

POLITY AND GOVERNANCE**Trends in Urban Local Bodies (ULBs) finance and spending**

CONTEXT: Recently, the Indian Institute for Human Settlements (IIHS) analysed data from 80 Urban Local Bodies (ULBs) across 24 States between 2012-13 and 2016-17 to understand ULB finance and spending, and found some key trends.

About Urban Local Bodies (ULBs)

- They are small local bodies that administer or govern a city or a town of specified population.
- They are vested with a long list of functions delegated to them by the state governments.
 - These functions broadly relate to public health, welfare, regulatory functions, public safety, public infrastructure works, and development activities.
- **Types**
 - There are several types of Urban Local bodies in India such as Municipal Corporation, Municipality, Notified Area Committee, Town Area Committee, Special Purpose Agency, Township, Port Trust, Cantonment Board etc.
- **Beginning of Urban Empowerment:**
 - The 74th Constitution Amendment Act was passed in 1992 mandating the setting up and devolution of powers to urban local bodies (ULBs) as the lowest unit of governance in cities and towns.
 - Constitutional provisions were made for ULBs' fiscal empowerment.
- **Key revenue sources**
 - The ULBs' key revenue sources are taxes, fees, fines and charges, and transfers from Central and State governments, which are known as intergovernmental transfers (IGTs).
 - The share of own revenue (including revenue from taxes on property and advertisements, and non-tax revenue from user charges and fees from building permissions and trade licensing) to total revenue is an important indicator of ULBs' fiscal health and autonomy.
 - This ratio reflects the ULBs' ability to use the sources they are entitled to tap, and their dependency on IGTs.
 - Cities with a higher share of own revenue are more financially self-sustaining.

Findings of Recent study

- ULBs' own sources of revenue were less than half of their total revenue, with large untapped potential.
 - The ULBs' own revenue was 47% of their total revenue.
- ULBs still lacked revenue buoyancy as their share in GDP of own revenue was only 0.5% for the five-year period.
- Property tax, the single largest contributor to ULBs' own revenue, accounted for only about 0.15% of the GDP.
 - The corresponding figures for developing and developed countries were significantly higher (about 0.6% and 1%, respectively) indicating that this is not being harnessed to potential in India.
- Stable and predictable IGTs are particularly important since ULBs' own revenue collection is inadequate.
 - While dependence on IGTs dipped over the years due to modest increase in own revenue, the scale of IGTs in India remained at around 0.5% of GDP, which is far lower than the international average of 2% to 5% of GDP.
- Operations and maintenance expenses are on the increase but still inadequate.
 - O&M expenses are crucial for the upkeep of infrastructure and for maintaining quality of service delivery. The share of O&M expenses in ULBs' total revenue expenditure increased from about 30% in 2012-13 to about 35% in 2016-17.

Issues faced by ULBs

- ULBs across the country lack autonomy in city management and several city-level functions are managed by parastatals (managed by and accountable to the state).
- Several taxation powers have also not been devolved to these bodies, leading to stressed municipal finances.
 - These challenges have led to poor service delivery in cities and also created administrative and governance challenges at the municipal level.

- Indian ULBs are amongst the weakest in the world in terms of fiscal autonomy and have limited effective devolution of revenue.
- They also have limited capacity to raise resources through their own sources of revenue such as property tax.
- Municipal administration in India suffers from staffing issues which leads to a failure in delivering basic urban services.
 - These include growing fiscal deficits, constraints in tax base expansion, and weakening of institutional mechanisms that enable resource mobilisation remain challenges.
 - Revenue losses after implementation of the Goods and Services Tax (GST) and the pandemic have exacerbated the situation.
- Other concerns include overstaffing of untrained manpower, shortage of qualified technical staff and managerial supervisors, and unwillingness to innovate in methods for service delivery.

Conclusion and Way Forward

- The scale of municipal finances in India is undoubtedly inadequate. A ULB's own revenue resources are far below the estimated potential. Tapping into property taxes, other land-based resources and user charges are all ways to improve the revenue of a ULB.
- IGTs assume significance in the fiscal composition of ULBs, and a stable support from Central and State governments is crucial till ULBs improve their own revenues.
- Measures need to be made to also cover O&M expenses of a ULB for better infrastructure and service.
- The health of municipal finances is a critical element of municipal governance which will determine whether India realises her economic and developmental promise.
 - It is essential that ULBs leverage their own revenue-raising powers to be fiscally sustainable and empowered and have better amenities and quality of service delivery.

PRELIMS

1. One Health

CONTEXT: Recently, the COVID-19 pandemic has once again renewed interest among scientists and policy makers for building an integrated approach such as One Health.

About One Health

- It is an approach to design and implement programmes, policies, legislation and research in which multiple sectors communicate and work together to achieve better public health outcomes.
- Interdependence: The core of the One Health approach is rooted in acknowledging and understanding the interdependence of human and natural systems to obtain optimal health for people, animals and the environment.
- It is particularly relevant in food safety, the control of zoonoses (diseases that can spread between animals and humans) and combating antibiotic resistance (when bacteria change after being exposed to antibiotics and become more difficult to treat).
- Developing database: For One Health science, it is important to develop databases and models with a consolidated approach of ecologists, field biologists, epidemiologists and other scientists. The Kyasanur Forest Disease Model is one such example.

2. CRISPR/Gene Editing

CONTEXT: Recently, the gene-editing technology which has led to innovations in medicine, evolution and agriculture has completed 10 years of innovation.

About Gene Editing

- Gene/genome editing refers to technology that permits to change an organism's DNA.
 - These technologies allow genetic material to be added, removed, or altered at particular locations in the genome.
 - Its applications include correcting genetic defects, treating and preventing the spread of diseases and improving crops etc.
- **Discovery :**
 - A decade ago, scientists in Germany and the US discovered a technique which allowed them to 'cut' DNA strands and edit genes.
 - For agriculture scientists this process allowed them to bring about desired changes in the genome by using site directed nuclease (SDN) or sequence specific nuclease (SSN).

- Nuclease is an enzyme which cleaves through nucleic acid — the building block of genetic material.
- Advanced research has allowed scientists to develop the highly effective clustered regularly interspaced palindromic repeat (CRISPR) -associated proteins based systems.
 - This system allows for targeted intervention at the genome sequence.
 - This tool has opened up various possibilities in plant breeding. Using this tool, agricultural scientists can now edit the genome to insert specific traits in the gene sequence.
- Depending on the nature of the edit that is carried out, the process is divided into three categories — SDN 1, SDN 2 and SDN 3.
 - SDN1 introduces changes in the host genome's DNA through small insertions/deletions without introduction of foreign genetic material.
 - In the case of SDN 2, the edit involves using a small DNA template to generate specific changes.
 - Both these processes do not involve alien genetic material and the end result is indistinguishable from conventionally bred crop varieties.
 - The SDN3 process involves larger DNA elements or full length genes of foreign origin which makes it similar to genetically modified organisms (GMO) development.

3. **Pradhan Mantri Fasal Bima Yojana**

CONTEXT: Recently, the state of Andhra Pradesh has decided to rejoin the Pradhan Mantri Fasal Bima Yojana (PMFBY) from the ongoing Kharif season.

Pradhan Mantri Fasal Bima Yojana (PMFBY):

- PMFBY insures farmers against all non-preventable natural risks from pre-sowing to post-harvest.
- **Objectives:**
 - To provide insurance coverage and financial support to the farmers in the event of failure of any of the notified crops as a result of natural calamities, pests & diseases.
 - To stabilize the income of farmers to ensure their continuance in farming.
 - To encourage farmers to adopt innovative and modern agricultural practices.
 - To ensure the flow of credit to the agriculture sector.
- **Payment of premium:**
 - Farmers have to pay a maximum of 2 percent of the total premium of the insured amount for Kharif crops, 1.5 percent for rabi food crops and oilseeds as well as 5 percent for commercial/horticultural crops.
 - The balance premium is shared by the Union and state governments on a 50:50 basis and on a 90:10 basis in the case of northeastern states.
- Claims are worked out on the basis of shortfall in actual yield, vis-a-vis the threshold yield in the notified area.
 - It shall be implemented through a multi-agency framework by selected insurance companies under the overall guidance & control of the Department of Agriculture and state government.
 - There is no upper limit on Government subsidies.
 - The premium rates to be paid by farmers are very low and the balance premium is paid by the Government to provide the full insured amount to the farmers.

4. **Mediation Bill**

CONTEXT: Recently, the Parliamentary Standing Committee on Law and Justice has recommended substantial changes to the Mediation Bill. The Mediation Bill is meant for institutionalisation of mediation and establishment of the Mediation Council of India.

Mediation Bill

- **Objectives of the Bill:**
 - To promote, encourage and facilitate mediation especially institutional mediation for resolution of disputes commercial and otherwise,
 - To enforce domestic and international mediation settlement agreements.
 - To provide for a body for the registration of mediators, to encourage community mediation.

- To make online mediation as an acceptable and cost-effective process and for matters connected therewith or incidental thereto has been prepared.
- **Main Features of the Bill**
 - The draft Bill proposes for pre-litigation mediation.
 - At the same time, it also safeguards the interest of the litigants to approach the competent adjudicatory forums/courts in case urgent relief is sought.
 - The successful outcome of mediation in the form of a Mediation Settlement Agreement (MSA) has been made enforceable by law.
 - Since the MSA is out of the consensual agreement between the parties, the challenge to the same has been permitted on limited grounds.
 - The mediation process protects the confidentiality of the mediation undertaken and provides for immunity in certain cases against its disclosure.
 - The registration of MSA has also been provided with State, District, Taluk Legal Authorities within 90 days
 - To ensure maintenance of authenticated records of the settlement.
 - Provides for the establishment of the Mediation Council of India.
 - Provides for community mediation.
- **The qualifications and appointment of the Chairperson and Members of the proposed Mediation Council:**
 - The Chairperson and full time Members to have ‘shown capacity’ and ‘knowledge and experience’ in ‘mediation.’
 - According to present provisions in the Bill, people dealing with problems relating to ‘Alternative Dispute Resolution’ can become members and chairman of the council.

5. **Natural Farming**

CONTEXT: Recently, the Prime Minister of India lauded the experiments of natural farming in Surat district of Gujarat.

About

- Surat’s success in connecting 75 farmers in every panchayat with natural farming is going to become an example for the entire country.
- Natural farming is a means of prosperity as well as respecting and serving mother earth.
- The Centre has created 30,000 clusters of natural farms for the benefit of lakhs of farmers and one million hectares will be covered under the ‘Paramparagat Krishi Vikas Scheme’.

Natural Farming

- **Origin:**
 - This farming approach was introduced by Masanobu Fukuoka, a Japanese farmer and philosopher, in his 1975 book The One-Straw Revolution.
- **About:**
 - It is a production system which avoids or largely excludes the use of synthetically compounded fertilisers, pesticides, growth regulators, genetically modified organisms and livestock food additives.
 - This system rely upon crop rotations, use of crop residues, animal manures, legumes, green manures,
- **Features:**
 - **Chemical Free:** Natural farming refers to the type of agriculture in which the use of chemicals like pesticides, fertilisers, growth regulators, food additives, genetically modified organisms are entirely shunned.
 - **Use of Alternatives Systems:** In place of chemical based inputs, natural farming utilises methods like crop rotation, use of green manures and compost, biological pest control and mechanical cultivation.
 - **Additional Practices:** Natural farming systems can be complemented with practices like crop rotation (planting different crops sequentially), mulching (see inset), intercropping (planting different crops simultaneously in a field) and seed soaking with liquid manure, to increase the yields in a field.

ANSWER WRITING

Q. What are rare earth materials? Discuss their strategic and environmental significance with respect to India? (150 words)

Introduction

The Rare Earth Elements (REE) are a set of seventeen metallic elements. These include the fifteen lanthanides on the periodic table plus scandium and yttrium. They are also referred to as “rare earth oxides” because many of them are sold as oxide compounds.

Body

Rare-earth elements (REE) are necessary components of products across a wide range of applications, especially high-tech consumer products, such as cellular telephones, computer hard drives, electric and hybrid vehicles, and flat-screen monitors and televisions. The demand for them is small, although rising. They are mined and produced in small quantities and hence the name.

- **Environmental Significance:** Due to their unique magnetic, luminescent, and electrochemical properties, REE help technologies to reduce emissions, and energy consumption; therefore provide them greater efficiency, performance, speed, durability, and thermal stability. They have distinctive electrical, metallurgical, catalytic, nuclear, magnetic and luminescent properties. The futuristic technologies will need these REEs for high-temperature superconductivity, safe storage and transport of hydrogen for a post-hydrocarbon economy, environmental global warming, and energy efficiency issues.
- **Strategic:** Permanent magnets which are used in defence equipment, including actuators, to control guidance systems for airborne smart missiles, as well as in aerospace applications for aircraft components and airstrip maintenance equipment are derived from rare earth minerals.
- With growing global trends in clean technologies, the demand for critical rare earth minerals will grow. While late in joining the race, the Government of India is taking steps to develop and strengthen India's position in the rare earth market. Moreover, if India wants to position itself as a global leader in renewable energy and be more self-sufficient in defence equipment, it should seek to reduce its dependence on imports of renewable energy equipment like solar panels and modules as well as defence equipment.

Conclusion

While a beginning has been made with the announcement of a National Mineral Policy 2019, covering non-fuel and non-coal minerals, India must strive to acquire expertise in valorising these minerals and shift to developing its downstream sector. To that end, India should seek to leverage its ties with Japan and other countries that have the requisite technology for manufacturing downstream equipment so that it can set itself up as an alternative source of the REE-based technology, with its own supply chain of minerals and metals required for the same.

MCQs

- 1) Consider the following statements regarding One Health:
 1. It is an approach to design and implement programmes, policies, legislation and research in which multiple sectors communicate and work together to achieve better public health outcomes.
 2. It can reduce potential threats at the human-animal-environment interface to control diseases that spread between animals and humans
 3. It does not ensure food safety.

Which of the above statement(s) is/are correct?

a. 1 only b. 1 and 2 only c. 1 and 3 only d. 1,2 and 3
- 2) Consider the following statements regarding Gene Editing:
 1. These technologies allow genetic material to be added, removed, or altered at particular locations in the genome.
 2. CRISPR is a technology that can be used to edit genes.

Which of the above statement(s) is/are correct?

a. 1 only b. 2 only c. Both 1 and 2 d. Neither 1 nor 2
- 3) Consider the following statements regarding Pradhan Mantri Fasal Bima Yojana:
 1. It insures farmers against all non-preventable natural risks from pre-sowing to post-harvest.
 2. Farmers have to pay a maximum of 2 percent of the total premium of the insured amount for Kharif crops, 1.5 percent for rabi food crops and oilseeds as well as 5 percent for commercial/horticultural crops.
 3. Andhra Pradesh has decided to rejoin the Pradhan Mantri Fasal Bima Yojana (PMFBY)

Which of the above statement(s) is/are correct?

a. 1 and 2 only b. 2 and 3 only c. 1 and 3 only d. 1, 2 and 3
- 4) Consider the following statements about Alternate Dispute Resolution Mechanism?
 1. ADR refers to the methods of resolving a dispute, which are alternatives for litigation in Courts.
 2. It offers to resolve all types of matters related to civil disputes, as explicitly provided by the law.

3. Only Legal Services Authority Act, 1987 deal with this mechanism.
Which of the above statement(s) is/are correct?
a. 1 only b. **1 and 2 only** c. 3 only d. All are correct.
- 5) Consider the following statements about Natural Farming:
1. This farming approach was introduced by Masanobu Fukuoka, a Japanese farmer and Philosopher.
2. It is a production system which avoids or largely excludes the use of synthetically compounded fertilisers, pesticides, growth regulators, genetically modified organisms and livestock food additives.
Which of the above statement(s) is/are incorrect?
a. 1 only b. 2 only c. **Both 1 and 2** d. Neither 1 nor 2
- 6) Consider the following statements:
1. Light from distant objects is compressed by the expansion of our universe, which drives the radiation from the visible to infrared region.
2. James Webb Telescope is the biggest and first infrared telescope ever built and collects more photons than the Hubble Telescope.
Which of the above statement(s) is/are correct?
a. 1 only b. 2 only c. Both 1 and 2 d. **Neither 1 nor 2**
- 7) Consider the following statements:
1. Heatwaves happen due to large-scale atmospheric circulation related to Rossby waves.
2. If the arctic ice is present, the vortex or wind circulation will be concentrated around the Arctic.
3. If the arctic ice is absent, the vortex will become wobbly and come down south to the mid-latitudes.
Which of the above statement(s) is/are correct?
a. 1 and 2 only b. 1 and 3 only c. 2 and 3 only d. **1, 2 and 3**
- 8) Consider the following statements:
1. The Global Gender Gap Index's indices are economic participation and opportunity, educational attainment, health and survival, and political empowerment.
2. According to the report, India is the best performer among its neighbors in the 'health and survival' sub-index.
Which of the above statement(s) is/are correct?
a. **1 only** b. 2 only c. Both 1 and 2 d. Neither 1 nor 2
- 9) Consider the following statements:
1. I2U2 is known as the International Forum for Economic Cooperation with Iran, Israel, UAE, and the UK as its members.
2. The aim of the organization is to discuss common areas of mutual interest, and to strengthen the economic partnership in trade and investment.
Which of the above statement(s) is/are correct?
a. 1 only b. **2 only** c. Both 1 and 2 d. Neither 1 nor 2
- 10) Consider the following statements:
1. Under CAATSA, the US government can impose sanctions on nations purchasing weapons from Russia.
2. Using CAATSA the US government has imposed sanctions only on Indonesia, North Korea, Iran, Russia, and also Turkey, a member of NATO.
Which of the above statement(s) is/are correct?
a. 1 only b. 2 only c. **Both 1 and 2** d. Neither 1 nor 2