

GOVERNANCE**Issues with Agriculture in India**

The protest by thousands of farmers at Delhi's borders have brought to focus a range of issues in agriculture in India.

The protests are against the three farm bills that seek to replace ordinances issued in June 2020.

Key Points**Concerns of Protesting Farmers:**

- These laws signal the beginning of the end of open-ended procurement of wheat and paddy.
- The success of states (Punjab and Haryana) in creating the infrastructure for procurement may now become the reason for withdrawal of support of the Centre.
- Stocking by corporates, especially those which are in modern retail and e-commerce

Land Size:

Decreasing Area: Area under agriculture has been shrinking, it reduced from 159.5 million hectares (mn ha) in 2010-11 to 157 mn ha in 2015-16.

Increase in Land Holdings: The number of operational holdings has been rising (increased from 138.3 million to about 146 million) owing to increasing population.

This leads to falling average landholdings' size of farmers, which has come down from 1.2 ha to about 1.08 ha.

Forced Selling: Smaller landholdings produce smaller pockets of produce, aggregation of which becomes essential for even a trolley-load to be carried to an Agricultural Produce Market Committee (APMC) mandi or a nearby market.

- Due to small holdings caused by fragmentation, small and marginal farmers are forced to sell their produce at the farm gate itself.
- This is especially so in states that have a weak network of APMC mandis.

No Access to Modern Technology: Bringing new technologies and practices to such a large number of smallholders scattered over a vast countryside and integrating them with the modern input and output markets is a huge challenge for Indian agriculture.

More Farm Labourers than Farmers:

A farmer is usually a farm owner, while employees of the farm are farm labourers, farmhands, etc.

Employment in Agri-sector: As per recent estimates from the Labour Bureau, 45% of India's workforce is employed in agriculture.

Labours in Agri-sector: According to Census 2011, 55% of the agri-workforce comprises agri-labourers.

No support for Labours: It is tough to drive or sustain growth in agriculture since farm labourers get no policy support or incentive to invest in farming.

Owners Getting the Benefit: All benefits like seed kit, fertilisers, pesticides, farm machinery, micro-irrigation, land development assistance etc. are meant only for those who can prove land ownership.

Falling Investment in Agriculture:

- The Gross Capital Formation (GCF) in agriculture as a percentage of the total GCF in the economy has fallen from 8.5 % in Financial Year 2011-12 to 6.5 % in Financial Year 2018-19. This is because the share of private investment has shrunk.
- Though public investment has gone up it is not sufficient to check the slide or keep the GCF at FY12 level.

Subsidy and Related Issues:

- **Flowing to Businesses:** A number of subsidies meant for agriculture also flow to businesses, e.g. grants given to food processing units and cold chain projects.
- **Net Loss of Farmers:** As per the Indian Council for Research on International Economic Relations- Organisation for Economic Co-operation and Development (ICRIER-OECD) report, despite the plethora of schemes run to support and subsidise Indian farmers, because of regressive policies on the marketing side (both domestic and international trade policies) and the deficit of basic infrastructure for storage, transportation etc., Indian farmers suffered net losses and thus emerged to be net taxed despite receiving subsidies.

Minimum Support Price (MSP) and Related Issues:

- **Selective Procurement:** The government declares MSP for 23 crops, only wheat and paddy (rice) are procured in large quantities as they are required to meet the requirement of the Public Distribution System (PDS), which is about 65 million tonnes.

- **Stagnant Rates of MSP:** The government declaration of Minimum support prices do not increase at par with increase in cost of production.
- **Unequal Access:** The benefits of this scheme do not reach all farmers and for all crops. There are many regions of the country like the north-eastern region where the implementation is too weak.
- **Non Scientific Practices:** MSP leads to non-scientific agricultural practices whereby the soil, water are stressed to an extent of degrading ground water table and salinisation of soil.

Way Forward

- If India has to move away from procurement-based support, at present restricted to certain crops only, a more attractive income support scheme has to be conceived coupled with much higher investment, both public and private, in agri-infrastructure.
- The Rashtriya Krishi Vikas Yojana (RKVY) incentivised the states, which increased their expenditure on agriculture. The Centre's assistance for such states should be higher.
- Focused research on crops grown in low-productivity states can deliver better seeds, which can withstand the challenge of higher temperature due to climate change.
- Democratic norms and processes like open public debate, dialogue with stakeholders and detailed Parliamentary scrutiny to ensure every aspect and implication of a public policy goes through meticulous examination before being adopted and implemented is crucial to fix the issues with agriculture.

INDIAN ECONOMY

Single Window Clearance for Coal

Recently, the Union government has announced a new online single window clearance portal for the coal sector.

- The coal sector can be the biggest contributor towards the target of India becoming a USD 5 trillion economy by 2025.
- Despite having the world's fourth-largest coal reserves, India is importing coal.
- The next tranche of commercial mining auction would be launched in January 2021.

Key Points

Aim :

- It is aimed at allowing faster clearances, including environmental and forest clearances, from a single portal with progress monitoring, instead of having to go to multiple authorities.
- Presently, about 19 major approvals, or clearances are required before starting the coal mine in the country.

Significance:

- The portal will allow successful bidders to operationalise coal mines more quickly.
- It is in the spirit of minimum government and maximum governance.
- It will further ease of doing business in the country's coal sector.
- It will help in bringing huge investment and creating employment.

Future Plan:

- PARIVESH Mechanism for forest and environment related clearances would likely be merged into this single window clearance mechanism which is expected to help with the operationalisation of the coals blocks that are set to be auctioned in the upcoming auctions.
- PARIVESH is a web-based application which has been developed for online submission and monitoring of the proposals submitted by the proponents for seeking Environment, Forest, Wildlife and Coastal Regulation Zones (CRZ) Clearances from Central, State and district level authorities.

Recent Initiatives in Coal Sector:

As a part of Atmanirbhar Abhiyaan:

- Commercial mining of coal allowed, with 50 blocks to be offered to the private sector.
- Entry norms will be liberalised as it has done away with the regulation requiring power plants to use "washed" coal.
- Coal blocks to be offered to private companies on revenue sharing basis in place of fixed cost.
- Coal gasification/liquefaction to be incentivised through rebate in revenue share.
- Coal bed methane (CBM) extraction rights to be auctioned from Coal India's coal mines.

- UTTAM (Unlocking Transparency by Third Party Assessment of Mined Coal): In April 2018, the Ministry of Coal launched UTTAM Application for coal quality monitoring.
- Scheme for Harnessing and Allocating Koyala (Coal) Transparently in India (SHAKTI): Launched in May 2017, for allocation of future coal linkages in a transparent manner for the power sector.

SOCIAL JUSTICE

Severe Stress Among Army Personnel

According to the findings of a study by United Service Institution of India (USI), a Service think tank, more than half of Indian Army personnel seem to be under severe stress.

Key Points

Stressed Army Personnel:

- The Army has been losing more personnel every year due to suicides, fratricides and untoward incidents than in response to any enemy or terrorist activities.
- Prolonged exposure of Indian Army personnel to Counter Insurgency and Counter Terrorism (CI/CT) environment has been one of the contributory factors for increased stress levels.
- This loss is substantially greater than the operational casualties suffered by the Armed forces. In addition, a number of soldiers and leaders have been affected by hypertension, heart diseases, psychosis, neurosis and other related ailments.
- Officers experience comparatively much higher cumulative stress levels, compared to the Junior Commissioned Officers (JCO) and Other Ranks (OR) and the stress causative factors are also different.

Causes of Stress:

- Among Army Officers: Inadequacies in the quality of leadership, overburdened commitments, inadequate resources, frequent dislocations, lack of fairness and transparency in postings and promotions, insufficient accommodation, indifferent attitude of civilian officials, etc.
- Among Lower Rank Officials: Excessive engagements, domestic problems, lack of dignity, lack of recreational facilities and conflict with seniors as well as subordinates, etc.

Impact of Stress on Work:

- Units and subunits under stress are likely to witness an increased number of incidents of indiscipline, unsatisfactory state of training, inadequate maintenance of equipment and low morale that adversely affects their combat preparedness and operational performance.

Suggestion:

- Stress prevention and management should be treated “as a leadership role at Unit and Formation level”.

Army's Stand:

- The Army has rejected the study, stressing that the sample size for the survey was too “miniscule” to arrive at such “far reaching” conclusions.
- The study has been done by one individual, with a sample size of around 400 soldiers.

Related Steps Taken:

- Provision of better quality of facilities such as clothing, food, married accommodation, travel facilities, schooling, recreation etc. and periodic welfare meeting.
- Conduct of yoga and meditation as a tool for stress management.
- Training and deployment of psychological counsellors.
- Institutionalization of projects ‘MILAP’ and ‘SAHYOG’ by the Army in Northern & Eastern Command to reduce stress among troops.
- A ‘MansikSahayata Helpline’ has been established by the Army & Air Force to take professional counselling.
- Mental Health Awareness is provided during pre-induction training.
- Formation of Military Psychiatry Treatment Centre at INHS Asvini and establishment of Mental Health Centres in Mumbai, Visakhapatnam, Kochi, Port Blair, Goa and Karwar.

Previously, Defence Institute of Psychological Research (DIPR) had completed research projects that focused on identifying factors causing suicides among troops deployed in Field and Peace areas. It had found in its studies that not getting timely leave was one of the stress factors triggering suicidal behaviour.

Recommendation included: rationalizing grant of Leave, counselling at the time of leave, decrease workload, reduction in tenure of deployment, increase in pay and allowances, improvement in living

conditions, building better interpersonal relations between the officers and men, training programmes in stress management and psychological counselling, enhancing basic and recreation activities and redress of grievances.

INTERNAL SECURITY

Coastal Defence Exercise Sea Vigil 21

Recently, the second edition of the biennial pan-India coastal defence exercise 'Sea Vigil-21' has started.

Key Points

Launch:

- The inaugural edition of the exercise was conducted in January 2019.
- It is billed as India's largest coastal defence drill.

Area of Operation:

- The 2021 exercise is being undertaken along the entire 7516 km coastline and Exclusive Economic Zone of India.
- The United Nations Convention on the Law of the Sea (UNCLOS) defines an Exclusive Economic Zone (EEZ) as generally extending 200 nautical miles from shore, within which the coastal state has the right to explore and exploit, and the responsibility to conserve and manage, both living and non-living resources.
- It involves all the 13 coastal States and Union Territories along with other maritime stakeholders, including the fishing and coastal communities.
- 13 Coastal States and UTs: Gujarat, Maharashtra, Goa, Karnataka, Kerala, Tamil Nadu, Andhra Pradesh, Odisha, West Bengal, Daman & Diu, Puducherry, Andaman & Nicobar Islands (Bay of Bengal) and Lakshadweep Islands (Arabian Sea).
- Assets of the Indian Navy, Coast Guard, Customs and other maritime agencies are participating in the Exercise.
- The Indian Air Force, National Security Guard, the Border Security Force, oil handling agencies and airports also participate in the exercise.

Coordinating Force:

Indian Navy

Aim:

- To check the efficacy of the measures initiated to plug gaps in coastal security following the Mumbai terror attack in 2008.
- Multiple initiatives were set forth, including the National Committee for Coastal and Maritime Security (NCSMCS), creation of Joint Operations Centres (JOC) at Mumbai, Cochin, Visakhapatnam and Port Blair, raising of Sagar Prahari Bal (SPB), installation of the Harbour Defence Surveillance System, setting-up of National Command Control Communication and Intelligence (NC3I) Network.

Significance:

- The exercise is a build up towards the major Theatre level exercise TROPEX (Theatre-level Readiness Operational Exercise) which Indian Navy conducts every two years.
- Sea Vigil and TROPEX together will cover the entire spectrum of maritime security challenges, including transition from peace to conflict.
- While smaller scale exercises are conducted in coastal states regularly, including combined exercises amongst adjoining states, the conduct of a security exercise at national-level is aimed to serve a larger purpose.
- It provides opportunity, at the apex level, to assess the country's preparedness in the domain of maritime security and coastal defence.

BIODIVERSITY & ENVIRONMENT

National Energy Conservation Awards

Recently, the Ministry of Power, in association with the Bureau of Energy Efficiency (BEE), organised the 30th National Energy Conservation Awards (NECA) function.

During the event, the Standards and Labelling Programme for Air Compressors and Ultra High Definition (UHD) TV on voluntary basis was initiated and SATHEE Portal was also launched.

Key Points

National Energy Conservation Awards Programme:

- The Ministry of Power had launched a scheme in 1991, to give national recognition through awards to industries and establishments that have taken special efforts to reduce energy consumption while maintaining their production.
- The awards were given away for the first time on 14th December, 1991, which was declared as the 'The National Energy Conservation Day'.
- It recognizes the energy efficiency achievements in 56 sub-sectors across industry, establishments and institutions.
- During the award ceremony, it was specifically mentioned that the impact of PAT Cycle II achieved emission reduction of 61 million ton of CO₂.

The Perform, Achieve and Trade (PAT) Scheme

- It is a market-based mechanism to further accelerate as well as incentivize energy efficiency in the large energy-intensive industries.
- It provides the option to trade any additional certified energy savings with other designated consumers to comply with the Specific Energy Consumption reduction targets.
- It is being implemented by BEE, as a “flag bearer” which has not only demonstrated its promise in the country but also has found interest among many other countries.

Standards and Labelling Programme for Air Compressors and Ultra High Definition (UHD) TV:

- It is to be carried out on a voluntary basis.
- They are aimed to further enhance the level of energy conservation. This conserved energy can then be used for a different purpose in the home or workplace.
- Besides saving energy, this programme could also facilitate reducing energy bills.

SAATHEE Portal:

- The Bureau of Energy Efficiency (BEE) has developed a Management Information System (MIS) portal namely State-wise Actions on Annual Targets and Headways on Energy Efficiency (SAATHEE).

For SDAs: It is a portal for the State Designated Agency (SDA) for state level activities.

Captures Status of Energy Efficiency: It will be useful in capturing the physical and financial status/progress of Energy Efficiency activities being implemented by States/ UTs across the country. Thus, it will facilitate Real Time Monitoring.

Streamlines Decision Making and Compliance: It will also help in decision making, coordination, control, analysis, and implementation and enforcement of the compliance process for various energy consumers at the pan India level.

Targets in Energy Efficiency:

- India has one of the lowest per capita emissions and per capita energy consumption. Despite this the country has made ambitious commitments to meet the global challenge posed by climate change.
- India has a target to reduce the emission intensity to 33-35% by 2030 compared to 2005 level, as part of commitments made during COP 21.
- The Prime Minister’s vision aims at a climate mitigation goal, with a target for renewable energy capacity to be increased to 450 GW by 2030.

Initiatives Aimed at Energy Conservation:

The Perform, Achieve and Trade (PAT) Scheme, Standard and Labelling and Demand Side Management, Energy Conservation Building Code, etc.

Note:**SATHI (Sophisticated Analytical & Technical Help Institutes):**

It is an initiative of the Department of Science & Technology (Ministry of Science and Technology).

Objective: To provide a shared, professionally managed services and strong Science and Technology infrastructure/facilities, to service the demands of faculty, researchers, etc., to enable them to carry out R&D activities on a round the clock basis with minimum downtime.

SAATHI (Sustainable and Accelerated Adoption of efficient Textile technologies to Help Small Industries) Initiative:

- It is an initiative of the Ministry of Textiles.

Objective: To sustain and accelerate the adoption of energy efficient textile technologies in the powerloom sector and cost savings due to use of such technology.

SATH (Sustainable Action for Transforming Human capital) Program:

- It is a program of NITI Aayog.

Objective: To initiate transformation in the education and health sectors and build 3 future 'role model' states.

IMPORTANT FACTS FOR PRELIM

Sultanpur National Park

After confirmed cases of bird flu reported from Delhi, the forest department has also stepped up vigilance at Sultanpur national park in Gurgaon district of Haryana.

Key Points

Location:

It is situated in Gurgaon district of Haryana. Distance of the park is around 50 Km from Delhi and 15km from Gurgaon.

About:

- Sultanpur National Park is a bird paradise for bird watchers. It is famous for its migratory as well as resident birds.
- Migratory birds start arriving in the park in September. Birds use the park as a resting place till the following March-April.
- During summer and monsoon months the park is inhabited by many local bird species.
- In April 1971, the Sultanpur Jheel inside the park (an area of 1.21 sq. Km.) was accorded Sanctuary status under section 8 of the Punjab Wildlife Preservation Act of 1959.
- The status of the park was upgraded to National Park under the Wildlife (Protection) Act, 1972 in July 1991.

Important Fauna at the Park:

Mammals: Blackbuck, Nilgai, Hog deer, Sambar, Leopard etc.

Birds: Siberian Cranes, Greater Flamingo, Demoiselle Crane etc.

Other National Park in Haryana: Kalesar National Park, District Yamunanagar

Domestic Vanadium Deposits

A recent exploration by Geological Survey of India (GSI) has found reserves of Vanadium in **Arunachal Pradesh**.

GSI is an attached office to the Ministry of Mines.

Key Points

About Vanadium:

- Vanadium is a chemical element with the symbol V.
- It is a scarce element, hard, silvery grey, ductile and malleable transition metal with good structural strength.
- Transition metals are all the elements in groups 3–12 of the periodic table. These are superior conductors of heat as well as electricity.

Ores:

- **Patronite, vanadinite, roscoelite and carnotite.**

Uses:

- Vanadium is used primarily as an alloying element in the Iron & Steel Industry and to some extent as a stabiliser in titanium and aluminium alloys used in the aerospace Industry.
- Modern applications of vanadium include its use as vanadium secondary batteries for power plants and rechargeable Vanadium Redox Battery (VRB) for commercial applications.
- Vanadium alloys are used in nuclear reactors because of vanadium's low neutron-absorbing properties.

Reserves of Vanadium in Arunachal Pradesh:

- Concentrations of vanadium have been found in the palaeo--proterozoic (era) carbonaceous phyllite rocks in the Depo and Tamang areas of Papum Pare district in Arunachal Pradesh.
- Phyllite is a fine-grained metamorphic rock formed by the recrystallization of fine-grained, parent sedimentary rocks, such as mudstones or shales.
- Sedimentary rocks containing significant enrichment in organic matter over average sediments are called carbonaceous sedimentary rocks.
- There are other potential sites in various districts in Arunachal Pradesh.
- This is the first report of a primary deposit of vanadium in India.

Current Scenario:

- India is a significant consumer of vanadium, but is not a primary producer of the strategic metal.
- According to data provided by the GSI, India consumed 4% of total global production of Vanadium in 2017.
- It is recovered as a by-product from the slag of processed vanadiferous magnetite (iron) ores.
- Slag is the glass-like by-product left over after a desired metal has been separated (i.e., smelted) from its raw ore.

Global Reserves:

The largest deposits of Vanadium are in China, followed by Russia and South Africa respectively.

DAILY ANSWER WRITING PRACTICE

Qns. Explain intra-generational and inter-generational issues of equity from the perspective of inclusive growth and sustainable development. (150 words) (UPSC GS-3 Mains 2020).

Ans:

Intergenerational and intra-generational equity are two hands of the doctrine of sustainable equity. Sustainable equity aims to find a proper balance between intergenerational equity (between the present and future people) and intragenerational equity (between the rich and the poor of the present generation).

Intergenerational Equity & Issues

- One of the primary objectives of intergenerational equity is the development of resources by one generation to enhance economic sustainability for the future generation.
- Intergenerational equity has become crucial in the present times, due to the growing imbalance in the distribution of resources, ongoing degradation of environment and depletion of resources.
- This imbalance is more profound between the developed & developing nations or between the Global North and the Global South.
- Moreover, the developed countries are today unwilling to help developing countries adapt and mitigate climate change, which is a result of their ruthless pursuit to economic growth at the cost of the environment.
- In this context, the concept of sustainable development has been introduced, which refers to the use of resources should be done in such a manner that those resources shall also be available to meet the future needs.

Intra-generational Equity & Issues

- The concept of intra-generational equity provides rights and duties to every person of a single generation to use and take care of the resources moderately among the members of the generation.
- In order to promote the intra-generational equity, the concept of social justice is propagated. Welfare schemes like subsidies, reservations, etc., are provided by the governments to help the vulnerable section of society.
- However, sometimes measures taken under the narrative of social justice interfere with the free market principle.
- The free market demands rollback of state and propagates market as the solution of every problem.
- Following this, India conducted LPG reforms in 1991. However, the pro-market reforms have failed to trickle-down effect and resulted in the jobless growth & increasing inequalities (Oxfam Report).
- In this context, the concept of Inclusive Growth has been introduced, which advances equitable opportunities for economic participants during economic growth with benefits incurred by every section of society.

Conclusion

The concept of inclusive growth and sustainable development are the key pillars of the global welfare narrative, which can be prompted by ensuring intra-generational and inter-generational equity.

Moreover, in a developing country like India, intra-generational & inter-generational equity is more important as more resources are required for ensuring the development of all, including the future generation.

DAILY QUIZ

1. Consider the following statements about Vanadium:

1. It is a superior conductor of heat as well as electricity.
2. The vanadium reserve is found in Arunachal Pradesh and West Bengal.

Which of the statements given above is/are correct?

- a) **1 only**
- b) 2 only
- c) Both 1 and 2
- d) Neither 1 nor 2

2. Consider the following statements about Sea Vigil- 21:

- 1. It is the largest coastal defence exercise of India held annually.
- 2. The 2021 exercise will take place along the coastline and Exclusive Economic Zone of India.
- 3. All the Coastal States & Union Territories and oil handling agencies will also participate in the exercise.

Which of the statements given above is/are not correct?

- a) **1 only**
- b) 1 and 2 only
- c) 2 only
- d) 2 and 3 only

3. Consider the following pairs:

Initiatives	Government institution/Ministry
1. SAATHI Scheme	Ministry of Education
2. SATH Program	NITI Aayog
3. SAATHEE Portal	The Bureau of Energy Efficiency

Which of the pairs given above are correctly matched?

- a) 1 and 2 only
- b) **2 and 3 only**
- c) 1 and 3 only
- d) 1, 2 and 3

4. Which of the following National Park/Wildlife Sanctuaries have performed best in the Management Effectiveness Evaluation (MEE) of Protected Areas?

- 1. Tirthan Wildlife Sanctuary
- 2. Great Himalayan National Park (GNHP)
- 3. Turtle Wildlife Sanctuary

Select the correct answer using the code given below:

- a) **1 and 2 only**
- b) 2 and 3 only
- c) 3 only
- d) 1, 2 and 3

5. Consider the following statements:

- 1. UTTAM application was launched by the Ministry of Coal to monitor the quality of Coal.
- 2. The Shakti scheme is launched to ensure transparency in allocation of coal for the power sector.

Which of the statements given above is/are correct?

- a) 1 only
- b) 2 only
- c) **Both 1 and 2**
- d) Neither 1 nor 2