DAILY CURRENT AFFAIRS 31-05-2024

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An overview of Amrut scheme

Syllabus: GS-2; Government policies and Interventions

Context

- *Around 36% of India's population is living in cities and by 2047 it will be more than 50%.*
- *The World Bank estimates that around $840 billion is required to fund the bare minimum* **urban infrastructure** *over the next 15 years.*
- *This article will be discussing about AMRUT (Atal Mission for Rejuvenation and Urban Transformation) scheme which was a flagship programme launched by the NDA-1 government in June 2015, with its 2.0 version launched on October 1, 2021.*

What is the AMRUT scheme?

The mission was drawn to cover 500 cities and towns with a population of over one lakh with notified municipalities.

The purpose of the AMRUT mission was to

(i) ensure that every household has access to a tap with assured supply of water and a sewerage connection

(ii) increase the value of cities by developing greenery and well-maintained open spaces such as parks and

(iii) reduce pollution by switching to public transport or constructing facilities for non-motorised transport.

- *The total outlay for AMRUT was ₹50,000 crore for five years from FY 2015-16 to FY 2019-20.*
- *AMRUT 2.0 was aimed at making cities* **'water secure'** *and providing functional water tap connections to all households in all statutory towns.*
- *Ambitious targets were set up such as providing 100% sewage management in 500 AMRUT cities.*
- *The total outlay for AMRUT 2.0 is ₹2,99,000 crore, with the Central outlay being ₹76,760 crore for five years, and the rest of the amount to be mobilised by the States and cities.*

How much money has been utilised?

- *The AMRUT dashboard shows that as of May 19, 2024, a sum of ₹83,357 crore has been dispersed so far.*
- *This amount has been utilised to provide a total of 58,66,237* **tap connections**, *and 37,49,467* **sewerage connections**.

- *A total of 2,411* **parks** *have been developed, and 62,78,571* **LED lights** *have been replaced.*
- *These works include the contributions made by States and cities.*

What is the reality?

- *It is estimated that about 2,00,000 people die every year due to inadequate water, sanitation and hygiene.*
- *In 2016, the* **disease burden due to unsafe water and sanitation per person was 40 times higher in India than in China.**
- *This has not improved much.*
- *Huge amounts of waste water and little treatment enhances the vulnerability and incidence of diseases.*
- *Around 21 major cities are going to run out of ground water.*
- *In a NITI Aayog report it was stated that* **40% of India's population will have no access to drinking water by 2030.**
- *Nearly 31% of urban Indian households do not have piped water; 67.3% are not connected to a piped sewerage discharge system; and average water supply per person in urban India is 69.25 litres/day, whereas the required amount is 135 litres.*
- *Additionally, air quality in AMRUT cities and in other large urban settlements continue to worsen.*
- *A National Clean Air Programme was launched by the central government in 2019, as AMRUT 2.0 focused only on water and sewerage and because the air quality concerns of AMRUT 1.0 were far from addressed.*

What went wrong?

- *The basic fundamental of the scheme was erroneously constructed. Instead of a* **holistic approach,** *it took on a* **project-oriented attitude**.
- *Furthermore, AMRUT was* **made for cities with no participation from the cities.**
- *It was quite mechanical in design, with hardly any organic participation of the elected city governments, and driven by mostly private interests.*
- *The project was owned by bureaucrats, parastatals, and large technology-based companies.*
- *Peoples' representatives are completely missing, in violation of the* **74th constitutional amendment.**
- *Moreover, water management in cities must factor in climate and rainfall patterns of the area and existing infrastructure of combined sewers.*

Way forward

- *The scheme needs* **nature based solutions** *and a* **comprehensive methodology** *with a* **people centric approach** *and empowering local bodies.*

Sovereign bond yields

Syllabus: GS-3; Money Market

Context

- *Sovereign yield falls to near 1-year low post RBI's dividend payout*

About

- *A sovereign bond yield is the* **interest rate a national government pays to buyers of its debt securities,** *also known as sovereign bonds, to service its outstanding bonds.*

Why?

- **Governments issue sovereign bonds to raise capital for spending**, *such as financing war efforts.*
- *Sovereign bonds can be denominated in either the local currency or in a global currency such as the U.S. dollar or the euro.*

Risk?

- *Sovereign bond yields are similar to corporate bond yields and depend on the risk for the bondholders.*
- *Risk factors include* **political risks, economic uncertainties, and exchange rates** *if the debt is denominated in a foreign currency.*
- *As a result, sovereign bond yields are higher than average for risky issuers and lower than average for highly-rated issuers.*

Sovereign Bond Ratings

- *The creditworthiness of sovereign bonds is typically based on the perceived financial stability of the issuing government and its ability to repay debts.*
- *These ratings are based on factors that include:*
    - *Gross domestic product (GDP) growth*
    - *The government's history of defaulting*
    - *Per capita income in the nation*
    - *The rate of inflation*

- *The government's external debts*
- *Economic development within the nation*

Manama Declaration

Syllabus: GS-3: Economy-International Institutions.

Context:

- *The* **fifth Manama Declaration**, *named after the Bahraini capital where the 2024* **World Entrepreneurship Investment Forum** *(WEIF) has been running since 28th May 2024.*

Manama Declaration Highlights:

- *Emphasizes promoting new sectors like the* **creative or 'orange economy'.**
- *Advocates for* **embracing digital transformation**, *including AI.*
- *Calls for* **implementing smart farming practices** *to create jobs and achieve economic development.*

Collaborative Efforts:

- *Governments, private sector, academia, civil society, media, and international organizations urged to cooperate.*
- *Aim is to facilitate* **entrepreneurship and innovative enterprises** *for achieving the Sustainable Development Goals (SDGs) by 2050.*

Objectives of the Declaration:

- *Promote entrepreneurship and innovation for SDG achievement.*
- *Calls for international* **support for women and youth** *in post-conflict areas.*

Presentation and Conclusion:

- *The declaration will be presented to the* **UN General Assembly**.
- *The WEIF will focus on* **'women, peace, and security'** *on its last day, aiming to promote stability in conflict-affected areas by supporting female entrepreneurs.*

World Entrepreneurship Investment Forum (WEIF) for UPSC

- *The WEIF is an annual forum initiated by the* **United Nations Industrial Development Organization (UNIDO)** *in 2015.*
- *Focuses on* **entrepreneurship, innovation, and investment** *for sustainable development.*

Key Objectives:

- **Connecting entrepreneurs and investors**: *Creates linkages and partnerships between entrepreneurs globally.*
- **Sharing best practices**: *Fosters knowledge exchange on building an ecosystem for entrepreneurship and attracting investment.*
- **Promoting impactful investment**: *Highlights the role of investment in achieving Sustainable Development Goals (SDGs).*

Nephrotic syndrome

Syllabus: GS-3; General Science

Context

- *The study shows major advancement in the process of identification and tracking of renal illnesses linked to nephrotic syndrome.*

About

- *Nephrotic syndrome is a* **kidney disorder** *that* **causes the body to pass too much protein into the urine.**
- *It's caused by damage to the* **small blood vessels** *in the kidneys that filter waste and excess water from the blood.*

- *This damage increases the permeability of the basement membrane in the* **renal glomerulus**, *which leads to a range of symptoms:*
    - *Protein in the urine: Also known as massive proteinuria, this is greater than 40 mg/m^2 per hour*
    - *Low blood albumin levels: Also known as hypoalbuminemia, this is less than 30 g/L*
    - *High blood lipids: Also known as hyperlipidemia*
    - *Significant swelling: Also known as edema, this most commonly occurs around the eyes, abdomen, feet, and legs*
    - *Other symptoms: May include weight gain, feeling tired, foamy urine, puffy eyelids, loss of appetite, and a greater chance of catching infections*

Causes

Nephrotic syndrome can be caused by a number of things, including:

- *Kidney diseases*
- *Congenital infections*
- *Diabetes*
- *Systemic lupus erythematosus*
- *Neoplasia*
- *Certain drug use*

About the study

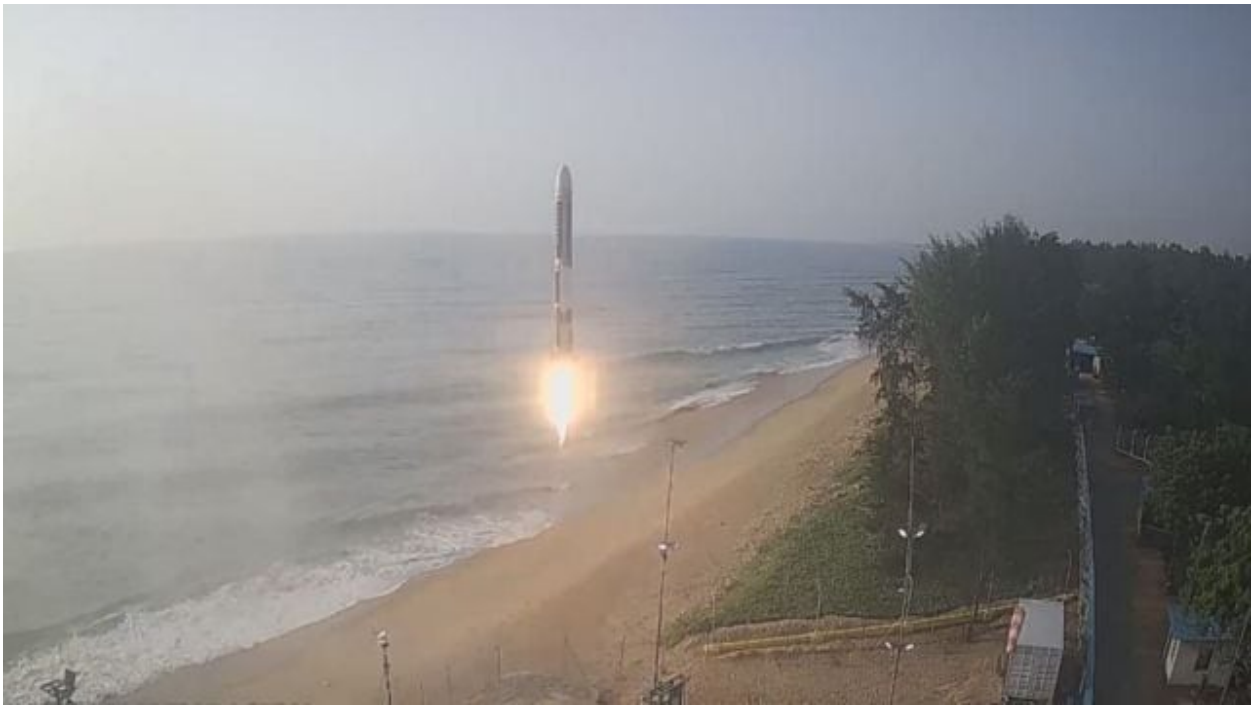
- *The study, conducted across Europe and the USA, introduced a novel approach combining immunoprecipitation with* **enzyme-linked immunosorbent assay (ELISA)** *to reliably detect anti-nephrin autoantibodies.*
- *By employing a hybrid methodology, scientists discovered that anti-nephrin autoantibodies serve as a dependable biomarker for monitoring the advancement of the disease, paving the way for more individualized therapeutic strategies.*
- *To further investigate the impact of nephrin immunisation on kidney function and disease, researchers administered laboratory-made nephrin protein to mice, creating a condition akin to MCD in the mice.*
- *Immunisation led to the phosphorylation of nephrin and notable alterations in cell structure, indicating the involvement of antibodies targeting nephrin in podocyte malfunction and nephrotic syndrome.*
- *Remarkably, unlike other models necessitating multiple immunisations, this model induced swift disease manifestation with a single immunisation, even at low antibody concentrations.*

India's 1st semi-cryogenic rocket Agnibaan

Syllabus: GS-3; Space Technology

Context

- *Chennai-based space startup* **AgniKul Cosmos** *successfully test-launched India's first semi-cryogenic rocket — Agnibaan* **SOrTeD (Sub Orbital Technology Demonstrator)** *— after four of its previous attempts had failed.*



Features

Agnibaan has features that make it a key achievement.

- *A* **plug-and-play engine configuration** *would allow the precise tailoring of the rocket to meet mission objectives and adjustments to fit commercial requirements.*
- *This feature makes Agnibaan, which would be available for commercial use, versatile, with a potential for various applications.*
- *Agnikul Cosmos has also pointed out that Agnibaan, unlike conventional rockets launched from guide rails, will lift off vertically and follow a predetermined trajectory while performing a* **precisely orchestrated set of manoeuvres** *during flight.*

More to know

Semi-cryogenic engine

- *Agnibaan is a* **single-stage** *launch rocket powered by an Agnilet semi-cryogenic engine***,** *i.e., an engine fuelled by a* **combination of liquid and gaseous propellants***.*
- *A semi-cryogenic engine remains at temperatures higher than cryogenic but colder than traditional liquid rocket engines.*
- *A semi-cryogenic engine also can* **provide more thrust to rockets***, helping carry higher payloads than cryogenic engines running on only gaseous propellants.*
- *So, Agnibaan paves the way for* **heavy-lift capability rockets,** *marking a significant development in India's space sector.*
- *Moreover, semi-cryogenic rockets are* **environment-friendly and cost-effective***.*

Significance

- *All the vehicle was completely designed in-house and powered by the* **world's first single piece 3D-printed engine** *and also happens to be India's first flight with a semi-cryo engine.*
- *This is a huge boost and a proud moment for India's thriving* **private space industry** *and just a glimpse into what the future holds for us*