



drishti

News Analysis (20 Apr, 2019)

drishtiias.com/current-affairs-news-analysis-editorials/news-analysis/20-04-2019/print

Rising Carbon Dioxide Levels & Zinc Deficiency

Rising carbon dioxide levels can **accelerate zinc deficiency** in crops and thus in human consumption, according to a new study titled '**Inadequate zinc intake in India: Past, Present and Future**' by the Harvard T.H. Chan School of Public Health.

- Food crops such as wheat, rice, barley, soya, and field peas, which serve as an important source of dietary zinc for billions of people around the world, have recently been **shown to contain lower concentrations of zinc** and other nutrients when grown under open field conditions.
- The study states that inadequate zinc intake has been rising in India for decades, causing tens of millions of people to become newly deficient in it.
 - The **highest rate of inadequate zinc intake** was concentrated mainly in the **southern and northeastern States** with rice-dominated diets: **Kerala, Tamil Nadu, Andhra Pradesh, Manipur and Meghalaya**.
 - The national rates of inadequate zinc intake has **increased from 17% to 25% between 1983 and 2012**.
 - Rising carbon dioxide levels in the coming decades **could accelerate this trend**.
- Apart from **rising CO₂ emissions**, changing diets and an **aging population** are also seen as factors responsible for increasing zinc deficiency.

Overall urban populations, and wealthier urban groups in particular, showed higher rates of inadequate intake as well, due to a **higher proportion of nutrient-poor fats and sugars in the diet**.

Zinc Deficiency

- Zinc supports cell function, helping an estimated 100 enzymes perform their duties. It plays additional roles in the body, including:
 - boosting immune function,
 - helping cells divide,

- maintaining the sense of smell and taste,
- promoting wound healing,
- Zinc also supports a person's growth and development. As such, it is an essential mineral for pregnant women as well as growing children.
- Human body **does not store zinc**, which means getting enough of the mineral from food is important in preventing a deficiency.
- Inadequate zinc intake can have **serious health consequences**, particularly for young children, who are more susceptible to contracting malaria, diarrhoeal diseases and pneumonia, when suffering from zinc deficiency.

The presence of zinc plays a critical role in **human immune systems**.

- **National grain fortification programmes, increased dietary diversity, bio-fortified crops, and reduced carbon dioxide emissions** could make a difference to slow or reverse the course.

Food fortification

- Food fortification refers to the process of **adding essential micronutrients**, such as vitamins and minerals, to food staples to make them more nutritious.
- Food fortification is an effective strategy to meet the nutritional needs of a large number of people across various sections of the society, including the poor and underprivileged as well as the vulnerable, such as pregnant women and young children.
- Common micronutrients deficient in **Indian diets are iron, iodine, vitamin A, folic acid, vitamin B12 and vitamin D**.
- **Fortification of Vanaspati with Vitamin A and D started more than 50 years ago** and has been **mandatory** in the country **since 1953**.
- The **tremendous success of salt iodization programme** signifies the potential of food fortification.

Salt iodization in India started with the **National Goiter Control Programme in 1962**. It gained momentum in 1980s and mandated the distribution of iodized salt in 1997. **Voluntary wheat flour fortification** were notified in 1970s.

- **Article 47 of the Constitution** documents that it is duty of the state to raise the level of nutrition and the standard of living and to improve public health.

Index of Cancer Preparedness

The **Economist Intelligence Unit (EIU)** has created the Index of Cancer Preparedness (ICP).

- It draws on a wide range of **data relevant to cancer policy and control from 28 countries**.
- The aims of the ICP are to allow benchmarking of national efforts and identify best

practice in addressing the cancer challenge.

Index of Cancer Preparedness (ICP)

- **Australia tops the ICP**, followed by the **Netherlands and Germany**. **Saudi Arabia, Romania, and Egypt face at the bottom in Index.**
- The ICP explores the issue of cancer preparedness through **three broad domains**:
 - policy and planning;
 - care delivery;
 - health systems and governance.
- Four **essentials of cancer preparedness**:
 - essential investment (appropriate spending and resources),
 - roadmap (effective planning),
 - foundation (functioning health systems),
 - intelligence (availability and quality of cancer-related data).

Cancer

- Cancer is a **generic term for a large group of diseases characterized by the growth of abnormal cells** beyond their usual boundaries that can then invade adjoining parts of the body and/or spread to other organs.
- Other common terms used for cancer are **malignant tumors and neoplasms**.
- Cancer is the **second leading cause of death globally** and is estimated to account for **9.6 million death in 2018**.
- **World Cancer Day** is observed on 4th February every year.

Economist Intelligence Unit (EIU)

The Economist Intelligence Unit (EIU), created in 1946, is the research and analysis division of The Economist Group and the world leader in global business intelligence.

India and ICP

- India's overall rank **is 19th** with a score of **64.9**.
- India ranks **17th in** cancer policy and planning, but it has a relatively high score of 80.8.
- India's score largely stems from its strong cancer research and tobacco control measures.
 - It ranked **first for research and third for tobacco control in ICP**.
- India ranks **23rd for its national cancer control plan**.
- With a score of 40.3, **India's healthcare system ranks 25th in the index**, above only Saudi Arabia, Kenya, Egypt.
- India's **healthcare infrastructure is the second worst** among the index countries.

- In its **delivery of cancer care, India ranks 20th with a score of 61.3.**
 - India has a **high standard of clinical guidelines**, a category in which it is ranked first.
 - India falls **short on immunization, screening and early detection.**
-

Special Properties of River Ganga

A study commissioned by the Union Water Resources Ministry to probe the **“unique properties” of the Ganga** found that the river water contains a significantly **higher proportion of organisms with antibacterial properties.**

- Other Indian rivers also contain these organisms but the Ganga, particularly in its upper Himalayan stretches, has more of them.
- The study, **‘Assessment of Water Quality and Sediment To Understand Special Properties of River Ganga,’** began in **2016** and was conducted by the **Nagpur-based National Environmental Engineering and Research Institute (NEERI), a Council of Scientific and Industrial Research (CSIR) lab.**
- As part of the assessment, **five pathogenic species of bacteria (Escherichia, Enterobacter, Salmonella, Shigella, Vibrio)** were selected and isolated from the Ganga, Yamuna and the Narmada and their numbers **compared with the bacteriophages** present in the river water.
 - Because **bacteriophages are a kind of virus that kill bacteria**, they are **frequently found in proximity to each other.**
 - In the river Ganga, the **bacteriophages were detected to be approximately 3 times more** in proportion than bacterial isolates.
 - These bacteriophages hold great potential as an **antibacterial pharmaceutical.**

Other Findings

- The water quality at most locations in the **River remains below the BIS Drinking Water Quality Standards.**
- Heavy metals like **chromium, aluminium, manganese, arsenic, chromium and lead** were found above the Drinking Water Quality Standards at select locations where found.
- Organic contamination, mostly from **domestic sewage** was found.
- The overall water quality **remains below the drinking water standards** for chemical parameters but also pollution due to discharge of domestic sewage warrants immediate attention in controlling sewage and waste disposal even from villages and towns besides cities.
- **Microbiological parameters viz., total coliforms, faecal coliforms and E. Coli** also

show an increasing trend in terms of degree of contamination.

- Major causes of finding **pharmaceutical and hormones in River water** are sewage/industrial wastewater discharge and anthropogenic activities.
 - **Presence of high organic (disposal of ritualistic material and offering such as flower, milk etc.)** and inorganic (such as agricultural and industrial flow containing phosphorus, nitrogen and micro-nutrients) pollutants and disposal of sewage support the growth of planktons in river Ganga. Thus, disposal of **ritualistic material must be prevented from entering the river.**
-

Alexander Statue in Athens

A statue of **Alexander the Great** has been installed in central Athens, Greece. Three decades after it was finished by **Yannis Pappas**, one of the greatest Greek sculptors of the 20th century.

- In the bronze statue, Alexander bears no arms and is depicted at a very young age.
- In the past, statues of the Alexander have been erected in other parts of Greece, but not in Athens.
- The **long delay is mainly due to bureaucratic reasons** and Greek authorities delayed installing so as **not to raise tensions during efforts to resolve a row with neighboring Macedonia** over its name.
- The figure, the history and the legacy of Alexander were found in recent years at the center of the dispute between the two countries over the use of the name Macedonia.
- **The Republic of Macedonia was renamed as Republic of North Macedonia in January 2019** and since the two sides have stepped up efforts to strengthen bilateral cooperation in many sectors.

About Alexander

- **Alexander the Great**, also known as **Alexander III or Alexander of Macedonia** was born in **356 BCE in Pella, Macedonia**. He died on June 13, **323 BCE in Babylon**.
- He was the **king of Macedonia (336–323 BCE), who overthrew the Persian empire**.
- He spent most of his ruling years on an **unprecedented military campaign through Asia and northeast Africa**, and by the age of thirty, he had created one of the largest empires of the ancient world, **stretching from Greece to northwestern India**.

Alexander Invasion of India

- **In 326 BC, Alexander invaded India**, after crossing the river **Indus he advanced towards Taxila**.
- He then challenged **king Porus, ruler of the kingdom between the rivers Jhelum**

and Chenab.

- The Indians were defeated in the fierce battle (**Battle of Hydaspes**).
 - Alexander captured Porus and, like the other local rulers he had defeated, **allowed him to continue to govern his territory**.
 - Alexander remained in India for **19 months (326-325 B.C.)**, which were **full of fighting in July 325 BC** Alexander and his army returned westward for home.
-

Navy to take Part in Fleet Review in China

The **Indian Navy has sent two ships to Qingdao, China, to participate in the International Fleet Review**, to be held later in the month of April as part of the **70th anniversary** celebrations of the **People's Liberation Army (Navy)**.

- The ships are stealth destroyer **INS Kolkata** and fleet tanker **INS Shakti**.
 - INS Kolkata is equipped with state-of-the-art weapons and sensors to address threats in all dimensions of naval warfare.
 - INS Shakti, a replenishment ship, is one of the largest tankers displacing over 27,000 tonnes and capable of carrying 15,000 tonnes of liquid cargo and over 500 tonnes of solid cargo including victuals and ammunition.
- **Pakistan's Navy is not participating in the event.**

The reason could be inability of Pakistan to spare its warships for the event. Currently, there is a heavy deployment of the Indian navy in the Arabian Sea.
- **International Fleet Review (IFR)** is a parade of naval ships, aircraft and submarines, and is organised by nations to promote goodwill, strengthen cooperation and showcase their organisational capabilities.
 - It also serves as an ideal platform for world's navies to showcase their prowess and indigenous ship designing and ship building capabilities in a global/international arena.
 - **In 2018, it was held at Jeju, South Korea.**
 - The **Indian Navy** had last held an International Fleet Review in **February 2016**, in which 50 navies of different countries took part with nearly 100 warships.

India- China Relations

- In 2016, when India organised an International Fleet Review at Visakhapatnam, the People's Liberation Army (Navy) sent two of its guided missile frigates, Liuzhou and Sanya for the show.
- **In 2017**, the relations between the two neighbours nosedived following the **Doklam crisis** in which the border guarding troops had a face-off for 73 days. It took several high-level meetings to set out the road map on improving the relations.
- **In April 2018**, Prime Minister Narendra Modi and China's President Xi held an

informal summit in Chinese city of Wuhan, where they resolved to open a new chapter in their ties, and thus directed their militaries to boost coordination along the nearly 3,500 km Sino-India border.

- **Recently, Chinese foreign minister has indicated that India's refusal to attend the second Belt and Road forum, will not affect relations between the two countries.**

India will boycott the forum as its **protest against** the China Pakistan Economic Corridor (**CPEC**) -- the artery of the Belt and Road project - that cuts through Pakistan-controlled Kashmir.

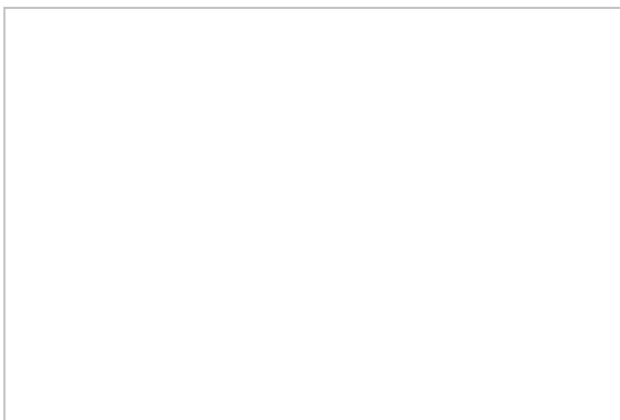
Important Facts For Prelims (20th April 2019)

Swiss Challenge Method

Central Bank of India has recently put up its **two** non-performing assets (**NPA**s) worth Rs 251 crore for **sale through the Swiss challenge method**.

- Swiss challenge method is a **method of bidding**, often used in public projects, in which an **interested party initiates a proposal** for a contract or the bid for a project.
- **The government** then puts the details of the project out in the public and **invites proposals from others** interested in executing it.
- On the receipt of these bids, **the original proposer gets an opportunity to match the best bid**. In case, the original proposer fails to match the bid, the project is awarded to the proposer of the best bid.

Kakapo Parrot (*Strigops habroptila*)



- According to New Zealand's Department of Conservation (DOC), **Kakapos - the world's heaviest species of parrot** - have had their most successful breeding season this year.
- The researchers have said that **climate change might be responsible for changing**

the breeding pattern of these parrots.

- Kakapo parrots (meaning “night parrot” in Maori), also known as **owl parrot**, are **nocturnal and flightless parrots endemic to New Zealand**.
- The kakapos, which currently have a total of 147 adults, were believed to be extinct until some were found again in 1970.
- **IUCN Status: Critically Endangered; CITES: Appendix 1**

Power Surplus Status of India

- India’s **installed generation capacity (344 GW) of power is more than peak demand (170GW)**.
 - However, **due to lack of demand by Discoms’ and loss in transmission**, during peak hours, as much as 175.52 gigawatt (GW) was up against demand of 177.02 GW leaving a deficit of 1.49 GW or 0.8 per cent in 2018-19.
 - This **inhabited India from being power surplus country**.
 - Surplus power occurs when the **power available with distribution companies at a given time exceeds the demand for electricity**.
 - A surplus **could arise due to a fall in the demand for power**, for instance, during an industrial slowdown. Or it could result from an **increase in the power supply**, for instance, when a new generating station is added.
-