

### NEWSPAPER HIGHLIGHT

Madeleine Albright, who fled the Nazis as a child in her native Czechoslovakia during Second World War but rose to become the first woman Secretary of State and, in her later years, a feminist icon, died on Wednesday at the age of 84. She served as America's top diplomat from 1997 to 2001 in the last four years of Clinton administration.

The Norwegian Academy of Science and Letters has awarded the Abel prize for the year 2022 to American Mathematician Dennis Parnell Sullivan, who is with the Graduate School and University Center of the City University of New York and the State University of New York at Stony Brook. The citation mentions that the award has been given, "For his ground breaking contributions to topology in its broadest sense, and in particular its algebraic, geometric and dynamical aspects".

India's annual goods exports crossed the \$400 billion mark for the first time ever, the government announced on Wednesday, buoyed by an increase in shipments of merchandise, including engineering products, apparel and garments, gems and jewellery and petroleum products. Commenting on the development, Commerce and Industry Minister Piyush Goyal said the boost in the exports was likely to bolster India's position in the ongoing negotiations for Free Trade Agreements (FTAs) with several trade partners. "India set an ambitious target of \$400 billion of goods exports and achieves this target for the first time ever. This is a key milestone in our Aatmanirbhar Bharat journey," Mr. Modi said in a message.

Only 12% of the villages that were supposed to get infrastructure for liquid waste management this year have achieved their goal under the second phase of the Swachh Bharat Mission, according to the parliamentary standing committee report on water resources presented in the Lok Sabha on Wednesday. The implementation of solid waste management infrastructure also lagged behind, with only 22% of target villages covered during 2021-22 until February 7.

India imported 651.24 tonnes of gold in financial year 2020-21 as compared with 719.94 tonnes in the year earlier period, the government

### ARSENIC POLLUTION

1. Under Jal Jeevan Mission (JJM), while allocating the funds to States/ UTs, 10% weightage is given to the population residing in habitations affected by chemical contaminants including Arsenic. Arsenic is a natural semi-metallic chemical component of the earth's crust. It is widely distributed throughout the environment in the air, water and land. Inorganic arsenic compounds are more harmful than organic ones.

2. Source - More than 90% of arsenic pollution is inferred to be geogenic. Alluvial sediments are the major source for arsenic contamination in groundwater and there is a relation with plate tectonic processes, mountain building, erosion and sedimentation. The groundwater extracted from unconsolidated sedimentary aquifers, particularly those which are located within the younger orogenic belts of the world, are the worst affected.

3. Impacts - Arsenic poisoning is caused by the ingestion, absorption, or inhalation of dangerous amounts of arsenic. Long-term exposure to arsenic-contaminated groundwater results in severe health issues like skin, lung, kidney and bladder cancer; coronary heart disease; bronchiectasis; hyperkeratosis and arsenicosis. [Treatment involves bowel irrigation, medication and chelation therapy.]

4. Remedial Measures are to be designed based on the source mineral, climatological and hydrogeological scenario of the affected region. The corrective measures available include Substituting high-arsenic sources, such as groundwater, with low-arsenic, microbiologically safe sources such as rain water and treated surface water.

5. Removing arsenic from groundwater using filters, Exploring deeper or alternative aquifers, Treatment of the aquifer itself, Dilution method by artificial recharge to groundwater, Conjunctive use, and Installation of nano-filter, among other procedures.

### HYPERSONIC MISSILES

1. The Russian Ministry of Defence announced that it had used a hypersonic aeroballistic missile for the first time in the war with Ukraine. A hypersonic missile is a weapon system that flies above the speed of Mach 5 i.e. five times the speed of sound. That's about 6,100 kmph. Hypersonic missiles are manoeuvrable, unlike the ballistic missiles that follow a set course or a ballistic trajectory.

2. Advantages - Hypersonic weapons can enable responsive, long range strike options against distant, defended or time critical threats when other forces are unavailable, denied access or not preferred. They use only kinetic energy i.e. energy derived from motion, to destroy unhardened targets or even underground facilities. Detection - Hypersonic weapons could challenge detection and defence due to their speed, manoeuvrability and low altitude of flight. The ground based radars or terrestrial radars cannot detect hypersonic missiles until late in the flight of the weapon.

3. This delayed detection makes it difficult for the responders to the missile attack to assess their options and to attempt to intercept the missile. Countries - While the US, Russia and China are in advanced stages of hypersonic missile programmes, India, France, Germany, Japan and Australia too are developing hypersonic weapons.

4. Kinzhal Hypersonic Missile - The Kh-47M2 Kinzhal is Russia's first operational conventionally armed hypersonic weapon. It is designed to be carried by MiG fighter jets. Kinzhal (or Dagger) is a hypersonic aeroballistic air-to-surface missile. It is said to be a modification of its Iskander missile. Russia claims that Kinzhal has a range of more than 2,000 km, and a speed of Mach 10.

### BS-VI

1. The Supreme Court permitted the registration of BS-VI (BS6) light and heavy diesel vehicles used for public utility and essential services. Bharat stages (BS) emission standards are laid

said. In a written reply to the Lok Sabha, Minister of State for Commerce and Industry Anupriya Patel said the imports stood at 982.71 tonnes in FY 201819. Replying to another question, she informed that the import of toys, games, sports equipment from China is showing a declining trend. "The imports of these products from China have reduced from \$451.71 million in 201819 to \$206.11 million in 2021 (from April 2021 to Jan 2022).

Domestic passenger numbers would exceed pre-pandemic levels by 2023-2024, Minister for Civil Aviation Jyotiraditya Scindia said in the Lok Sabha. "PreCOVID19, there was a passenger throughput of 35 crore, which fell by 66% to 11.5 crore. In 20232024, we will bring this figure to 40 crore passengers," he said. To achieve this, the government would focus on "inclusion, access and affordability".

Domestic banks' share in the overall commercial credit plunged to a low of 34% in FY21 from 56% in FY11 partly due to the pandemic and more because companies were moving away from banks for funds, according to a report by BofA Global Research. The share of nonbanks in commercial credit has more than doubled to 44% while that of foreign banks rose to 22% in FY21. According to BofA analysts, nonfinancial firms have been significantly lowering their reliance on bank credit to meet their funding needs for some time now. Hence, nonbank domestic and foreign sources have risen in prominence.

The Production Linked Incentive (PLI) scheme will account for 1315% of the average annual investment spending in key industrial sectors over the next three four years, according to a report by Crisil. Since its unveiling in March 2020, the PLI scheme has been announced for 15 sectors, involving government incentives to the tune of ₹1.93 lakh crore. Of this, 5060% is to be spent on sectors with domestic manufacturing and export focus, and the rest on import localisation.

Many Indians are cutting down on fried food and even vegetables as the Ukraine war inflates the prices of items from edible oils to fuel, threatening a sputtering recovery in the consumption based economy after two years battling COVID19. Consumers are feeling the bite as companies pass on a surge in costs since the invasion, battling the first increases in five months this week in the prices of diesel and petrol, as well as more expensive vegetable oils.

down by the central government. They regulate the output of air pollutants from internal combustion engine and spark-ignition engine equipment, including motor vehicles. The standards and the timeline for implementation are set up by the Central Pollution Control Board under the Ministry of Environment, Forest and Climate Change. BS1 to BS6 - The first emission norms, based on European regulations, were introduced in India in 1991 for petrol and in 1992 for diesel vehicles.

**2.The primary rules BS-I with the soubriquet Asian nation 2000 were introduced in 2000. The soubriquet BSII (BS2) and BSIII (BS3) were introduced in 2001 and 2005, respectively. BS4 was introduced in 2017.** In 2016, the Indian government announced that the country would skip the BS V norms altogether and adopt BS VI norms by 2020. The government has mandated that vehicle makers must manufacture, sell and register only BS-VI (BS6) vehicles from April 1, 2020.

**3.Difference Between BS4 and BS6-** Both BS-IV and BS-VI are unit emission norms that set the maximum permissible levels for pollutants that an automotive or a two-wheeler exhaust can emit. Compared to the BS4, BS6 emission standards are stricter. Whereas makers use this variation to update their vehicles with new options and safety standards, the biggest modification comes in the permissible emission norms.

**4.Mashelkar Committee 2002-**In 2002, the Government had formed the high powered Mashelkar Committee to decide about the National Auto Fuel Policy, 2003. It accepted the report submitted by the Mashelkar committee. Mashelkar committee proposed a road map for the rollout of Euro-based emission norms in India. It also recommended a phased implementation of future norms, with regulations being implemented in major cities first and extended to the rest of the country after a few years.

## NAVROZ

**1.**The Prime Minister of India has greeted the people on the occasion of Navroz or Nowruz (21 March 2022). Jamshed-i-Navroz/Jamshed-i-Nouroz or Navroz ['Nav' (new) and 'Roz' (day)] is a Parsi New Year believed to be observed by Iranians and Zoroastrians for the past 3,000 years. **2.**It is celebrated on the first day of the Farvardin (first month) of the calendar followed by Zoroastrians. It is a day dedicated to the beginning of the spring and the renewal of nature. It is dedicated to promote peace, solidarity, and friendship among people and different communities.

**3.**History - Festival of Navroz is named after the Persian king, Jamshed, who is credited for creating the Persian or the Shahenshahi calendar.Date - Though celebrated in March globally, Navroz arrives 200 days late in India and is celebrated in August as the Parsis here follow the Shahenshahi calendar.

**4.**In India, people celebrate it twice a year - first according to the Iranian calendar and the second according to the Shahenshahi calendar which is followed by people here and in Pakistan. In 2009, Navroj was listed in the list of UNESCO Intangible Cultural Heritage of Humanity of India.

## KALANAMAK RICE

**1.**It is named Kalanamak Rice because it has black husk (Kala) and it has a mild salty (namak) taste. It is a non-basmati scented rice variety grown primarily in the tarai region of Uttar Pradesh. It is described as Buddha Prasad (an offering to Buddha).

**2.**It has been rebranded as Buddha Rice in order to promote the sale of this GI-tagged rice in Buddhist countries. Traits - Its elongation after cooking - a trait that is the second major determinant of prices in the international market - is also greater. In addition, great head rice recovery after polishing (unbroken grains that can then be marketed) adds to its profitability. **3.**Kalanamak is a successful adapter to usar soils characterised by higher salt concentration and high pH. It is also highly resistant to notorious, and in India common, rice diseases such as panicle blast, stem rot and brown spot. Bacterial blight is quite rarely observed. It is drought tolerant.

**4.**It is normally grown under rain-fed conditions and in uplands. Water requirement is quite low as compared to basmati. Kalanamak is traditionally grown using no fertiliser, herbicide and pesticide, which makes it suitable for organic cultivation.

## LAMITIYE-2022

**1.**An Indian Army contingent has arrived in Seychelles for the ninth edition of the Joint Military Exercise Lamitiye 2022 between the Indian Army and Seychelles Defence Forces (SDF).

**With Europe facing its most precarious future since Second World War, President Joe Biden will huddle with key allies in Brussels and Warsaw this week as the leaders try to prevent Russia's war on Ukraine from spiralling into an even greater catastrophe.**

**Speaking at a United Nations Security Council (UNSC) meeting on cooperation between the United Nations (UN) and the League of Arab States (LAS), Foreign Secretary Harsh Shringla said India and the Arab world share a "civilisational relationship", as he welcomed the normalisation of relations between countries in the region and reiterated India's support for a two-state (Palestine and Israel) solution.**

**2.Seychelles is an Archipelago in the western Indian Ocean, comprising about 115 islands. Lamitiye, which in Creole means friendship, is a biennial training event being conducted in Seychelles since 2001.**

**3.The aim is to build and promote bilateral military relations in addition to exchanging skills, experiences and good practices between both armies.**