



Current Affairs of the Day

GS Paper - II

- Issues relating to Poverty and Hunger.
- U.S. allies welcome Israel-Sudan deal but Iran, Palestine cry foul
- 'Once U.S. leaves, Pakistan will gain more space in Afghanistan'

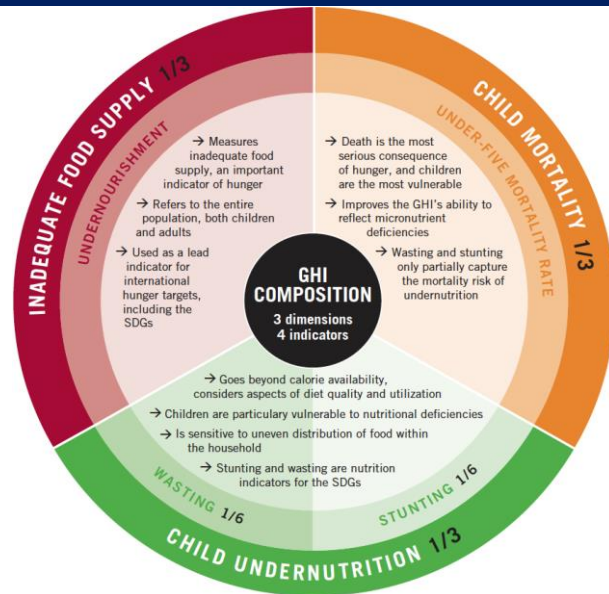
GS Paper - III

- Outlook bleak for Himalayan brown bears
- Room temperature superconductivity, possible but under severe pressure

The chronic battle with malnourishment

GS II: Issues relating to Poverty and Hunger.

The story so far: India has been ranked 94 on the 2020 Global Hunger Index (GHI), lower than neighbours like Bangladesh and Pakistan. The number of young children in India who are very short and thin, reflecting severe undernutrition, puts it alongside the poorest African nations, with some indicators showing actual declines over the last five years.



Understanding GHI

1. The GHI is an annual publication by Concern Worldwide and Welthungerhilfe. It aims to track hunger at global, regional and national levels. It uses four parameters to calculate its scores.
2. One-third of the score comes from the level of undernourishment in a country, which is the share of the population with insufficient caloric intake and uses Food and Agriculture Organization data.
3. The other three parameters are based on children under the age of five years. A third of the score comes from the child mortality rate, which often reflects the *fatal mix of inadequate nutrition and unhealthy environments*.
4. The remaining third of the score is based on child wasting and child stunting.
5. These parameters use information from the World Health Organization, the World Bank and the United Nations, although all these international organisations draw from national data, which, in India's case, includes the National Family Health Surveys (NFHS). There is always a time lag in such data, so the 2020 scores are based on data from 2015-19.
6. This results in a 100-point scale, with zero meaning no hunger at all. Countries scoring 9.9 and less are classified as having **low severity**. A score between 10



and 19.9 is considered **moderate**, that from 20 to 34.9 is **serious**, and a score of 35 or more is **alarming**.

7. These classifications are comparable over time, but the rankings themselves are not comparable, as the number of countries included in each particular year varies.

India's Performance

1. In 2020, India falls in the 'serious' category on the Index, with a total score of 27.2. This is a definite improvement from the situation two decades ago when it scored 38.9 and fell into the 'alarming' category. However, its scores are abysmal when compared to its peers in the BRICS countries. China and Brazil both scored under five, and are considered to have very low levels of hunger. India is tied at the 94th rank out of 107 countries, sharing the rank with Sudan.
2. In terms of overall undernourishment, 14% of India's population does not get enough calories, an improvement from almost 20% in 2005-07. The child mortality rate is 3.7%, a significant drop from 9.2% in 2000. Many countries fare worse than India on these two parameters.
3. India's poor score comes almost entirely from the child stunting and wasting parameters. Almost 35% of Indian children are stunted, and although this is much better than the 54.2% rate of 2000, it is still among the world's worst.
4. Also, 17.3% of Indian children under five are wasted, which is the highest prevalence of child wasting in the world. There is no change from two decades ago when it was 17.1%. In fact, the situation improved to 15% in the 2010-14 data period but worsened again by 2015-19.

Critical Analysis Of Data

1. However, experts say this decline may also be partially due to vagaries in data collection. Hunger is a seasonal phenomenon in many parts of the country, with families dependent on agriculture for their livelihoods, facing lean periods based on the sowing and harvesting cycle.
2. There are seasonality differences between NFHS's third and fourth rounds, meaning that higher levels of wasting may have been seen in the fourth round, on which the latest scores are based because field data was collected after a lean period.

3. However, even the Comprehensive National Nutrition Survey (2016-18) shows the same 17.3% rate of wasting.

The Social And Environmental Factors Behind Low Performance

1. Indian babies show very high levels of wasting very early in their lives, within the first six months. This reflects the poor state of maternal health, more than anything else.
2. Mothers are too young, too short, too thin and too undernourished themselves, before they get pregnant, during pregnancy, and then after giving birth, during breast-feeding. It is more than a health issue, there are social factors like early marriage, neglect of nutritional need of women.
3. Almost 42% of adolescent girls aged 15 to 19 have a low body mass index (BMI), while 54% have anaemia. Almost 27% of girls are married before they reach the legal age of 18 years, and 8% of adolescents have begun childbearing in their teens. Almost half of all women have no access to any sort of contraception. These poor indicators of maternal health have dire consequences for the child's health as well.
4. Poor sanitation, leading to diarrhoea, is another major cause of child wasting and stunting. At the time of the last NFHS, almost 40% of households were still practising open defecation. Only 36% of households disposed of children's stools in a safe manner. One in ten children under the age of five suffers from diarrhoea.

Variability among states

The Comprehensive National Nutrition Survey shows wide variability across States. Almost one in three children in Jharkhand show acute undernutrition, with a 29% rate of wasting. Although this is the worst State by far, other large states such as Tamil Nadu, West Bengal, Madhya Pradesh, Chhattisgarh and Karnataka also have one in five children who are wasted.

Way Forward:

1. There is no single solution. Every kind of household deprivation that makes life difficult for women needs to be dealt with. The focus needs to be on healthy mothers. Need of focused life cycle approach to secure healthy life for

women. Social factors like child marriage, neglect of women nutrition, education family planning need to be resolved.

2. Need comprehensive Political-Social-Economic empowerment of women.
3. Also, poverty, inequality and poor governance need to be removed for long term sustainable impact on the Hunger and Malnutrition.
4. Food insecurity, poor sanitation, inadequate housing, limited access to healthcare — all result in maternal distress that leads to the kind of slow, chronic wasting seen in Indian children.
5. Although India has overall food security with record levels of foodgrain production in recent years, access to healthy food is still difficult for poor households. So access has to be improved.
6. Over the last five years, the Swachh Bharat Mission's push for toilets for all and ending open defecation may have resulted in better sanitation outcomes which could reflect in better maternal and child health in the NFHS round five, which started collecting field data in 2018-19. This should continue along with the availability of safe tap water at all households.

U.S. allies welcome Israel-Sudan deal but Iran, Palestine cry foul

GS II: Bilateral, Regional and Global Groupings and Agreements involving India and/or affecting India's interests.

Sudan and Israel agreed on Friday to normalise relations, in a U.S.-brokered deal to end decades of hostility that was widely welcomed but stirred Palestinian anger.



Highlights:

1. The announcement makes Sudan, technically at war with Israel since its 1948 foundation, the third Arab country to forge diplomatic relations with the Jewish state in the last two months after the Bahrain and UAE.



2. Other U.S. allies, including Germany, Egypt, the United Arab Emirates, Bahrain, welcomed the deal as a boost to stability in West Asia.
3. Meanwhile, Palestinian leaders strongly condemned the deal, echoing their rejection of Israel's normalisation accords with the UAE and Bahrain signed in Washington last month.

Prelims:

1. Countries recently normalized relations with Israel. UAE, Bahrain and recent Sudan. Egypt and Jordan normalized relations way back.

Mains Focus:

1. If at all these deals will peace in West Asia, Implication for Indian geopolitics, trade and Diaspora.

'Once U.S. leaves, Pakistan will gain more space in Afghanistan'

GS II: India and its Neighborhood- Relations.

The Diplomatic mission from Afghanistan is calling for India to take a keener interest in the Afghan situation, that they fear will deteriorate if U.S. forces pull out completely, as they have announced they will, and Doha talks with the Taliban fail to make headway.



Highlights:

1. There are worries that Afghanistan could return to a situation like 1996 when the Taliban took control of Kabul and allowed foreign groups like al-Qaeda and Lashkar-e-Toiba to grow.

2. The mission wants to thank India for its proactive diplomacy in the past and ask India to be more proactive today. Unfortunately, as the U.S. leaves, the Taliban will be more aggressive, and Pakistan will gain more space.
3. Afghan diplomats had spoken of the need for India to remain “in the game”, to have a robust presence in building regional consensus for peace, to help facilitate Intra-Afghan talks, and to support the Afghan government.
4. The mission also asked India to consider talking to the Taliban directly, in an effort to “broaden India’s interests” and to “dilute the influence of others”, pointing to the fact that regional countries, including China, Iran, Pakistan and Russia, had increased their leverage in Afghanistan through engagement with the Taliban. India should do the same.

Main Focus:

1. India’s stand: Afghan-led Afghan-owned peace process in Afghanistan
2. With a lot of in stake, should India directly engage with Taliban and shape the peace process?

Outlook bleak for Himalayan brown bears (HBB)

GS III: Conservation

Bottom line:

1. A Study predicts massive habitat decline by the year 2050 due to climate change
2. Need for **Adaptive Spatial Planning** of protected areas to ensure the survival of the species



Highlights

1. A recent study on the Himalayan brown bear (*Ursus arctos isabellinus*) has predicted a significant reduction in suitable habitat and biological corridors of the species due to climate change, prompting scientists to suggest adaptive spatial planning of the protected area network in the western Himalayas for conserving the species.



2. The Himalayan brown bear is one of the largest carnivores in the highlands of the Himalayas. The study carried out in the western Himalayas by scientists of the Zoological Survey of India (ZSI) predicted a massive decline of 73% of the bear's habitat by the year 2050.
3. Some of the most critical PAs are Great Himalayan National Park, Dachigam National Park, Gangotri National Park, Kistwar National Park, and Kugti Wildlife Sanctuary (WLS), where HBB populations are reported to be present.
4. Furthermore, simulation suggests a significant qualitative decline in remaining habitats of the species within the protected areas of the landscape.
5. In such a situation when the protected areas in the Himalayan region in India and Pakistan lose their effectiveness and representativeness, there is a need to adopt preemptive spatial planning of PAs in the Himalayan region for the long-term viability of the species.
6. The researchers have taken the Himalayan brown bear as an example because it is a top carnivore of the high-altitude Himalayan region. The elevation gradient in which the brown bear is distributed is most vulnerable to global warming as this elevation belt is getting warmer faster than other elevation zones of Himalayas.
7. Such studies are very crucial as the habitat of such species is highly vulnerable to climate and unless we plan in advance, we cannot sustain its population in future.

Prelims Facts:

The Himalayan brown bear (*Ursus arctos isabellinus*), also known as the Himalayan red bear, isabelline bear or Dzu-Teh, is a subspecies of the brown bear and is known from northern Afghanistan, northern Pakistan, northern India, west China and Nepal. It is the largest mammal in the region, males reaching up to 2.2 m (7 ft) long while females are a little smaller. These bears are omnivorous and hibernate in a den during the winter. While the brown bear as a species is classified as Least Concern by the IUCN, this subspecies is highly endangered and populations are dwindling. It is Endangered in the Himalayas and Critically Endangered in the Hindu Kush.

India has four species of bears: Asiatic Black, Sloth, Sun and Himalayan Brown Bear.

All Indian Bear species are listed under Appendix I in CITES and Schedule I of the Wildlife (Protection) Act, 1972. This provides complete protection to the species from hunting and trade.

Key terms for Mains:

1. *Adaptive spatial planning* of the protected area network in the western Himalayas for conserving the species.

Room temperature superconductivity, possible but under severe pressure

GS III: Science and Technology- Developments and their Applications and Effects in Everyday Life.

Discovery: Researches in the U.S. have created a material that is superconducting at 15 degrees Celsius. That is, it shows zero resistance to the flow of electricity through it.

Such a material would have hitherto unheard-of applications from power supplies to quantum computers. The only caveat is that it needs ultrahigh pressure of about 2 million atmospheres to achieve this transition, putting off any thoughts of application to the future. The pressure they needed was 267 Gigapascals or 2.6 million atmospheres. The pressure at the centre of the Earth is 360 GPa, so it is 75% of the pressure at the centre of the Earth.



Breakthrough

The researchers made three tests to verify that this phase was indeed a superconductor:

1. First, they measured resistance as a function of temperature and found that it did fall to a vanishingly small value below the critical temperature.
2. A true superconductor would, if placed in a magnetic field, try to push out the field from its interior.



3. Thirdly, it is known that sufficiently high magnetic fields can destroy superconductivity in a material. The researchers applied high magnetic fields up to 9 teslas and showed the suppression of the transition temperature to lower and lower values as the magnetic field increased.

Prelims:

1. Superconductivity is a phenomenon whereby a charge moves through a material without resistance. In theory, this allows electrical energy to be transferred between two points with perfect efficiency, losing nothing to heat.
2. In an ideal world, we'd all have superconducting materials wired into our electronics and power grids, saving huge amounts of energy and allowing us to cram circuits into confined spaces. Unfortunately, there's a catch. Most superconducting materials only have this useful function at temperatures of just above absolute zero, where atoms barely move.
3. In recent years, researchers have been pushing the temperature limits on how cold a superconducting material needs to be to function. The current record holder is a compound made of sulphur and hydrogen, which can conduct electricity care-free at a relatively warm 203 Kelvin (-70 degrees Celsius or -94 Fahrenheit). The only catch is it requires pressures of 1.5 million atmospheres to form.
4. As physicists learn more about superconducting materials they will develop more accurate models on the phenomenon, perhaps bringing us ever closer to superconductors that can operate comfortably in your pocket.