Prelim Bits 26-07-2022 | UPSC Daily Current Affairs

Masala Bonds

Kerala Infrastructure Investment Fund Board's 'masala bonds' won't be impacted due to the depreciation of the rupee against the US dollar this year, as the 'masala bonds' are rupee-denominated bonds.

> *Kerala will have to bear higher costs for those foreign currency loans it has taken from multilateral agencies like the World Bank, the Asian Development Bank, etc.*

- **Masala Bonds** are rupee-denominated bonds issued outside India by Indian entities or companies.
- In India, the masala bonds were first introduced by the International Finance Corporation (IFC), a member of the World Bank group, in 2014 in order to fund infrastructure projects.
- In 2015, the RBI put in place a framework for issuance of Rupee denominated bonds overseas within the External Commercial Borrowing (ECB) policy, to facilitate Rupee denominated borrowing from overseas.
- Masala Bonds, like any other off-shore bonds, are debt instruments that help to raise money in local currency from foreign investors.
- Both the government and private entities can issue these bonds.
- Investors outside India who would like to invest in assets in India can subscribe to these bonds.

> *By usage of the term, Masala Bonds are similar to dimsum bonds -bonds issued outside China but denominated in Chinese currency.*
>
> *But they are different from samurai bonds which are Yen (Japanese currency)-denominated bond issued in Tokyo by a non-Japanese company and subject to Japanese regulations.*

- **Criteria** - Masala bonds can be subscribed by any resident of that country, which is member of the Financial Action Task Force.
- The investors who subscribe should be whose securities market regulator is a member of the International Organisation of Securities Commission.
- **Maturity Period** - According to RBI, the maturity period is three years for the bonds raised to the rupee equivalent of 50 million dollars in a financial year.
- The maturity period is five years for the bonds raised above the rupee equivalent of 50 million dollars in a financial year.

- The conversion of these bonds happens at market rate on the date of settlement of transactions undertaken for issue and servicing of interest of the bonds.
- **Impacts** - As the 'masala bonds' are rupee-denominated bonds, the foreign exchange fluctuations would not affect these bonds.
- Thus, if the rupee rate falls, the investor will bear the loss.

Current Situation

- The depreciation of rupee against USD will have a negative impact on India's public sector foreign currency loan of about $130 billion.
    - Public sector foreign currency loans are the total loans taken by all state governments and PSUs, and guaranteed by the Central government.
- Private sector borrowing is not included in this $130-billion loan.
- The financing cost of all USD borrowing of both private and public sector increased by 6.8%, in addition to the applicable interest rate.
- As our external loans are less than 4% of our debt, the impact of rupee depreciation impact on the state's finances will only be marginal.

> *A big positive in the foreign exchange fluctuation is the loans taken from the Japanese funding agency JICA. The rupee appreciated against JPY by around 14.70% in the last 12 months, so the borrowing cost is reduced.*

Reference

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2. http://www.arthapedia.in/index.php/Masala_Bonds
3. https://cleartax.in/s/masala-bonds

Mahuli Group of Temples

The National Monument Authority (NMA) is going to submit a report on comprehensive development of Mahuli group of temples to the Ministry of Culture.

- Also known as **Dakshin Kashi**, the Mahuli Group of Temples are located in Mahuli near Satara in **Maharashtra.**
- It is situated at confluence of the rivers Krishna and Venna.
- These are famous group of 5 temples belonging to 11th and 12th CE in Hemadpanthi style of architecture.

> *Hemadpanthi style is named after its founder, Hemandpant, who was the Prime Minister at the court of Seuna Yadavas of Devagiri.*

- Vishweshwar Temple side is called "Sangam Mahuli" whereas Rameshwar Temple side is called "Kshtra Mahuli".
- This area has the samadhis of great Maratha queens Rani Tarabai Bhosle and Rani

Yesho Bai Bhosle.

Reference

1. https://pib.gov.in/PressReleaseIframePage.aspx?PRID=1838980
2. https://www.indianarrative.com/culture-news/maharashtra-s-mahuli-group-of-temples-set-for-a-makeover-soon-18184html
3. https://chitrolekha.com/shree-kshetra-mahuli-satara-maharashtra/

Starlink Mission

Elon Musk's SpaceX has launched the Starlink as its 32nd launch of 2022 using its workhorse Falcon 9 rocket.

- Starlink is a constellation of broadband satellites in the low-Earth orbit.
- Announced in 2015, the Starlink project is a satellite constellation development project underway by SpaceX.
- Under the project, SpaceX intends to evolve into a constellation of nearly 12,000 satellites.
- The aim is to provide low-cost and reliable space-based Internet services to the world.
- This is a project to develop a low-cost, high-performance satellite bus and requisite customer ground transceivers to implement a new space-borne Internet communication system.
- This will offer speeds of up to 1 Gbit/s, with latencies between 25 ms and 35 ms.
- The Starlink satellites carry **Hall thrusters,** which **use electricity and krypton gas** to generate an **impulse,**
    1. To manoeuvre in orbit,
    2. To maintain altitude and
    3. To guide the spacecraft back into the atmosphere at the end of their mission.
- SpaceX has launched Starlink satellites to space quicker than its rivals in the satellite internet race, such as OneWeb, due in part to
    1. Falcon 9's rapid reusability and
    2. The edge associated with using in-house rockets.
- **Related Links** - OneWeb (Internet from the Sky)

Reference

1. https://indianexpress.com/article/technology/science/spacex-whizzes-past-annual-launch-record-with-starlink-mission-8048414/
2. https://directory.eoportal.org/web/eoportal/satellite-missions/s/starlink
3. https://spaceflightnow.com/2022/07/24/falcon-9-starlink-4-25-live-coverage/

National Mineral Exploration Trust

- The Mines and Minerals (Development and Regulation) Act (MMDR Act), 1957 was amended in March 2021.
- The amended Act mandates National Mineral Exploration Trust (NMET) as a nonprofit **autonomous** body.
- The NMET is a Trust set up by the Central Government under the Ministry of Mines.

- It was set up for the purposes of **regional (inter-state) and detailed exploration** of minerals with special emphasis to strategic and critical minerals.
- This exploration is done using the NMET funds accrued to it and in such manner as prescribed by the Central Government.
- The holder of a mining lease or a prospecting licence-cum-mining lease has to pay to the NMET, 2% of the royalty paid by it.
- Such contributions are made to the relevant state government along with royalty payments, and the state government, in turn, transfers the amount to NMET.

MET is similar to the District Mineral Foundation set up under the same Act, but with

1. *Different rate of contribution (2% instead of 10-30%),*
2. *Different level of operation (boosting exploration effort instead of enhancing welfare of the mining affected) and*
3. *comes under different jurisdictional authorities (central Government instead of state governments)*

Reference

1. https://pib.gov.in/PressReleasePage.aspx?PRID=1844631
2. http://arthapedia.in/index.php/National_Mineral_Exploration_Trust
3. https://theprint.in/economy/governing-body-of-national-mineral-exploration-trust-to-meet-on-13th-april/912039/

Plastics Alternative Study - NITI Aayog

A NITI Ayog report has suggested on plastic alternatives or technologies making plastic degradable.

- **Global Trends** - Globally, 97-99% of these plastics are derived from fossil fuel feedstock while the remaining 1-3% come from bio (plant) based plastics.
- The amount of plastic that is produced every year has increased exponentially in just a human lifetime, i.e. from 2 million tons (1950) to 381 million tons (2015).
- **Indian Trends** - The Indian plastics industry started in 1945 and has been growing over the years.
- From 0.9 million tons in 1990 to 18.45 million tons in 2018, plastic consumption has grown 20 times since then.
- The plastics industry is one of the biggest generators of employment in the country, valued to be around INR 5.1 lakh crore (USD 73 billion).
- **Recommendations** - Develop emerging technologies - additives can make plastics biodegradable polyolefins (such as polypropylene and polyethylene)
- Use of Bio-plastics: as a cost-effective alternative to plastics
- Appreciate the contribution of the Informal sector and vulnerable groups in recycling waste
- Use Extended Producer responsibility to minimize waste
- Levelling and collection of compostable and biodegradable plastics

- Transparency: Disclose data on waste generation, collection and disposal
- Avoid greenwashing (the process of conveying misleading information about how a company's products are more environmentally sound)
- **Techniques**
    1. Prevention of macroplastics - Stormwater and wastewater filters, Laundry balls, Residential wastewater treatment, etc
    2. Collection of macroplastics - River booms, Sand filters, Large-scale booms, Drones and robots, Boats and wheels, Detection aids, Waterway litter traps, Vacuum, Air barrier, etc.,

Best Practices

- Edible Seaweed Cups (Indonesia): Seaweed can grow up to 60 times faster than land-based plants, making it an important carbon sink.
- A US-based firm has created algae-blended ethylene-vinyl acetate transforming air and water pollution (ammonia, phosphates, and carbon dioxide) into plant biomass rich in proteins.
- A UK firm has invented the only commercially available zero plastic recycled paper bottle in the world.
- In 2020, a Scotland-based paper manufacturing company developed a sustainable wood-based alternative to plastic packaging.
- A UK-based company has developed an additive which, when added to the masterbatch of polyolefins, i.e., PE and PP, onsets the degradation.

Plastic Alternatives

- The study also draws two alternate scenarios
    1. Improve waste management infrastructure as per capita GDP grows and
    2. Reduce plastic use demand per capita with a fraction of plastic in municipal solid waste capped at 10% by 2020 and 5% by 2040, waste management gradually improves as in the previous scenario.
- **Bio-plastics** encompass many materials that are either bio-sourced or biodegradable or both and are made from renewable biomass resources, (corn starch/ sugarcane/ cassava) - might be biodegradable or not.
- **Biodegradable plastic** means that plastics, other than compostable plastics, which undergo complete degradation by biological processes
- It requires ambient environmental (terrestrial or water) conditions, in specified time periods, without leaving any micro plastics, or visible, distinguishable or toxic residue, which has adverse environment impacts, adhering to laid down standards of BIS and certified by CPCB.
- **Compostable plastics** mean plastics that undergo degradation by biological processes.
- During composting, they yield CO2, water, inorganic compounds and biomass at a rate consistent with other known compostable materials, excluding conventional petro-based plastics, and do not leave visible, distinguishable or toxic residue.
- These can be plantbased, but can also be petroleum-based as well.
- **Oxo-degradable/** oxo-biodegradable plastics are conventional plastics such as PE, which include an additive to help them break down into smaller fragments.

- They could lead to microplastic leakage in the environment.

Reference

https://www.niti.gov.in/sites/default/files/2022-07/Plastics%20Alternative%20Study_Final_Report_compressed.pdf

