Food security and wheat export

- The sudden turnaround in the export policy appears to be on account of fears that low public procurement would affect domestic food security.
- The system of public procurement has been in place since the mid-1960s, and has been the backbone of food policy in India.
- Progressive economists and social scientists have always argued that for a country the size of India, food security has to be ensured through domestic production.
- This summer, procurement of wheat by the Food Corporation of India (FCI) has been very low. Last year, the FCI and other agencies procured 43.34 million tonnes of wheat.
- For the current season, procurement has only been 17.8 million tonnes, as of May 10, 2022.
- Given the low levels of procurement, the Government has reduced the procurement target for the current season from 44.4 to 19.5 million tonnes.
- While wheat production this year has been lower than estimated on account of high heat and other factors in March, there is not a big shortfall in production relative to previous years.
- Wheat production was 103.6 million tonnes in 2018-19, 107.8 million tonnes in 2019-20, and 109.5 million tonnes in 2020-21.
- It was expected to be a record 111.3 million tonnes for the ongoing year (2021-22).
- There is, of course, a projection of a global reduction in production and trade on account of the war in Ukraine.
- Both Russia and Ukraine were major exporters of wheat in the global market and disruptions from the war are affecting countries that relied on imports from these two countries, such as Egypt.
- India has been urged by developed countries to meet this shortfall and provide relief to importing counties.
- It is essential that the PDS and open market operations be used to cool down food price inflation
- To promote production, a key aspect of food policy in India has been to provide remunerative prices to farmers.
- As is well known, after the reports of the National Commission on Farmers, the announced minimum support price (MSP) for wheat has often been inadequate to cover costs of cultivation for several regions and classes of farmers,

especially if comprehensive costs (or Cost C2) are taken as the base.

THE HINDU

Myopia prevalence

- Millions of young children are growing up short-sighted every year because of myopia.
- The World Health Organization (WHO) estimates that there were nearly two billion people with myopia in 2010 a quarter of the human population. By 2030, they project myopia prevalence to reach 3.3 billion people
- Myopia is commonly found in children.
- As they grow and their bodies' change, the length of the eyeball and its power to refract light do not always align, leading to vision that is blurry.
- A pair of spectacles is enough to correct this mismatch. However, spectacles address the symptom and not the cause (eyeball length), so myopia can progress all through childhood.
- Progressive myopia, after a point, leads to 'high' myopia, increasing the risk of retinal detachment, glaucoma or macular degeneration that can cause permanent vision loss.
- A host of environmental and genetic factors determine the onset of myopia. It is believed that exposure to sunlight and a healthy balance between distance- and near work can arrest myopia onset and progression.
- Many children, especially in urban environments, are spending more time indoors and on near-work.
- Be it at school or at home, the quantum of near-work looking at books, television, phones or laptops has increased over the decades.
- Despite a demographic shift towards cities and towns, nearly 65% of India's population still lives in rural areas.
- As urbanisation increases, so does the burden of myopia.
- Myopia can be twice as high among urban children when compared to rural ones.

THE HINDU

Iran regional centrality

- With an area of 1.6 million sq km, Iran is the 18th largest country in the world in terms of area.
- It shares land borders with Pakistan, Afghanistan, Turkmenistan, Azerbaijan, Armenia, Turkey and Iraq and maritime borders with Kuwait, Bahrain, Saudi Arabia, Qatar, the UAE, and Oman.
- In May 2003, and after America's success in the Iraq war, Iran offered

through the Swiss intermediary full negotiations with the U.S. This was ignored by the George Bush administration.

- In October 2003, the Tehran Declaration was reached between Iran and the European Union (EU). Iran agreed to cooperate fully with the International Atomic Energy Agency (IAEA) including the Additional Protocol, and temporarily suspend all uranium enrichment.
- In September and October 2003, the IAEA conducted several facility inspections. In July 2015, the Joint Comprehensive Plan of Action (JCPOA) was concluded between Iran and the P5+1 and the EU.
- The Donald Trump administration certified Iran's compliance with the agreements twice in 2017, but in May 2018, withdrew from it promising a better deal.
- This did not happen. After changes of administration in both Tehran and Washington, quiet negotiations were resumed in Vienna in the expectation of an early success with an Iranian insistence on returning to the original terms of the JCPOA.
- The Ukraine war and the western regime of sanctions on Russia become an impediment; so is the Iranian insistence that U.S. sanctions be lifted on the Islamic Revolutionary Guard Corps, so effective in Iraq, Syria and with Hezbollah, and also playing a role in the Iranian economy.
- Some of the Gulf Cooperation Council states are supporting a powerful U.S.-lobby in this endeavour.
- In the final analysis, the U.S. has a difficult choice between its strategic objectives, requirements, and capabilities in West Asia in relation to Israel and the conservative Arab bloc on the one hand and with the reality of Iran's regional centrality and its implications, on the other.

THE HINDU

Look out Circular

- The story so far:
- On April 5, the Punjab and Haryana High Court while quashing a Look Out Circular (LOC) against petitioner Noor Paul passed omnibus instructions to the respondents including the Ministry of Home Affairs (MHA) and the Bureau of Immigration (BOI) to serve a copy of the LOC to the affected person, state the reasons for issuing the LOC "as soon as possible" and provide a "post-decisional opportunity.

What is a look out circular?

- It is a notice to stop any individual wanted by the police, investigating agency or even a bank from leaving or entering the country through designated land, air and sea ports.
- The immigration is tasked to stop any such individual against whom such a notice exists from leaving or entering the country. There are 86 immigration check posts across the country.

Who can issue LOCs?

- A large number of agencies which includes the Central Bureau of Investigation (CBI), Enforcement Directorate, Directorate of Revenue Intelligence (DRI), Income Tax, State police and intelligence agencies are authorised to generate LOCs.
- The officer should not be below the rank of a district magistrate or superintendent of police or a deputy secretary in the Union Government the MHA in 2018 brought changes to the 2010 guidelines authorising the chairman, managing director and chief executives of all public sector banks to generate LOCs against persons who could be detrimental to economic interests of the country.
- The 2010 Ministry guidelines give sweeping powers to police and intelligence agencies to generate LOCs in "exceptional cases" without keying in complete parameters or case details against "suspects, terrorists, anti-national elements, etc, in larger national interest.
- The MHA has asserted that "LOCs cannot be shown to the subject" at the time of detention nor can any prior intimation be provided.
- The Ministry recently informed the Punjab and Haryana High Court that the LOC guidelines are a secret document and the same cannot be shared with the 'accused' or any unauthorised stakeholder; it cannot be provided or shown to the subject at the time of detention.

THE HINDU

AI Chips

What are AI chips?

- AI chips are built with specific architecture and have integrated AI acceleration to support deep learning-based applications.
- Deep learning, more commonly known as active neural network (ANN) or deep neural network (DNN), is a subset of machine learning and comes under the broader umbrella of AI.
- It combines a series of computer commands or algorithms that stimulate activity and brain structure.

- DNNs go through a training phase, learning new capabilities from existing data.
- DNNs can then inference, by applying these capabilities learned during deep learning training to make predictions against previously unseen data.
- Deep learning can make the process of collecting, analysing, and interpreting enormous amounts of data faster and easier.
- These chips, with their hardware architectures and complementary packaging, memory, storage and interconnect technologies, make it possible to infuse AI into a broad spectrum of applications to help turn data into information and then into knowledge.
- There are different types of AI chips such as application-specific integrated circuits (ASICs), field-programmable gate arrays (FPGAs), central processing units (CPUs) and GPUs, designed for diverse AI application.

Are they different from traditional chips?

- When traditional chips, containing processor cores and memory, perform computational tasks, they continuously move commands and data between the two hardware components.
- These chips, however, are not ideal for AI applications as they would not be able to handle higher computational necessities of AI workloads which have huge volumes of data.
- In comparison, AI chips generally contain processor cores as well as several AI-optimised cores (depending on the scale of the chip) that are designed to work in harmony when performing computational tasks.

What are their applications?

- Semiconductor firms have developed various specialised AI chips for a multitude of smart machines and devices, including ones that are said to deliver the performance of a data centre-class computer to edge devices.
- Some of these chips support in-vehicle computers to run state-of-the-art AI applications more efficiently.
- AI chips are also powering applications of computational imaging in wearable electronics, drones, and robots.
- Additionally, the use of AI chips for NLP applications has increased due to the rise in demand for chatbots

and online channels such as Messenger, Slack, and others.

- They use NLP to analyse user messages and conversational logic.
- Then there are chipmakers who have built AI processors with on-chip hardware acceleration, designed to help customers achieve business insights at scale across banking, finance, trading, insurance applications and customer interactions.

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