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Asteroids as Foods

A study published in The International Journal of Astrobiology suggests that astronauts could use asteroids to meet their nutritional needs.

- **Concept** - The idea is to extract and convert the carbon from space rocks into something edible.
- **Principle** - Asteroids share similarities with plastics regarding how microbes interact with them.

Asteroids are remnants of planetary formation and they circle the Sun in a zone lying between Mars and Jupiter. The circular chain of asteroids is called the asteroid belt.

- **Conversion of plastic into food** - Plastic wastes are broken down into solid, gas and oil through the process of *pyrolysis*.
- The *oil is then fed to bacteria* in a bioreactor, producing a nutritious biomass.

Pyrolysis uses heat to break down combustible materials in the absence of oxygen, producing a mixture of combustible gases, liquids and solid residues.

- **Microbes in meteorite** - It was observed that microbes thrived on the meteorite material.
- **Significance** - It addresses the limitations of the amount of dried food astronauts can carry.

Some astronauts have grown food in space, such as chillies and lettuce.

- It can also help in space farming that hasn't evolved yet.
- It is reported that [asteroid Benu](#) when broken down by microbes, even inefficiently could sustain astronauts for up to 600 years.
- **Challenges** - Extensive toxicity testing is needed to ensure that the biomass created for astronauts is safe to eat.

Reference

[NDTV| Asteroids as Food](#)

India-UAE Bilateral Investment Treaty 2024

Recently, India-UAE Bilateral Investment Treaty (BIT) came into effect.

- **Need** - The earlier Bilateral Investment Promotion and Protection Agreement (BIPPA) between them expired in September 2024.
- **Signed in** - February 2024 at Abu Dhabi
- **Entered into force** - With effect from August 2024.
- **Bilateral trade** - UAE is the 7th largest with a share of 3% in the total Foreign Direct Investment (FDI) received in India
 - Cumulative investment of approximately \$19 Billion from April 2000- June 2024.
- India also makes 5% of its total Overseas Direct Investments in UAE to the tune of \$15.26 Billion from April 2000 - August 2024.
- **Importance of BIT 2024** - It gives continuity of investment protection to investors of both the countries

Key features of India-UAE BIT 2024

- Closed asset-based definition of Investment with coverage of Portfolio Investment.
- Treatment of Investment with obligation for no denial of justice, no fundamental breach of due process, no targeted discrimination and no manifestly abusive or arbitrary treatment.
- Investor-State Dispute Settlement (ISDS) through arbitration with mandatory exhaustion of Local remedies for 3 years
- General and Security Exceptions
- Right to Regulate for State
- No investor claim in case investments is involved with corruption, fraud, round tripping etc.
- Provision on National Treatment
- Treaty for protection to investments from Expropriation
- Treaty for Transparency, Transfers and Compensation for losses.
- Scope carve out for measures such as those related to taxation, local government, government procurement, subsidies or grants and Compulsory license.

Reference

[PIB| Bilateral Investment Treaty of India-UAE Comes into Effect](#)

Nutrition Support for TB Patients and their Families

Union Health Minister Unveils Key Initiatives to boost Nutrition Support for TB Patients and their Families

- **Ni-Kshay Poshan Yojana (NPY)** - Nutrition support under this has been increased from existing Rs. 500 per month/patient to Rs. **1,000/month/patient** for entire duration of the treatment.
- All TB patients will now receive a nutritional support of Rs. 3,000 to Rs.6,000 under Ni-Kshay Poshan Yojana (NPY).

- It will benefit all *25 lakh TB patients in a year*.
- Till date, Rs.3,202 crores have been disbursed to 1.13 crore beneficiaries through Direct Benefit Transfer under this.
- **Energy Dense Nutritional Supplementation (EDNS)** - It would be provided to all eligible patients ***for the first 2 months of their treatment***.
- Patients having *BMI less than 18.5 kg/m²* at the time of diagnosis are eligible for this scheme.
- It would cover *approximately 12 lakh underweight patients*.
- It move will cost the Government of India approximately an additional Rs.1,040 crores to be shared between the center and states on 60:40 basis.
- **Ni-Kshay Mitras** - It provides for nutritional support to Tb patients under Pradhan Mantri TB Mukh Bharat Abhiyaan (PMTBMBA).
- Its scope has been expanded to provide nutritional support *to the family members (household contacts)* of TB patients.
- It provides for distribution of food baskets with a view to improve the immunity of the family members of TB patients.
- It would lead to a significant reduction in out-of-pocket expenses (OOPE) incurred by TB patients and their families.
- **Significance** - These measures are expected to aid nutritional recovery, improve response to treatment and outcomes and reduce mortality due to TB in India.

Reference

[PIB| Nutritional Support to TB Patients and their Families](#)

Codex Committee on Nutrition and Foods for Special Dietary Uses (CCNFSDU)

India Participates in 44th Session of Codex Committee on Nutrition and Foods for Special Dietary Uses.

- **Codex Alimentarius** - It is the international food standards, guidelines and codes of practice for the safety, quality and fairness in international food trade.
- **Established in** - 1963
- **Functions of CCNFSDU** - To study specific nutritional problems assigned to it by the Commission and advise the Commission on general nutrition issues.
- To draft general provisions, as appropriate, concerning the nutritional aspects of all foods.
- To develop standards, guidelines or related texts for foods for special dietary uses, in cooperation with other committees where necessary.
- Endorse provisions on nutritional aspects proposed for inclusion Codex standards, guidelines and related text.
- **India's Representatives** - Food Safety and Standards Authority of India, the Ministry of Health and Family Welfare, and the Ministry of Women and Child Development
- **Matters Discussed** - Various food safety, consumer health, and trade-related issues.
- **India's Contribution** - It provided valuable insights on nutrient reference values for persons aged 6 to 36 months.
- India disagreed with the EU's proposal for sensory testing on assessing the relative sweetness of carbohydrate sources.

- **India's Demand** - Update Probiotic Guidelines for foods and food supplements and Nutrient Standards.
- During the adoption of the final report, India's suggestions were officially incorporated, marking a significant contribution to shaping global food safety and nutrition standards.
- **Joint Statement on Healthy Diet Principles** - During the session, FAO/WHO announced plans for a Joint Statement on Healthy Diet Principles.
- **Food and Diet domain** - This new domain was introduced by FAO on its FAOSTAT database.

References

1. [PIB | Codex Committee on Nutrition and Foods for Special Dietary Uses](#)
2. [FAO | CCNFSDU](#)
3. [FAO | Codex Alimentarius](#)

Sports Authority of India (SAI)

Sports Authority of India (SAI) signs MoU with Government of Maharashtra to develop National Centre of Sports Excellence in Mumbai.

- **SAI** - It was set up as a Society registered under Societies Act, 1860 in pursuance of the Resolution of the Department of Sports, Govt. of India.
- **Established in** - 1984.
- **Objective** - Promoting sports and achieving sporting excellence at the national and international level.
- SAI Sports complex is located in Kandivali.
- **Role** - Training and preparation of National teams.
- Support Training with Scientific & Sports Equipment and scientific personnel.
- Monitor and enhance Performance with a scientific evaluation system.
- Implement various schemes like Khelo India , Assistance to NSF, TOPS, FIT India.
- Offering academic programmes in physical education and sports.
- Sports Infrastructure Development & Maintenance.
- Maintaining and utilizing Stadia in Delhi
 - Jawaharlal Nehru Sports Stadium
 - Indira Gandhi Sports Complex
 - Major Dhyan Chand National
 - Dr. Syama Prasad Mookherjee Swimming Pool Complex
 - Dr. Karni Singh Shooting Ranges
- **Strategies** - International collaboration for sports development and sporting excellence.
- Evolving a structured system for spotting and increasing the talent pool in all Olympic disciplines and selected indigenous and other sports.
- Focused attention on areas and regions having potential of excellence in the specific sports disciplines.
- Encouraging active involvement of the corporate sector in developing academies and Centres of Excellence for different disciplines
- Ensuring the availability of quality sports goods and the development of indigenous

sports goods industry.

References

1. [PIB | SAI](#)
2. [SAI | SAI](#)

