

YOJANA SUMMARY

**COOPERATION TO
PROSPERITY**

JULY 2023

What is Cooperation?

- The concept of Cooperation envisages a group of persons having one or more common economic needs, who **voluntarily agree to pool their resources**-both human and material, and use them for mutual benefit through an enterprise managed by them on democratic lines.
- Cooperation is a form of economic organisation based on certain values of life. It is a voluntary democratic association of human beings, based on **equality of control, opportunity and equity of distribution**.
- Further, it stands for the promotion of the common interests of producers and consumers.
- Cooperation renders services to its members without the sole intention of making profits.

What Are The Constitutional Provisions for a Cooperative Society?

- **Article 19(1)(c)** of the Constitution states that All citizens shall have the right to form associations or unions or co-operative societies.
- **Directive Principles of State Policy 43B** deals with the Promotion of cooperative societies.
 - The State shall endeavour to promote voluntary formation, autonomous functioning, democratic control and professional management of cooperative societies.
- **Part IXB of the Constitution** grants constitutional status to cooperative societies and contains provisions for their democratic functioning.

What is National Cooperative Database?

- The primary goal and purpose of building National Cooperative Database is to have Information based Decision Support System.

SAHAKAR SE SAMRIDDI: FROM PLANNING TO REALISATION

- PM Modi carved out a separate administrative Ministry - Ministry of Cooperation (MoC) on 6 July 2021.
- The PM's clarion call - ***Sahakar se Samridhi*** offers a clear message of cooperation as a tool to achieve economic freedom, self-reliance and social justice, through **community-led and community-owned entrepreneurial exertions**.
 - Cooperatives are community-level business organisations with incredible capacity to generate and absorb social capital.

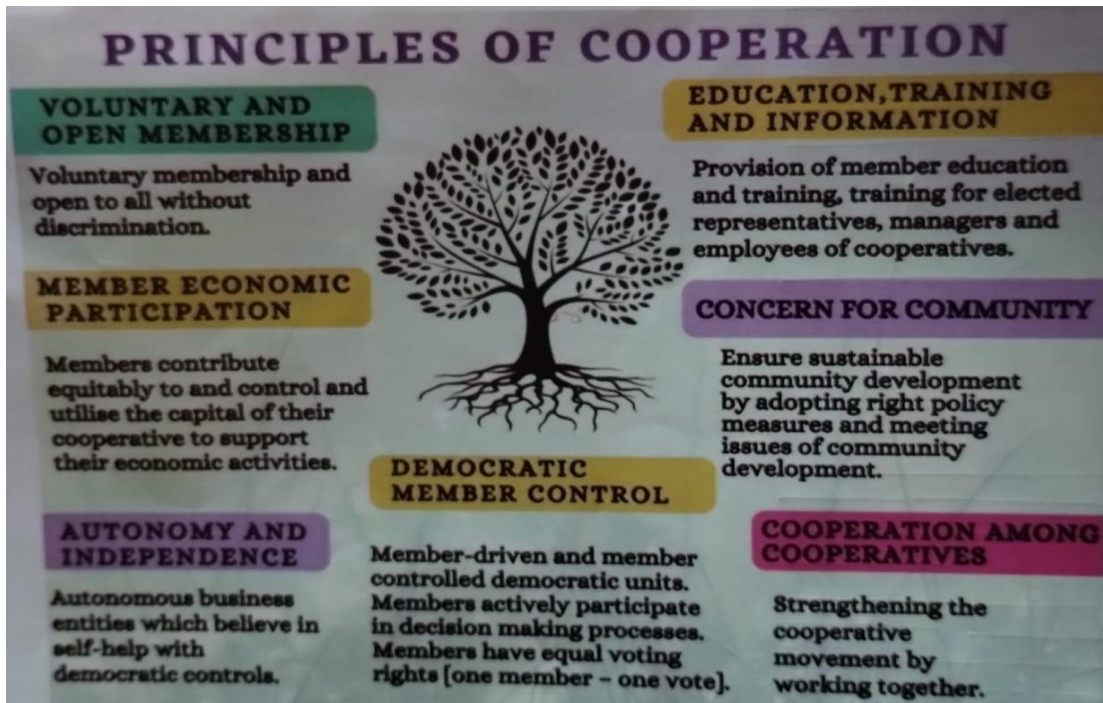
Cooperatives: Historical Background

- From the promulgation of the **Cooperative Credit Societies Act in 1904** to its amendment in 1912, the cooperative movement was largely concentrated on rural credit mobilisation and disbursements to farmers.
- Following recommendations by the **Maclagan Committee on Cooperation in India (1914-15)**, the movement transitioned from being primarily focused on providing relief to becoming a movement that aimed to improve socio-economic welfare.
- Currently, India is home to 8.54 lakh cooperatives of which 80% are non-credit cooperatives, and 20% are credit Cooperatives.

Sardar Vallabh Bhai Patelji sowed the seeds of **Anand Milk Union Limited (Amul)** through Tribhuvandas Patel by forming farmer cooperatives for the production and marketing of milk through collectivised efforts.

- Today, cooperatives have a presence in 98% of villages, with 29 crore members.

Honouring Cooperative Principles: Seven Golden Principles Of Cooperation



Commitment To Cooperative Movement: Steps Taken

- Govt. has decided to plan, prioritise and explore new emerging areas for our cooperatives and strive collectively by being members of a cooperative '**SQUAD**':
 - '**S**' - 'Self-reliance (Atmanirbhar)'; '**Q**' - 'Quality Performance', '**U**' - 'Unshakable Cooperative Movement', '**A**' and '**D**' for 'Accountability in Governance' and 'Development through Modern Technology, respectively.
- **Cooperation Policy is being finalised by a committee** [Chairman: Suresh Prabhu].
- **Important Policy parameters for attaining Sahakar Se Samridhi: 4Ps + 4Es**
 - **4Ps** – People Cooperating with People; Production by People; People before profit; Profit with a purpose
 - **4Es** – Ease of Doing Business; Ease of Living; Ease of credit access; Ease of Cooperation
- During July 2021 and May 2023, the Ministry successfully got approvals on **eight important policy matters**:
 - Cooperative Societies as registered buyers and sellers on GeM platform
 - Computerisation of 63,000 functional PACs
 - Introduce Amendment to the Multi-State Cooperative Societies Bill, to comply with the 97th Constitutional Amendment Provisions
 - Establishing National Organics Cooperative Society to promote organic products
 - Setting up of National Seed Cooperative Society, promoting production, preservation, certification and distribution of quality seeds through cooperatives
 - Setting up of National Export Cooperative Society, promoting exports from cooperatives

- Creating two lakh new multi-purpose PACS or Dairy/Fisheries Cooperative Societies to cover all 2,54,000 Panchayats
- World's largest community foodgrain storage movement through PACs
- **Model bye-laws: making PACS vibrant**
 - Model bye-laws for PACS have been drawn and circulated to the States/UTS for appropriate adoption.
 - So far, 22 States/UTS have adopted the model bye-laws.
- **PACS as common service centers (CSCs)**
 - It has been decided to register and digitise PACS/Large Area Multi-Purpose Societies (LAMPS) to provide more than 300 e-services to common citizens
- **Integrating PACS with FPO**
 - Cooperatives are ready to promote Farmer Producer Organisations (FPOs).
 - The Government of India has decided to allot an additional 1,100 FPOs to NCDC under the existing FPOS Scheme of the Ministry of Agriculture and Farmers Welfare.
 - Integration of the FPOS Scheme in cooperatives would help PACS extend their scope of activities in agriculture production, input management, agri-equipment, processing, packaging, storage and transportation, etc.
 - The integration also enables PACS to take up high income enterprises like beekeeping, mushroom cultivation, etc.
- **Involving PACS in oil & energy business**
 - The PACS are now eligible to avail licenses for Petrol/ Diesel dealerships and LPG distributorships.
 - PACS are all-set to get **engaged in energy security efforts too**. They will be active partners in implementing various renewable energy schemes of the Ministry of New and Renewable Energy (MNRE).
 - The existing **PM- KUSUM Scheme of MNRE** will enable the farmer members of PAC to ensure energy security and guarantee incremental income through the installation of photovoltaic modules on the periphery of their farmland.
- **Developing national database**
 - MoC is developing a comprehensive cooperative database to capture systemic and organised information to catalogue sector-specific, diverse cooperatives.
- **Consolidating cooperative credit**
 - There are about 13 crore farmers linked directly to the cooperatives through PACS.
 - The Government is committed to **preserving the existing three-tier structure** of the cooperative credit system, as any dilution in the structure could weaken the credit mobilisation, distribution, financing, and refinancing system of Cooperatives.
 - To strengthen the Long-Term cooperative credit structure, MoC is working on a project for the computerisation of Agricultural and Rural Development Banks (ARDBs).
 - Planned and adequate computerisation will remove issues, inadequacies, and inefficiencies in their operation and profitability.
- **Improving cooperative education & training**

- Greater emphasis is given on imparting education and training to the primary members to make them aware of the new initiatives taken by the Union Government.
- The govt has expressed its commitment to **creating a national cooperative university with pan-India functionalities.**
- Through the establishment of a university, a comprehensive, integrated and standardised structure for cooperative teaching and training will be created.

Challenges

- Some of the **vital issues that require immediate attention are** - (a) reduction in regional and sectoral imbalances in cooperative spread; (b) meeting regulatory complexities; (c) improving governance, leadership and operational systems; (d) ensuring professional management; (e) initiating time-tested structural reform measures, etc.
- Other critical dimensions are:
 - establishing an effective dialogue and coordination mechanism between the central registrar and state registrars of cooperatives;
 - adhering to cooperative principles and democratic values, procedures of transparency, strengthening basic infrastructure including equity structure and diversification;
 - promoting entrepreneurship, branding, marketing, and adopting technology, training, exchange of education, and training of members;
 - formation and promotion of new cooperative societies; and promotion of social cooperatives.

Conclusion

- The contribution of cooperatives will have a multiplier effect on the PM's vision of a five trillion-dollar Indian economy and enhancing the income of farmers.
- To accomplish this, we must actively empower and revitalise primary cooperatives at the community-level as a priority.
- There is a need to identify and address various issues to ensure the smooth and sustainable progress of cooperatives.
- The vision of Sahakar se Samridhi will be realised in its true sense if our community business units suitably harness the inherent potential of people's collective action and act in unison in line with the core philosophy of the cooperative-based model of socio-economic progress.

Case Study: Profit Multiplier Through Business Diversification

- In Sittilingi - a tribal village of Dharmapuri district of Tamil Nadu, 500+ members joined hands to form Sittilingi Organic Farmers Association (SOFA) as a cooperative society in 2004.
- The members have diversified into production and marketing of millet-based cookies, health-mixes, roasted powders, papads, etc., which is sourced by 40 retail outlets, enabling an outlet turnover of a minimum of Rs 50,000/month.
- SOFA has diversified into ancillary agri-business too, viz., organic fertilisers and are running plant nurseries and bio-compost units with a collective turnover of Rs 25 lakh a year.

Short Term Rural Cooperative Credit Structure

- The Short Term Rural Cooperative Credit Structure (STCCS) is a **three- tier structure** that comprises **State Cooperative Banks** (StCBs) at the state level, **District Central Cooperative Banks** (DCCBs) at the district level, and **Primary Agriculture Credit Societies** (PACS) at the village level.
- The objective of this model is
 - to provide timely, adequate, and affordable cooperative credit to the farmer members, and
 - to realise social, economic, and political objectives ranging from self-help and grassroot level community participation to production, distribution, and social control over resource allocation and mobilisation.
- The farmers are members or owners of PACS. PACS are linked to the nearest DCCBs, whereas DCCBs are members of StCBs.
- These member-driven and community-based institutions are expected to function in a cohesive manner for efficient doorstep delivery of financial services.
- These institutions fall under the regulatory purview of the Reserve Bank of India (RBI) and are supervised by the National Bank for Agriculture and Rural Development (NABARD).

Importance of PACS

Data indicates that PACS account for 41 per cent (3.01 crore farmers) of the Kisan Credit Card (KCC) loans given by all entities in the country, and 95 per cent of KCC loans (2.95 crore farmers) through PACS go to the small and farmers.

PACS also function as nodal centres at panchayat level for the delivery of financial and non-financial services such as Direct Benefit (DBT), Interest Subvention Scheme (ISS), Crop Insurance Scheme (PMFBY), and inputs like fertilisers and seeds.

Cooperative Credit: Issues and Challenges

- The gradual institutionalisation of rural credit witnessed the presence of several commercial banks and microfinance institutions operating through cutting-edge technologies.
- The rural banking space has become tremendously competitive for cooperatives. The cooperative credit institutions could not compete due to their **inability to adopt technology enabled solutions.**
- Some of the most common issues are office management systems, transparency, good governance and professionalisation, product innovation speed, service delivery, etc.

Technology Adoption & Cooperative Credit

- The digitisation aspect of cooperative banks can be understood in terms of two aspects- **Digitisation of STCCS** and **Technology adoption for customer interface, service delivery, and decision-making.**
- **Digitisation of STCCS**
 - The StCBs and DCCBS fall under the regulatory purview of the RBI. These have been automated by the **Centralised Online Real-time Exchange (CORE) based Banking Solution [CBS].**
 - CBS not only strengthens the regulatory and supervisory mechanisms for cooperative banks but also ensures anytime, anywhere banking for the member clients.
 - While CBS has brought in modernisation and transparency to banking transactions, cooperative banks, especially the DCCBs, are yet to have adequate office management systems.

- In many cooperative banks, internal business processes like loan disbursement, performance appraisal, maintenance of office records, etc., are still handled manually, which dampens the efficiency of cooperative banks.
- Technology enabled internal systems ensure proper administration, governance, and internal monitoring, which will in turn aid in the statutory compliance of the RBI.
- **Common technological platforms and software across STCCS are the need of the hour** to bring uniformity to the agricultural credit system across states.
- While DCCBS need to deal with the digitisation of business processes, most of the PACS are being computerised. Computerisation is the first step towards digitisation.
- However, the rural infrastructure is still inadequate in terms of interrupted power supplies, internet connectivity, and low levels of computer skills.
 - The problem is further exacerbated by incomplete and inconsistent books and records in PACS.
- The Ministry of Cooperation, implemented a project on the '**Computerisation of PACS**'.
 - This initiative will witness computerisation of around 63,000 PACS over a period of 5 years and will enhance service delivery among small and marginal farmers.
 - It will enable PACS to digitise its services and link them with DCCBs and StCBs.
 - This will ensure speedy disposal of loans, a lower transition cost, faster audit, and reduction in imbalances in payments and accounting with StCBs and DCCBs.
- **Technology adoption for customer interface, service delivery and decision-making**
 - India is one of the largest producers of fruits and vegetables globally. The sector needs infrastructure and logistics facilitation and calls for high-end value-chain financing.
 - Similarly, warehouse receipt financing is an emerging area whereby the entire ecosystem comprising the buyer, seller, exchange, warehouse, and bank is integrated into a digital repository and lending system.
 - Many cooperative credit institutions have not been able to implement mobile banking and internet banking services.
 - The **cyber security risks and the rate of cyber fraud** are comparatively high in cooperative banks due to low investment system security.
 - Although there are immense benefits to the technological adoption, the costs may not be within the reach of rural cooperative credit institutions.
 - It is therefore desirable to have **shared tech resources through a collaborative approach** and strategic alliances.
 - Another example is using drones to monitor fields, which can improve the efficiency and accuracy of agri-insurance products.
 - Many advanced technologies, like block chain, have the potential to address cyber security risks and bring transparency to cooperative banking operations.

Conclusion

- The Ministry of Cooperation, has charted feasible pathways for providing policy support and guidance to STCCS.

- The pan-India PACS computerisation initiative has the potential to revolutionise cooperative banking. Computerisation, followed by digitisation, will enhance the service delivery of financial and non-financial products.
- The proximity of cooperative credit institutions to the farming community, along with their age-old banking wisdom, gives them a huge advantage in the agri-credit space when compared to their commercial counterparts.
- With the right technology and digitisation, cooperative credit institutions are well poised to serve the changing needs of Indian agriculture.
- It is important to note that digitisation calls for a complete transformation of the agriculture credit system so that cooperative credit activities are aligned with national priorities such as financial inclusion, sustainable agriculture, and the enhancement of farm incomes.

USHERING DEVELOPMENT PATHWAYS FOR NON-CREDIT COOPERATIVES

Cooperative Societies: Statistics

- As many as 8.54 lakh cooperative societies with a membership of 29 crore people are estimated to be operating in India.
- The evolution and growth of cooperatives in India vary across States. The difference across States arises due to the diverse focus areas and approaches adopted by the respective State administrative machinery to give an impetus to growth.

Cooperative Structure in India

- **The Cooperatives Society Act, 1912; the Mutually Aided Cooperative Thrift Society Act; and the Multi-State Cooperative Societies Act, 2002** form the legal framework of cooperatives in India.
- There are two types of cooperative structures in the country, i.e., State Cooperative Societies and Multi-State Cooperative Societies.
- The Multi-State Cooperative Societies come under the Central Government and the State Cooperative Societies under the State Governments.

Globalisation & Cooperative Societies

- It was largely believed that the advent of globalisation would impede the development of cooperatives. However, the success of certain cooperatives like Amul, Horticultural Producers' Cooperative Marketing and Processing Society (HOPCOMS), Kerala Co-operative Milk Marketing Federation (KCMMF) have proved this supposition wrong.
- The common thread running through these success stories is the existence of a multi-tier system that helps establish a strong supply chain.
- The backbone of a successful cooperative is a **well-functioning E2E (end-to-end) supply integration chain** involved right from procurement of raw materials, product specification, manufacturing, scheduling, distribution, till delivery of products to consumers
- The success of these cooperatives could also be **attributed to diversification of product mix, undertaking technical upgradation** of methods and inputs, focusing on marketing and expanding their presence, even internationally, and professional management.

The Way Forward

- Non-credit Cooperatives are heterogeneous in nature, and due to their sheer diversity and vast spread across sectors and regions, a 'one-size-fits-all' approach may not be successful for all sectors.
 - E.g., In January 2023, it was decided to set up and promote a **national-level Cooperative society for organic products**.
 - This is gaining in importance with rising levels of health and environmental consciousness.
- Steps must be taken to ensure convergence, awareness generation, training, mentoring, and technological upgradation, and digitalisation.
 - **Convergence**
 - The Ministry of Micro, Small and Medium Enterprises allows cooperatives to register as MSMEs through online registration on Udyam portal.
 - As per Udyam data, the highest number of cooperatives are registered under NIC code 10, which pertains to manufacture of food products.
 - A number of schemes that have substantially benefited MSMEs *en masse* are the Cluster- based programmes.
 - MSMEs also benefit in terms of creating marketing linkages through the domestic Procurement & Marketing Scheme, and the International Cooperation Scheme.
 - Authorities may consider Udyam certification as the basic document for cooperatives to avail benefits of programmes instead of any other documentation.
 - **Awareness, Training & Mentoring**
 - The need of the hour is to make students aware that the cooperative sector can be a full-fledged career option. For this purpose, training needs to be imparted to them.
 - Awareness programmes about cooperatives are required across India for capacity- building.
 - **Technology & Digitalisation**
 - The handholding from the Government in this regard is available in many forms, ranging from direct subsidies to various credit facilities that may be used for this pursuit.

Cooperatives in India

- Members of a cooperative - whether consumers, workers, or producers - are the owners of the business as well as the users of the goods and services.
- **Cooperatives are governed on a one- member, one-vote basis.** Democratic governance by members is one of the cooperative model's greatest strengths.
- The cooperative movement in India has always leveraged social and financial capital for inclusivity and community development.
- In India, cooperatives account for 19% of our agricultural financing, 35% of fertiliser distribution, 30% of fertiliser production, 40% of sugar production, 13% of wheat procurement, and 20% of paddy procurement.
- **Cooperative entrepreneur** is nothing but a social leader with a vision to craft robust strategies for managing business affairs democratically, rather than purely for personal gain.

- Cooperation' has remained the philosophy of India, and the cooperative movement is the backbone of the rural economy.
- Cooperative societies, particularly, in agriculture, dairy, and fisheries sectors, provide rural population not just with livelihood opportunities but also with financial safety net with a community-based approach

Socio-Economic Empowerment Effects of Cooperation

- Cooperatives have inherent advantages in tackling the problems of poverty alleviation, food security, and employment generation.
- These have immense potential to deliver goods and services at the doorstep without any hassles, as they are people-centred citizen organisations.
- In cooperative enterprises, people can reach **economic objectives by joining forces and pooling their resources**, which an individual would be unable to achieve.
- Cooperative enterprises can **facilitate and ensure market access, create economies of scale and scope, and establish independent market positions.**

Cooperatives, Agriculture and Food Society

- India's strong roots and strategic focus on the agricultural sector provide enough justification for the Government to move out of the front line of production and food security management and hand it over to the farmer cooperatives.
- The Government should recognise that cooperatives are the most appropriate institutions to contribute to and address some of the identified priority areas of concern, like food security, employment, poverty reduction, and financial inclusion.

Sahakar Grams - The Future

- Every village in the country should be encouraged to move towards **Atmanirbhar Sahakar Grams**.
- The concept of 'Sahakar Grams' is for shifting the gravitational forces of agriculture development and food management to the villages and farmers.
- Rational and efficient management of land, water, and cattle resources would ensure that there is no wastage and chemical inputs are used only when there is no alternative.

A Case for Creating National Cooperative Food Grid (NCFG)

- **Creating NCFG**
 - The Government can explore moving towards setting up a **National Cooperative Food Grid (NCFG)**.
 - Every Indian village should have one agriculture cooperative to run and manage its entire economic activities on cooperative principles.
 - This will reduce production costs and improve productivity.
 - Two or three such village-level cooperatives should jointly promote one Multi-Purpose Village Cooperative Society (MPVCS) with storage, sorting, grading, packaging, and trading facilities for perishables and non-perishables.
 - The recent initiative of the Ministry of regarding the **creation of 2 lakh additional multi-purpose cooperatives at the community level** would be a great step towards achieving self-reliance in India by following a bottom-up approach.

- **Working of NCFG**

- Every grain of food produced in the village should flow to NCFG through these cooperatives. This will completely eliminate food loss and wastage.
- The entire produce of the member farmer should be collected by the village cooperative and taken to MPVCS, which will immediately credit the value of the produce at Government-determined rates to the member's account.
- If the entire country is organised around this concept, then we will have around 7 lakh village agriculture cooperatives and around 3.5 lakh MPVCS.
- NCFG may be created by digitally connecting the entire network of village-level cooperatives and MPVCS.

- **Benefits**

- NCFG can help India **save around Rs 3 trillion annually** by lowering the cost of food production and rationalising expenditure on food security programmes of the Government.
- NCFG will also **generate enormous employment opportunities** in rural areas and trigger a new wave of rural development.
- NCFG may be complimented by setting up a dedicated 'National Rural and Farm Prosperity Fund (NRFPF)' for providing financial support.

Conclusion

- Cooperatives are the most appropriate institutional form for harnessing these opportunities, and a true cooperative value-based entrepreneurial initiative can never fail, whatever the overall economic and market condition be.
- The route for 'Developed and Atmanirbhar Bharat' essentially passes through its people, villages, rivers, agricultural land, natural resources, and deep and strong cooperative roots.

INNOVATION AND TECHNOLOGY FOR MAKING INDIAN COOPERATIVES FUTURE-READY

- The International Cooperative Alliance (ICA) defines cooperative as an organisation that is formed, controlled, and managed by its members. These members joined voluntarily.
- It is also an enterprise that strives to meet collective member aspirations through economic activities while retaining a social and cultural ethos.
- Basically, the major distinction between collectives, such as cooperative forms of organisations and other forms of business is:
 - Persons who own and finance the cooperative are those who use it;
 - Control of the cooperative is by those who use it; and,
 - Benefits of cooperatives are distributed to their members based on their use and contributions.

Spread and Outreach of Cooperatives

- India has 8.5 lakh cooperative units, of which 20 per cent are credit cooperatives.
- The remaining 80 per cent are non-credit cooperatives involved in diverse activities, viz. Fishery, Dairy, Producer, Processing, Consumer, Industrial, Marketing, etc.

Case of a Typical Cooperative in Dairy Sector

- The cooperative in the dairy sector in India follows a three-tier structure.
- The first layer is the **producer cooperative** formed by dairy producer members.
 - The producer members receive inputs from society. The society with the support of the union, studies the input markets and the needs of the members with much caution and generate critical insights to ensure sustained milk production through these producer members.
 - The role of information and communication technology (ICT) is quite helpful in locating markets and market prices for these input services.
 - Producers receive input services like cattle, fodder, cattle feed, animal health care, insurance, and animal husbandry services.
 - In this layer, the **producer operates as a customer for the cooperative**, and the cooperative shields members from market pressure, thereby playing an important role in influencing the cost of milk production at the producer's place.
 - Post-production by members, the cooperative looks after the milk pooling point for the producers. Today, technology-enabled services are planned to provide this facility at the doorstep of the farmer while ensuring transparent transactions.
 - **Automatic Milk Collection Units (AMCUs)** are now based on matured technologies having capabilities to support transparency in transactions and ensure quality control.
 - Robotics and internet of things (IoT)-based milking machines are used today to reduce drudgery and ensure timely information on the volume and quality of milk being milked at the producer's premises.
- **The second layer is the cooperative union.**
 - The union takes over the milk stored by the cooperatives by establishing supply chain and logistics models which are now ICT-enabled.
- **The third layer of the dairy cooperative sector in India is the federation.**
 - The federation emerges as a larger umbrella to make the dairy cooperative unions future-ready through continuous processes and market innovation.
 - The federation aims to find ways and means to understand market behaviour, manage economies of scale and scope, and compete in the market.
 - This approach involves the acquisition of business intelligence (BI) for the federation.

Conclusion and Way Forward

- The Digital India Policy (DI) has supported channelling digital services through Common Service Centres (CSCs).
- The intervention of the Ministry of Cooperation in converging CSC services with those of PACS is a major step forward.
- The **national cooperative database** is an emerging platform for effective use of ML, AI, BI, and digital twin services to benefit cooperatives.
- The **emergence of dashboards** will also have the potential to support policy decisions. The GEM portal, e-NAM, and related services, including funds for training and infrastructure, have the potential to converge with the national cooperative database.

Potential

- Fisheries is a **sunrise sector** in India. It has immense economic potential in India that has a coastline of over 8,000 km, an exclusive economic zone of over 2 million square km, and with extensive freshwater bodies stretching the length and breadth of the nation.
- India is the **3rd largest fish-producing country** in the world, contributing 7.93% towards global fish production, and is the **second largest among the aquaculture fish-producing** countries globally.
- It contributes to around one per cent of the national GDP. It provides livelihoods to more than 2.8 crore fishers and fish- farmers.
- The country has annual export earnings of over Rs 50,000 crore from the fisheries sector.

Steps Taken By The Govt.

- The **Pradhan Mantri Matsya Sampada Yojana** (PMMSY) was launched in the year 2019-20 by the Ministry of Fisheries, Animal Husbandry and Dairying.
- A dedicated Rs 7,522 crore **Fisheries & Aquaculture Infrastructure Development Fund** (FIDF) was created in the year 2018-19.
- The Government also initiated the **Blue Revolution** in 2014, boosting not only fish production but also infrastructure development in the fisheries sector.
- The momentum for the fishery cooperative movement in the country picked up in 2021 with the establishment of the Ministry of Cooperation.

Fishery Cooperative Movement in India

- The fishery cooperative movement in India began as early as 1913, when the first fishermen's society was organised under the name of 'Karla Machhimar Cooperative Society' in Maharashtra.
- There are 27,391 primary fishery societies in India 39.57 lakh fishers as members.

Role of Fishery Cooperative Federation

- **The National Federation of Fishers' Cooperatives Ltd.** (FISHCOPFED) is the apex and national level cooperative organisation for the development of the fishery cooperative movement in India.
- It has 104-member institutions all over the country, including the of Fisheries, Animal Husbandry, and Dairying, Government of India, and the National Cooperative Development Corporation (NCDC).

National Database of Fisheries Cooperatives

- A decision has been taken to organise **fishery cooperatives covering each panchayat** of the country to reach a figure of 2 lakh in the coming five years.
- The **National Fisheries Development Board (NFDB)** and **FISHCOPFED** have been assigned to speed up the work.
- The fisheries sector is quite diverse with sub-sectors like marine, inland, and brackish water, besides cold water and ornamental fisheries.
- The database can help us identify the gaps in the sector, and efforts will be made to bridge the gaps.
- Mapping of water bodies and production units is needed to strengthen the functioning of the fisheries cooperatives with optimal membership.

Strengthening of National Federation

- FISHCOPFED has provided social security to poor fishermen through accidental insurance.
- There is a need to set up the **Fisheries Cooperative Management Institute** in the country.
- **Kausalyaganga at Bhubaneswar** is a recognised fisheries hub in the country where FISHCOPFED has a training centre.
 - It could be upgraded as a National Institute of Fisheries Cooperatives Management with regional networks for skill development in the fisheries cooperative sector in a planned but phased manner.

Conclusion

- Around 4 million people are economically benefited through primary fishery cooperatives in India.
- The fishery cooperative sector can provide livelihood security, nutritional security, and social security to the vulnerable groups in our society.
- There is a need to insure over ten million fishermen under the Group Accident Insurance Scheme (GAIS) within the next 2 to 3 years.
- All four million fishery cooperative members should be provided with online awareness training about the PMMSY scheme and Cooperative Principles.
- Computerisation of a primary fishery cooperative can accelerate the growth of the sector at microlevel too.

ONE PACS ONE DRONE: TRANSFORMING COOPERATIVE SECTOR THROUGH TECHNOLOGY

Primary Agriculture Credit Societies (PACS) constitute the lowest tier of the 3-tier Short-Term Cooperative Credit (STCC) in the country, comprising approximately 13 crore farmers as its members, which is vital for the development of the rural economy.

PACS Becoming Multipurpose

- Recently, a Memorandum of Understanding was signed to enable PACS to function as Common Services Centres (CSC).
 - MoU was signed between the Ministry of Cooperation, the Ministry of Electronics and Information Technology (MeitY), NABARD, and CSC e-Governance Service India Limited.
- With PACS becoming multipurpose, more than 300 services will be made available to the rural population, especially to small villages situated in remote corners of the nation. more employment opportunities will be created in rural areas.
- In this sequence, it can be strengthened by providing **each PACS with a Drone under the initiative of 'One PACS One Drone (OPOD)**.
- It will strengthen the economic condition of PACS and promote the entry of new entrepreneurs in this field.

Drone Policy

- A drone is an unmanned aerial vehicle (UAV). It is an aircraft without any human pilot, crew, or passengers on board.
- The Drone Rules 2021 were announced with a vision to make India a global drone hub by 2030.

- In order to boost the manufacturing of drones in India, the Central Government approved **Production-Linked Incentive (PLI) scheme for drones** and components worth Rs 120 crore and putting import bans, paving the way for the domestic manufacturing sector.
- It is expected that the drone component industry will attract \$500 billion of investment in the next few years.
- In a major **step promote precision farming in using drone technology**, the Ministry of Agriculture and Farmers Welfare has issued guidelines to make drone technology affordable to the stakeholders of the Agriculture Sector.
- The **guidelines of the Sub-Mission on Agricultural Mechanisation (SMAM)** have been amended.
- This amendment envisages granting up to 100% of the cost of a drone or Rs 10 lakh, whichever is less, as a grant for the purchase of drones by the Farm Machinery Training & Testing Institutes, ICAR Institutes, Krishi Vigyan Kendras (KVK), and State Agriculture Universities for taking up large scale demonstrations of this technology on the farmers' fields.
- The Farmer Producer Organisations (FPOs) would be eligible to receive a grant of up to 75% of the cost of the agriculture for its demonstration to the farmers.
- In order to provide agricultural services through drone application, 40% of the basic cost of the drone and its attachments, or Rs 4 lakh, whichever is less, would be available as financial assistance by existing Custom Hiring Centres (CHC), which are set up by Cooperative Society of farmers, FPO, and rural entrepreneurs.

Why Drone in Agriculture Sector?

- The Indian agriculture sector is going through significant challenges such as low yield, soil erosion, a lack of irrigation facilities, inefficient use of inputs, unscientific use of chemical fertilisers, imbalanced NPK ratio in fertilisers, lack of post-harvest management structure, access to financial services, etc.
- Fourth Industrial Revolution technologies can play a major role in addressing these challenges. The Ministry of Electronic and Information Technology (MeitY) report highlighted that digital tech- based agriculture can unlock a further value of \$65 billion by 2025.
- The impact of digital agriculture on the Gross Domestic Product (GDP) will be even larger.
- **Drones** are one such technology that is gaining prominence in the agriculture sector. Land mapping, agrochemical and liquid fertilisers spraying (such as nano-urea/nano DAP/ Sagarika etc.), seeding, crop yield assessment, and drone-based analytics are the most prominent uses of the drone.
- **Spraying of Agrochemicals & liquid fertilisers** has the potential to be actively used as it saves the cost of inputs by 25-90%, minimises skin exposure by 90%, and improves crop yield.

Farm Mechanisation: A Concern

- It has been noticed that farm mechanisation has increased. However, this is still low when compared to other countries like China (more than 70%), Brazil (more than 75%), and the United States (more than 95%).
- The **low levels of mechanisation (less than 50% in India)** add to the inefficiencies during the harvest and post-harvest stages, which is one of the reasons for the low productivity of crops.
- With the introduction of drones in the agriculture sector, it is possible to increase the productivity of crops while minimising the input cost.

One PACS One Drone: Action Required & Benefits

- Drones can help transform Indian agriculture, boost agriculture GDP by 1-1.5% create at least 5 lakh new jobs, and support the country in ushering in a new digital era of prosperity.

- Rural entrepreneurs associated with PACS, who have passed class 10th or its equivalent from a recognised board and have pilot licences from institutes specified by the Director General of Civil Aviation (DGCA) would be eligible to fly the agricultural drone.

REGENERATIVE AGRI-SUPPLY CHAIN MANAGEMENT

- Supply chains concern themselves with the flow of products and information amongst the members of the supply chain organisations. This entails the procurement and transformation of materials into final finished products, and the distribution of those products to end customers.
- The supply chain is the **series of the flows of agricultural commodities from producer to consumer** following the sequence of logistics flows, transporters, stores, procurement, warehousing, inventory management, and processing.

Agriculture Supply Chain Management: Associated Challenges

- Agriculture Supply Chain Management (ASCM) focusses on efficient planning, design, coordination, organisation, storage, processing, and monitoring of the flow of agricultural commodities from farm to fork.
- However, these supply chains are often challenged by various factors such as climate change, market volatility, market price rate, and supply chain disruptions.
- The transformation towards a climate- smart regenerative agriculture supply chain will suppress the social and environmental pressures on agriculture.

Importance of Supply Chain Management

- Agricultural supply chains **ensure food security and sustainable agricultural development** by connecting different stakeholders.
- Farmers are dependent on supply chain intermediaries for procuring, marketing, and distributing commodities.
- Supply Chain Management requires the right allocation of resources to handle storage problems, transportation problems, and inventory management.

Cooperatives in Agri-supply Chain

- Collectives like Farmer Producer Organisations (FPOs), Cluster- Based Business Organisations (CBBOs), Cooperative Marketing Societies, etc., are responsible for diverse business activities like bulk purchase of agri-inputs, providing agro-advisory services.
- These are also involved in facilitation of credit requirements, aggregation of produce for collective marketing, and processing of agricultural commodities.
- Cooperatives provide a platform for information dissemination, marketing, transportation, and distribution of agricultural commodities.
- Producer cooperatives have integrated supply chain activities through symbiotic operations.
- Cooperatives help in offering credit facilities and getting quality produce by supplying the right agri-inputs (seed, fertiliser, agrochemicals, farm equipment, and biofertilisers).

Cooperative Marketing and Supply Chain

- The focus of agriculture cooperatives has transformed from production to quality produce in addition to marketing and processing.

- Cooperative Marketing Societies have been progressing towards better storage facilities, efficient management of resources, timely payments to farmers, and minimisation of waste.

PACS Storage & Supply Chain Management

- PACS are expected to become multi- purpose and will be able to undertake multifarious activities, which, inter alia, include fishery, dairy, construction of rural godowns, procurement of food grains, storage of agri-inputs (seed, fertiliser), LPG/CNG/Petrol distribution.
- The storage of agriculture implements, and agri-inputs by PACS can help ensure availability of quality inputs for farmers.
- PACS are **functioning as common service centres** by facilitating the delivery of services to villages.
- PACS have delivered the right agri-inputs to the farmers at the doorstep ensuring quality production, and facilitated storages.
- Cooperatives in regenerative supply chains are taking care of the climate, social, and environmental justice by going beyond profit maximisation.
- It focuses on reduce, reuse and recycle (3Rs) of the by-products generated in the supply chain and minimises waste.

Conclusion

- The Ministry of Cooperation has recently notified setting up of three sector-specific national level cooperative societies: seed, export, and organic societies.
- Setting up and promoting these cooperative societies will require an efficient supply chain management system to be owned, operated, and managed by member cooperatives.

WORLD'S LARGEST GRAIN STORAGE PLAN

- An Inter Ministerial Committee (IMC) has been constituted and empowered for facilitation of the '**World's Largest Grain Storage Plan**' in Cooperative Sector.
- This will be done by convergence of various schemes of the Ministry of Agriculture and Farmers Welfare, Ministry of Consumer Affairs, Food and Public Distribution and Ministry of Food Processing Industries.
- The IMC will be constituted under the Chairmanship of Minister of Cooperation, with Minister of Agriculture and Farmers Welfare, Minister of Consumer Affairs, Food and Public Distribution, Minister of Food Processing Industries and Secretaries concerned as members.
- This IMC will modify guidelines/ implementation methodologies of the schemes of the respective Ministries as and when need arises.

What's The Plan?

- The Plan entails setting up various types of agri-infrastructure, including warehouse, custom hiring centre, processing units, etc. at the level of PACS, thus transforming them into multipurpose societies.
- **Creation and modernisation of infrastructure** at the level of PACS will reduce food grain wastage by creating sufficient storage capacity, strengthen food security of the country and enable farmers to realise better prices for their crops.

- This initiative has been undertaken to set up decentralised storage capacity at the level of PACS along with other agri-infrastructure, which would not only strengthen the food security of the country, but would also enable PACS to themselves into vibrant economic entities.

Benefits of the Plan

- The plan is **multi-pronged**-it aims to address not just the shortage of agricultural storage infrastructure in the country by facilitating establishment of godowns at the level of PACS, but would also enable PACS to undertake various other activities, viz
 - **Functioning as Procurement centres** for State Agencies/ Food Corporation of India (FCI).
 - **Serving as Fair Price Shops (FPS).**
 - **Setting up custom hiring centres,**
 - **Setting up common processing units,** including assaying, sorting, grading units for agricultural produce, etc.
- Creation of decentralised storage capacity at the local level would reduce food grain wastage and **strengthening food security of the country.**
- By providing various options to the farmers, it would prevent distress sale of crops, thus enabling the farmers to **realise better prices for their produce.**
- It would hugely reduce the cost incurred in transportation of food grains to procurement centres and again transporting the stocks back from warehouses to FPS.
- Through 'Whole-of-Government' approach, the Plan would strengthen PACS by enabling them to diversify their business activities, thus enhancing the incomes of the farmer members as well.