

HEALTH INDEX

Syllabus: GS 2/ Issues relating to development and management of social sector/ Services relating to Health, Education, Human Resources

Context: Kerala, TN, Telangana top states in Covid year, Delhi worst UT: Health index

About: The three southern states of Kerala, Tamil Nadu and Telangana emerged as the top performers among the 'larger states' in the NITI Aayog's annual 'health index' for the Covid year of 2020-21. While Tripura was the best among the 'smaller states', Delhi ranked at the bottom of the Union territories' list.

NITI Aayog's annual 'health index'

- The annual Health Index, measures the performance of states and Union Territories, comprising 24 health performance
- It was launched by the NITI Aayog in 2017.
- The Aayog publishes the index in collaboration with the Union Ministry of Health and the World Bank.

NITI Aayog's annual 'health index'-What are the key takeaways?

- The Health Index rates states and Union Territories on two parameters – incremental performance (year-on-year improvement) and overall performance.
- **States and Union Territories** – categorized separately as 'Large States', 'Small States' and Union Territories – are then ranked based on their scores.
- Among the 19 'large states', Kerala, Tamil Nadu and Telangana are in the top three positions, ranking first, second and third respectively in terms of overall performance.
- Bihar (19th), Uttar Pradesh (18th) and Madhya Pradesh (17th) are at the bottom of the list.
- In terms of incremental performance, Rajasthan, Uttarakhand and Odisha have grown as performers in 2020-21 over their performance in 2019-20.
- Among the eight smaller states, Tripura recorded the best overall performance, followed by Sikkim and Goa; Arunachal Pradesh (6th), Nagaland (7th) and Manipur (8th) are at the bottom.

Significance of the Health Index Report

- **Policymaking:** States use it in their policy making and resource allocation.
- **Healthy Competition:** The index encourages healthy competition and cross-learning among States and UTs.
- **Helpful in Achieving SDGs:** The exercise is expected to help drive state and union territories' efforts towards the achievement of health-related Sustainable Development Goals (SDGs) including those related to Universal Health Coverage (UHC) and other health outcomes.
- **Role in National Health Mission:** The importance of this annual tool is reemphasized by MoHFW's decision to link the index to incentives under the National Health Mission.

SCIENCE & TECHNOLOGY

XPosat , India's first Polarimetry mission

CONTEXT: According to ISRO, "XPoSat will study various dynamics of bright astronomical X-ray sources in extreme conditions" and will carry two payloads.

About: The Indian Space Research Organisation is collaborating with the Raman Research Institute (RRI), Bengaluru, an autonomous research institute, to build the X-Ray Polarimeter Satellite (XPoSat) that is scheduled to be launched later this year.

What is the XPoSat mission?

- According to **ISRO**, "XPoSat will study various dynamics of bright astronomical X-ray sources in extreme conditions."
- It has been billed as India's first, and only the world's second polarimetry mission that is meant to study various dynamics of bright astronomical X-ray sources in extreme conditions. The other such major mission is NASA's Imaging X-ray Polarimetry Explorer (IXPE) that was launched in 2021.

About Imaging X-ray Polarimetry Explorer (IXPE) ?

- IXPE carries three state-of-the-art space telescopes. Each of the three identical telescopes hosts one light-weight X-ray mirror and one detector unit. These will help observe polarized X-rays from neutron stars and supermassive black holes. By measuring the polarisation of these X-rays, we can study where the light came from and understand the geometry and inner workings of the light source.
- IXPE Space Observatory is a joint effort of NASA and the Italian Space Agency.
- It studies " the most extreme and mysterious objects in the universe-supernova remnants, supermassive black holes, and dozens of other high-energy objects.
- It will help scientists understand how black holes spin and their location in the past and also unravel how pulsars shine so brightly in X-rays.

How are X-Rays witnessed in space?

- As NASA explains on its website, X-rays have much higher energy and much shorter wavelengths, between 0.03 and 3 nanometers, so small that some x-rays are no bigger than a single atom of many elements. The physical temperature of an object determines the wavelength of the radiation it emits. The hotter the object, the shorter the wavelength of peak emission.

- X-rays come from objects that are millions of degrees Celsius — such as pulsars, galactic supernova remnants, and black holes.
- Like all forms of light, X-rays consist of moving electric and magnetic waves. Usually, peaks and valleys of these waves move in random directions. Polarised light is more organised with two types of waves vibrating in the same direction,” says a video from NASA on IXPE.

Requirement of Polarimetry:

- ISRO’s website says that the emission mechanism from various astronomical sources such as black holes, neutron stars, active galactic nuclei, pulsar wind nebulae etc. originates from complex physical processes and are challenging to understand.
- Space based observatories are also unable to give information about the exact nature of the emission from such sources. Therefore, newer devices can measure specific properties.

What are XPoSat’s payloads?

- The spacecraft will carry two scientific payloads in a low earth orbit. The primary payload POLIX (Polarimeter Instrument in X-rays) will measure the polarimetry parameters (degree and angle of polarisation).
- The payload is being developed by RRI in collaboration with ISRO’s U R Rao Satellite Centre (URSC) in Bengaluru. POLIX is expected to observe about 40 bright astronomical sources of different categories during the planned lifetime of XPoSat mission of about 5 years. This is the first payload in the medium X-ray energy band dedicated for polarimetry measurements.
- The XSPECT (X-ray Spectroscopy and Timing) payload will give spectroscopic information (on how light is absorbed and emitted by objects). It would observe several types of sources, such as X-ray pulsars, blackhole binaries, low-magnetic field neutron star, etc.

Internal Security

Syllabus: GS3/ Internal Security

Context

- Recently, the Ministry of Home Affairs (MHA) notified fresh rules for the elite Special Protection Group (SPG).

What are the New Rules?

- The Special Protection Group (SPG) will now be handled by an **officer not less than the rank of an Additional Director-General** belonging to the Indian Police Service, while junior officers will be appointed on deputation for an initial period of six years.
- The appointment for the **2nd tenure may be done with the prior approval of the central government** for reasons to be recorded.
- The SPG will have **its headquarters in New Delhi** and now be handled by an officer **not less than the rank of an Additional Director-General** belonging to the Indian Police Service.
- The **general superintendence, direction, command and control, supervision, training, discipline, and administration** of the SPG will be vested in the director.
- These parameters were fixed through a new set of rules issued by the Ministry of Home Affairs under the **Special Protection Group Act, 1988 (34 of 1988)**.

Special Protection Group (SPG)

- The SPG is an elite force, specifically raised for the protection of the country’s Prime Minister, former PMs and their immediate family.
- The force is currently 3,000 strong and it was started in 1985 in the wake of the killing of PM Indira Gandhi in 1984.
- It was created on the recommendation of the Birbal Nath Committee, 1985.
- After **Rajiv Gandhi’s assassination in 1991**, the SPG Act was amended, offering SPG protection to all former Prime Ministers and their families for a period of at least 10 years.
- The SPG is highly trained in physical efficiency, marksmanship, combat and proximate protection tactics and is assisted by all central and state agencies to ensure fool proof security. SPG Special Agents assigned to the PM security detail wear black, Western-style formal business suits, with sunglasses, and carry a two-way encrypted communication earpiece, and concealed handguns. They wear safari suits on occasions.

Special Protection Group (SPG) Act 1988

- The Special Protection Group (SPG) Act 1988 provides the constitution & regulation of SPG to provide security to the Prime Minister of India and the former prime ministers and members of their immediate families.
- The term ‘proximate security’ as mentioned in the Act means the protection provided from close quarters, during the journey by road, rail, aircraft, watercraft or on foot or any other means of transport and shall include the places of functions, engagements, residence.

PRELIMS

Tina Turner

Tina Turner, the **legendary musician**, passed away at the age of 83. She was an American-born Swiss singer also known as the "Queen of Rock 'n' Roll". She was a trailblazer, especially as **an African-American woman in rock and roll**. Her singing talent and on-stage persona highlighted the pivotal role of **African-American women in the genre**.

Tina's journey, marked by her **escape from an abusive marriage**, served as an inspiration to many. Her reinvention as a **pop icon in the 1980s** solidified her place in music history. Tina Turner's contributions were widely celebrated, and she received numerous accolades, including **Grammy Awards and induction into the Rock and Roll Hall of Fame**. Her impact **extended beyond music**, with a **bestselling autobiography and a stage show** based on her life. Tina Turner's legacy as a **pioneer across genres will continue to resonate**.

Migration, Mobility Pact with Australia (MMPA)

News: India and Australia signed a migration partnership agreement during Prime Minister Narendra Modi's visit to Australia.

Features of the Agreement:

- **Aim:** It is aimed at promoting **two-way exchange of students, graduates, researchers, and business people**, and expanding people-to-people ties.
- **New Pathway:** Their mobility will be facilitated through a new skilled pathway named **MATES (Mobility Arrangement for Talented Early Professionals Scheme)** specifically created for India.

Other developments:

- India announced the **opening of a consulate in Brisbane**, adding to its existing consulates in Perth, Melbourne, and Sydney.
- The India-Australia hydrogen task force was established, to explore opportunities in green hydrogen and address energy targets.

India's Child Wasting

News: According to the latest UN inter-agency estimates, India has **the highest child-wasting rate globally, with over 18% of Indian children** affected by wasting in 2020

Other findings:

- India had a **stunting rate of 31.7 per cent** in 2022, down from **41.6 per cent** in 2012
- India had an **overweight percentage of 2.8 per cent in 2022**, compared to **2.2 per cent** in 2012.
- India is the **largest country in southern Asia**, where **half of all children** with wasting in the world live
- More than **three-quarters of all children** with severe wasting live in Asia
- There is **insufficient progress** to reach the **2025 World Health Assembly (WHA) global nutrition targets and UN-mandated Sustainable Development Goal target 2.2**.

Industrial Corridor Development in Andhra Pradesh

News: The Asian Development Bank (ADB) and the Government of India have signed a **\$ 141 million loan agreement** to support the development of infrastructure in **three industrial clusters in Andhra Pradesh**.

Clusters are:

- **Visakhapatnam node:** Rambilli and Nakkapalli industrial clusters; Nakkapalli cluster
- **Srikalahasthi-Chittoor node:** Chittoor–South industrial cluster; Naidupeta industrial cluster

This financing is part of a **larger \$500 million multi-tranche financing** facility approved by ADB in 2016. The funds will be used to improve **roads, water supply systems, and electricity distribution** networks in the clusters.

Aim: To promote **industrialization, boost manufacturing, enhance competitiveness**, and create job opportunities in these areas. The project also includes measures to strengthen **resilience to extreme weather, improve disaster risk management, and promote gender-responsive and socially inclusive** development.

Other Industrial Corridors:

| Corridor | States Covered | Funding |
|---|--|---|
| Delhi-Mumbai Industrial Corridor (DMIC) | Uttar Pradesh, Haryana, Rajasthan, Madhya Pradesh, Gujarat, Maharashtra | Government of India, Japanese loans; Japan depository receipts issued by Indian companies |
| Chennai-Bengaluru Industrial Corridor (CBIC) | Tamil Nadu, Andhra Pradesh, Karnataka | Japan International Cooperation Agency (JICA) |
| Bengaluru-Mumbai Economic Corridor (BMEC) | Maharashtra, Karnataka | Developed with the help of Britain (UK) |
| Amritsar-Kolkata Industrial Corridor (AKIC) | Punjab, Haryana, Uttarakhand, Uttar Pradesh, Bihar, Jharkhand, West Bengal | Eastern Dedicated Freight Corridor is the backbone of this |

| | | |
|---|---|---|
| | | economic corridor. Being developed by the Government of India |
| East Coast Economic Corridor (ECEC) | West Bengal, Odisha, Andhra Pradesh, Tamil Nadu | Asian Development Bank (ADB) |
| Vizag-Chennai Industrial Corridor (VCIC) | Andhra Pradesh | Asian Development Bank (ADB) loans and grants |

Certification of Indian Organic Products

News: A European Union (EU) audit has found “**many weaknesses**” in the certification of Indian organic products for exports to the EU.

Issues highlighted:

- Farmers of various **organic producer groups (PGs)** **lacked knowledge** of organic farming.
- **Infringement of NPOP norms**, inadequate supervision and implementation of controls.

Regulator of Organic Products:

- **Food Safety and Standards Authority of India (FSSAI)** (under the Ministry of Health and Family Welfare) regulates the **manufacture, distribution, sale or import** of Organic products through the Food Safety and Standards (Organic Foods) Regulations, 2017 (under FSSA 2006).

Certification of Organic products:

| Certification | Description |
|--|---|
| Participatory Guarantee System (PGS) | Implemented by the Ministry of Agriculture and Farmers Welfare . Ensures organic product production adheres to quality standards. Does not require third-party certification agencies. Certification is carried out by local groups consisting of producers and consumers and is based on trust. Involves a documented logo or statement as proof of certification. |
| National Programme on Organic Production (NPOP) | Implemented by APEDA, under the Ministry of Commerce & Industries . Regulates organic farming certification. Involves accreditation of Certification Bodies. Sets standards for organic production. Promotes organic farming and marketing. It's Standards have been recognized by the EU, Switzerland, and the US. |
| Other Programs for Organic Production | NMSA (National Mission for Sustainable Agriculture) : Promotes sustainable agriculture, including organic production. Paramparagat Krishi Vikas Yojna (PKVY) : Promotes organic farming. Mission Organic Value Chain Development for North East Region (MOVCD-NER) : Supports the development of organic value chains in the North East region of India. |

Cosmic Dust Particle

New: Indian scientists (from the Indian Institute of Astrophysics) have created a **computer model of cosmic dust particles** that can imitate the **unique way interstellar comet 2I/Borisov scatters light**.

Use: By studying the **way light scatters off these** cosmic particles, they can better understand **how comets behave**. The model accurately **reproduced the scattering of light** seen in experiments and observations. It revealed the presence of a large number of porous cosmic dust particles.

Cosmic dust particles:

| | Description |
|--------------------|--|
| About | Cosmic dust particles are tiny solid particles that exist in outer space . They are composed of various materials, including minerals, metals, ice, and organic compounds. |
| Shape | From spherical to irregular or fractal-like structures. |
| Size | Ranging from nanometers to micrometres |
| Composition | Amorphous silicate (Forsterite) and amorphous carbon |
| Found in | Cosmic dust particles can be found in different environments , such as interstellar space, planetary systems, and the atmospheres of planets and moons. |
| Role played | They contribute to the formation of stars and planetary systems by providing material for accretion . They also scatter and absorb light , affecting the radiation properties of celestial objects . Additionally, these particles serve as building blocks for the formation of larger objects , such as asteroids, comets, and planets. |

ANSWER WRITING

Q. Examine the role of Non-Government Organisations (NGOs) in ensuring social welfare. Throw light on various concerns raised with respect to their functioning.

According to the World Bank, “NGOs are private organizations that pursue activities to relieve suffering, promote the interests of the poor, protect the environment, provide basic social service or undertake community development”. In India, NGOs play an important role in the shaping and implementation of participatory democracy. As social welfare organisations, they seek to provide services and improve the lives of the less privileged, the challenged, and the traditionally deprived. However, in recent times, various concerns are being raised with respect to the working of NGOs.

Role of Non-Government Organisations (NGOs) in ensuring social welfare:

- **Poverty alleviation and rural development:** NGOs play a crucial role in organising public inconvenience and becoming an advocate for societal problems and needs. They play a significant role in lending a voice to the poor and needy. E.g.: NGOs played an important role in poverty alleviation during 6th five-year plan when the slogan of **Garibi Hatao** was given.
- **Women Empowerment:** NGOs in India have come a long way in working for women’s empowerment. A few examples include fighting against sati, dowry, cruelty, and other social menaces to educating women, lowering the female foeticide rate, employment to women, etc. Many foundations are working for such causes, like **Sewa, Agrani Foundation, Eklavya** etc.
- **Raising awareness about environmental issues:** NGOs working in the field of environment can play a crucial role in helping to plug gaps by conducting research to facilitate policy development, building institutional capacity, and facilitating independent dialogue to help people live more sustainable lifestyles. E.g., **Greenpeace, Chintan and Help Delhi Breathe** are some NGOs in India working towards tackling environmental issues.
- **Building community participation:** The non-profit organisation proposes a substitute perspective that includes the capability to carry out a meaningful dialogue with disadvantaged communities. Many NGOs are working to conserve and encourage India’s diverse culture. E.g., **Samata** is an NGO which focuses on advocacy and development issues among tribal communities in **Andhra Pradesh**.
- **Improve government performance:** It is one of the functions of NGOs to ensure that the government is responsive and is solving the problems of the citizens, thus making the governments work accountable. NGOs in India have been successful in influencing the government to formulate various developmental laws and policies, such as the **Right to Information, MNREGA, and Juvenile Justice**.
- **Providing service to society:** The non-profit organisation works as a mechanism through which people worried about any social or economic difficulty can respond and lend their helping hands. E.g.: the help of NGOs greatly mitigated the **devastating floods in Chennai** and the horrific aftermath of the **Nepal earthquake**. Even during the **Covid-19 Pandemic**, NGOs have continuously played an unforgettable role. They have been at the forefront of conducting webinars, distributing masks and sanitizers and looking into mass vaccination drives.

Concerns raised with respect to the functioning of NGOs:

- **Transparency issues with respect to appointment:** Experts argue that civil society organisations are self-appointed rather than elected, and thus do not represent the popular will.
- **Corruption and funding concerns:** This is particularly problematic for NGOs that depend on donors and the state to fund their work. In 2015, the government **de-registered nearly 9,000 NGOs for violating the Foreign Donations (Regulation) Act**. Many of these NGOs were found to have misused the funds they received, including diverting funds meant for social programs to personal bank accounts.
- **Accountability concerns:** Civil society organisations receiving foreign funding are **accountable to external rather than domestic constituencies** and are advancing foreign rather than local agendas.
- **Does not truly represent people:** Concerns are being raised that civil society groups are elite actors who are not representative of the people they claim to represent. Critics point to the **foreign education backgrounds, high salaries, and frequent foreign travel** of civic activists to portray them as out of touch with the concerns of ordinary citizens.
- **Administrative concerns:** Lack of proper governance, lack of strategic planning, networking and communication raises concerns over NGOs’ functioning. The interference of political parties in day-to-day activities also creates problems in the implementation of developmental project activities in a particular region or area.

The ideal model for actualizing social welfare would be one where the efforts of government and civil society complement each other. The focus should be on creating a **self-regulatory mechanism** that defines a healthy relationship between civil society and the government, thereby setting high standards of democratic functioning and accountability.

MCQs

1. With reference to Health Index report by NITI Aayog, consider the following statements:
 1. The Index was launched by NITI aayog in 2017.

2. The Index is developed by NITI aayog , with technical assistance from the WHO , and in close consultation with the Ministry of Health and Family Welfare (MoHFW).
3. Tripura has overall best performance in smaller scale category as per report of 2020-21.
Which of the above statements is/are incorrect?
a) 1 and 2 only **b) 2 only** c) 2 and 3 only d) None
2. Consider the following statements regarding Special Protection Group (SPG)
 1. It was created on the recommendation of the Birbal Nath Committee, 1985.
 2. Presently, Prime Minister Narendra Modi is the only SPG protectee.
 3. The SPG is come under The Ministry of Home Affairs.
 Which of these above statements is/are correct?
a) 3 only b) 1 and 3 only c) 2 only **d) All of the above**
3. The Indian Space Research Organisation is collaborating with the Raman Research Institute (RRI), Bengaluru, an autonomous research institute, to build the X-Ray Polarimeter Satellite (XPoSat) with reference to this context consider the following statements:
 1. XPoSat will study various dynamics of bright astronomical X-ray sources in extreme conditions.
 2. It has been billed as India's first, and only the world's second polarimetry mission.
 3. X-rays have much higher energy and much shorter wavelengths.
 Which of these above statements is/are correct?
a) 3 only b) 1 and 3 only c) 2 only **d) All of the above**
4. Consider the following statements regarding Angel Tax:
 1. It is a tax levied on the capital raised by listed companies in excess of the fair market value.
 2. Angel tax provisions are applicable only for investments received from resident investors.
 Which of the statements given above is/are correct?
a) 1 only b) 2 only c) Both 1 and 2 **d) Neither 1 nor 2**
5. Consider the following statements regarding features of India's New Parliament Building:
 1. The Lok Sabha is based on the theme of our national flower 'lotus'.
 2. The new building has a Constitution Hall for the purpose of showcasing India's democratic heritage.
 Which of the statements given above is/are correct?
a) 1 only **b) 2 only** c) Both 1 and 2 d) Neither 1 nor 2
6. Tina Turner, a legendary musician, belongs to which country?
a) USA b) India c) South Africa d) Kenya
7. Consider the following statement regarding Migration, Mobility Pact with Australia(MMPA):
 1. It is signed between India and Australia.
 2. It is aimed at aimed at promoting two-way exchange of students, graduates, researchers, and business people, and expanding people-to-people ties.
 Which of the statements given above is/are correct?
a) 1 only b) 2 only **c) Both 1 and 2** d) Neither 1 nor 2
8. Consider the following statement regarding US inter-agency estimate data:
 1. India has the lowest child-wasting rate globally, with over 18% of Indian children affected by wasting in 2020.
 2. India had a stunting rate of 31.7 per cent in 2022, down from 41.6 per cent in 2012.
 Which of the statements given above is/are correct?
a) 1 only **b) 2 only** c) Both 1 and 2 d) Neither 1 nor 2
9. Consider the following statement regarding Industrial Corridor Development Project in Andhra Pradesh:
 1. The Asian Development Bank (ADB) and the Government of India have signed a \$ 150 million loan agreement to support the development of infrastructure.
 2. The project aim to promote industrialization, boost manufacturing, enhance competitiveness, and create job opportunities in these areas.
 Which of the statements given above is/are incorrect?
a) 1 only b) 2 only c) Both 1 and 2 d) Neither 1 nor 2
10. Which the following statement regarding Certification of Indian Organic Products is not correct?
a) Food Safety and Standards Authority of India (FSSAI) regulates the manufacture, distribution, sale or import of Organic products through the Food Safety and Standards (Organic Foods) Regulations, 2017 (under FSSA 2006).
b) Participatory Guarantee System (PGS) is Implemented by the Ministry of Agriculture and Farmers Welfare.
c) National Programme on Organic Production (NPOP) is Implemented by APEDA, under the Ministry of Agriculture and Farmers Welfare.
d) NMSA (National Mission for Sustainable Agriculture) Promotes sustainable agriculture.