th, with a score of 49.7.

Significance:

- ★ Asit is the first comprehensive assessment of global health security capabilities in countries of varied incomes, the index quickly reflects the comparative capabilities across regions and countries in coping with the coronavirus outbreak.
- ★ With its wide-ranging criteria for evaluation, individual countries and their citizens can assess where they stand against the current threat and how prepared or capable is their public health system.

INCOIS Launches Three Ocean-Based Services**Context:**

- ★ The Indian National Centre for Ocean Information Services (INCOIS), Hyderabad, has launched three ocean-based specialised products/services - the Small Vessel Advisory and Forecast Services System (SVAS), the Swell Surge Forecast System (SSFS) and the Algal Bloom Information Service (ABIS).

Details:

- ★ Incois, an autonomous organisation under the Ministry of Earth Sciences, provides a number of free services for users in the marine realm, including fishermen.

Small Vessel Advisory and Forecast Services System (SVAS):

- ★ The SVAS is an innovative impact-based advisory and forecast service system for small vessels operating in Indian coastal waters.
- ★ It warns users about potential zones where vessel overturning can take place, 10 days in advance.
- ★ The advisories are valid for small vessels of beam width up to 7 m. This limit covers the fishing vessels used in all the nine coastal States and Union Territories.
- ★ The warning system is based on the Boat Safety Index (BSI) derived from wave model forecast outputs such as significant wave height, wave steepness, directional spread and the rapid development of wind at sea, which is boat-specific.

Swell Surge Forecast System (SSFS):

- ★ The SSFS is designed to predict the kallakkadal, or swell surge, that occurs along the Indian coast, particularly the West.
- ★ These are flashflood events that take place without any noticeable advance change in local winds or any other apparent signature in the coastal environment.
- ★ Kallakkadal is a colloquial term used by Kerala fishermen to refer to the 'freaky' flooding episodes. Since most people mistake these for tsunamis, the SSFS will be useful.

Algal Bloom Information Service (ABIS):

- ★ The ABIS tracks the increasing frequency of algal blooms, a major concern due to its ill-effects on fishery, marine life and water quality.
- ★ This service helps fishermen, marine fishery resource managers, researchers, ecologists and environmentalists.
- ★ The service also complements INCOIS marine fishing advisories and provides near-real time information on the spatio-temporal occurrence and spread of phytoplankton blooms over the North Indian Ocean.