



# **NABARD Grade A**

## **GK Digest : January 2019**

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# NABARD GRADE A GK DIGEST: JANUARY 2019

## AGRICULTURE CURRENT AFFAIRS DECEMBER-2018

- **The 13<sup>th</sup> Confederation of Indian industries Agrotech India-2018** was inaugurated in Chandigarh on 1<sup>st</sup> December 2018 by President Ram Nath Kovind. **The theme was-Technology in Agriculture: Increasing farmer's income.**
- World Meteorological Department has declared 2018 as the Fourth hottest year recorded.
- **Global Agriculture Food Summit-2018** was held in Ranchi, Jharkhand.
- **World Soil day** was celebrated on 5<sup>th</sup> December.
- The Cooperative department of Punjab has decided to merge 20 District Central Cooperative Banks with the Punjab State Cooperative Bank.
- World Bank has provided a financial assistance of \$210 million for the initiative-State of Maharashtra's Agribusiness and Rural Transformation (**SMART**) on 6<sup>th</sup> December 2018.
- **Shahpurkandi dam project** on River Ravi in Punjab has been approved by the Centre with the financial assistance of Rs.485.38crore for over 5 years from 2018-19 to 2022-23.
- Foundation stone of **Pusa Haat** was laid at ICAR Agricultural Technological Information Centre (ATIC) in New Delhi on 6<sup>th</sup> December 2018.
- According to a study by Global Carbon Project, **India ranks 4<sup>th</sup> in the emission of Carbon di oxide** in the world and accounts for 7% of the global Carbon di oxide emission in 2017.
- In order to boost rooftop Solar power capacity projects, NABARD has signed a loan agreement of \$100million with Green Climate Fund (GCF), on 8<sup>th</sup> December, 2018.
- **First International Conference on Sustainable Water Management** was held in Mohali, Punjab on 10<sup>th</sup> and 11<sup>th</sup> December 2018.
- NABARD has developed a portal-**ENSURE-under National Livestock Mission** for improving the practice of Direct Benefit Transfer (DBT).
- Ministry of Commerce and Industry has released India's first Agriculture Export Policy 2018 which aims to propel India to become a \$5trillion economy by 2025.
- **Jharkhand has been selected by the Union Ministry of Agriculture for Krishi Karman Award in the category of Rice** and this award will be awarded in February-2019 and carries a cash prize worth Rs.2crore.
- ICAR has approved the registration of 15 new breeds of livestock and poultry in 2018.
- Maharashtra Government has approved a sum of Rs.4089crore for the **Thembu lift irrigation project on River Krishna.**
- Jharkhand Government has launched a scheme **Mukhya Mantri Krishi Yojana** to help medium and marginal farmers to double their income by 2022.

- Odisha Government has announced **Krushak assistance for livelihood and Income augmentation (KALIA) scheme** with an outlay of Rs.10000crore to empower small, marginal and landless farmers and labourers.
- **Oil and Natural gas (ONGC) has set up the centre for Agricultural Research and Training in Telangana in collaboration with Eklavya Foundation.**
- **National Farmer's Day was celebrated on 23<sup>rd</sup> December** on the occasion of Birth Anniversary of Indian Farmer's leader and 5<sup>th</sup> Prime Minister of India Chaudhary Charan Singh. His statue was inaugurated in Ghaziabad, Uttar Pradesh.

## KURUKSHETRA MAGAZINE SUMMARY: DECEMBER 2018

### MODERN TECHNOLOGY IN IMPLEMENTATION OF RURAL DEVELOPMENT PLANS

- The Government of India has been taking several initiatives for the all-round development of rural areas and the prosperity of the village folk.
- **The Ministry of Rural Development has been making sincere efforts to bring prosperity and well-being in the villages through its programmes and schemes i.e.**
  - Pradhan Mantri Gram Sadak Yojana (PMGSY),
  - Pradhan Mantri Awas Yojana-Gramin (PMAY-G),
  - Mahatma Gandhi National Rural Employment Guarantee Act (MGNREGA),
  - National Rural Livelihood Mission (NRLM),
  - National Social Assistance Program (NSAP),
  - Sansad Adarsh Gram Yojana (SAGY),
  - Shyama Prasad Mukherjee Rurban Mission and
  - Mission Antyodaya.

**In recent years, the schemes related to rural development have been re-structured and their implementation has also been made more effective.**

- With the objective of providing pucca houses with basic facilities by 2022 to all the eligible homeless families and households living in the dilapidated houses, Pradhan Mantri Awas Yojana-Grameen was launched by on 20th nov, 2016.
- The Ministry of Rural Development, in collaboration with State Governments and UNDP, HUDCO, Construction Skill Development Council of India (MCI), National Skill Development Corporation (NSDC), National Institute of Rural Development and Panchayati Raj and Indian Institute of Technology (IIT) Delhi, has undertaken training related initiatives in every state through which all housing zones are being provided with suggestions and guidance to adopt designs and construction technologies according to their geographical, environmental and other needs. Under this scheme, the target is to construct one crore residential units till March 2019.
- Under Pradhan Mantri Awas Yojana-Gramin, construction of 52.26 lakh houses has been completed by 19th November, 2018. In the implementation of this scheme, performance of Madhya Pradesh, Uttar Pradesh, West Bengal, Odisha, Chhattisgarh and Rajasthan has been commendable. In each stage of housing construction, information technology based MIS-AwasSoft, mobile-based application. Awas app and space technology are being used on a large-scale for monitoring Purpose.
- Transfer of funds to the beneficiaries are done on the basis of Electronic Funds Transfer order (FTO).



Fund transfer is not permitted in any other form.

- The entire work of this scheme i.e. from the selection of beneficiaries to distribution of funds, verification of progress of construction work till the release of funds is being done through MIS AwasSoft.
- To monitor the progress of housing construction, all photographs are geo-tagged with the help of mobile-based application-Awas app and uploaded through Awas Soft.
- ISRO has developed this software application through which 2-D, 3-D images of the Earth's surface can be seen. Off-line module of this application has also been launched to register geo-tagged photographs.
- Rural Housing Knowledge Network (RHKN) has been started in collaboration with IIT Delhi with the objective to prepare multilingual web-portal in the public sector and to prepare comprehensive nationwide compilation of information related to business houses, institutions and practices associated with affordable and sustainable solutions of rural housing.
- During the Fifth Five year Plan' in the year 1974, the development of rural roads was made a part of the "Minimum Needs Program."
- The subject of "Rural Roads" is included in the Constitution under the State List.
- The Centrally- Sponsored Scheme of "Pradhan Mantri e The Gram Sadak Yojana", launched on December 25, 2000, provides all weather roads to the habitations included in core network of plains areas not connected with roads and having population of 500 and more (as per 2001 Census).
- According to the Core network, the habitations not connected with roads and having population of 250 and more (as per 2001 Census) in Special category States like North East, Sikkim, Himachal Pradesh, Jammu and Kashmir and Uttarakhand, desert areas, tribal areas included in Schedule-V and 88 selected tribal and backward districts as determined by the Home Ministry / NITI Aayog are to be connected with roads.
- On a special initiative of Ministry of Rural development, the Indian Roads congress has published a Rural Roads Manual IRCSP: 20 on the metric standards, design, construction and maintenance of rural roads.
- Asian Development Bank approved technical assistance of US \$ 500 million in December last year to emphasize on sustainability, innovative technology and disaster mechanism in the development of rural roads in the country.
- It is the result of the use of modern technology and scientific methods that under the Pradhan Mantri Gram Sadak Yojana, 1,68,394 out of 1,78,134 eligible habitations have been connected by road till 19th November, 2018 which is 94.5 percent of the target.
- During the tenure of the present government, the growth of road construction has increased by 27 percent as compared to last four years of the previous government.
- The speed of road construction in the year 2013-14 was 75 km per day, which increased to 134 Kilometres per day in 2017-18.
- Pradhan Mantri Gram Sadak Yojana-II has been started for improvement in existing rural road network.
- Under this, with the aim of making road network more vibrant, selected rural roads are being upgraded by the use of modern technology and parameters and the target has been fixed to construct 50 thousand kilometres of roads.
- Out of this, construction of more than 21000 kilometers of roads has been completed.
- To develop road connectivity in areas affected by left wing extremism, funds to the tune of 11,725 crores have been allocated and the target is to construct 5411 kms road by March, 2020.
- Under World Bank-assisted PMGSV-Rural Road Project II, emphasis has been laid on adopting innovative and simplified methods of maintenance of rural roads.
- Under this, a mobile application Aarambh has been developed which helps in collecting necessary data for preparation of inventory of roads, GIS based mapping for survey of road surface, cost estimation

and annual road maintenance plans and monitoring work.

- Modern Web-based, On-line Management, Monitoring and Accounting System (OMMAS) has been set up to effectively monitor the entire program, bring in more efficiency in implementation and increase responsibility and transparency in the system.
- E-payment and e-procurement are new dimensions added to it. Using the dot-net technology, the new version of OMMAS 2.0 has also been started.
- National Institute of Rural Development and Panchayati Raj has issued guidelines on technology initiatives for promoting cost-effective technology in the construction of rural roads using new materials, waste materials and locally available material.
- States have been advised to propose the use of any one of the new technologies for at least 10 percent of the roads involved in annual proposals including material approved by Indian Roads Organization (IRO).
- All states have been advised under PMGSY to start rural road projects for about 100 km long road on experimental basis, using cold mix technology in the construction of upper surface of the roads.
- Keeping in view the use of non conventional materials and environment-friendly Green Technologies in the construction of PMGSY roads, the Ministry of Rural Development has fixed state-wise targets regarding the use of waste plastic and cold mix technology.
- The project of mapping waste material and locally available material on the GIS platform has been entrusted to Central Road Research Institute, New Delhi.
- In March last year, a tripartite agreement was signed by National Rural Road Development Agency, Rural Development Ministry, National Remote Sensing Center, Indian Space Research Organization (ISRO) and National Institute of Rural Development and Panchayati Raj for use of Geo-informatics and Satellite imagery on real time basis and to verify the progress of implementation as per the information received from the states electronically.
- To fulfil the objectives of e-Governance and Digital India, a new mobile application Meri Sadak has been launched on July 20, 2015 for resolving complaints related to PMGSY roads.
- The Meri Sadak app is available in 10 regional languages along with English and Hindi.
- Mahatma Gandhi National Rural Employment Guarantee Act - MGNREGA, which provides at least 100 days of unskilled manual labour to each family in the form of guaranteed employment in a financial year is an important program to ensure inclusive growth of rural India.
- A budgetary allocation of Rs 55,000 crore, largest ever, has been provided for MGNREGA in the financial year 2018-19.
- An exclusive initiative named Geo-MGNREGA was introduced in the financial year 2016-17 to strengthen the scheme and also to underpin transparency and monitoring mechanism in implementation.
- Under this initiative, space technology is being used for geo-tagging of all assets created through MGNREGA.
- In this scheme. 3.93 crore assets have been created so far. Out of these, 2.42 crore assets were created during the tenure of the present government.
- SECURE (Software for Estimate Calculation Using Rural Rates for Employment) is an online application, specially designed and developed to prepare online estimates of MGNREGA works.
- Ministry of Rural Development has started the National Electronic Fund Management System (NE-FMS) from Jan 01, 2016 to further simplify the fund flow system Funds are being transferred directly to beneficiaries in bank / post office accounts through this System in 24 States and one Union territory.
- In the year 2018-19 so far, the payment of 99 percent wages has been done directly in the account of MGNREGA workers electronically through direct benefit transfer (DBT) system whereas during the financial year 2013-14, only 37 percent payments could have been made electronically.

- 12.55 million job cards have been issued to MGNREGA workers and about 10 crore workers have been linked to AADHAR.
- 6.95 crore workers have been linked to the AADHAR based payment system.

## DIGITAL HEALTH SERVICES: SOME KEY INITIATIVES

### MSAKHI

- It is an award winning mobile phone app to help health workers in providing high-quality health care to the families in even the remotest villages in different parts of the country. It is an open source Android application developed specifically for the health workers in India. With this app, ASHA workers can use their smartphones to update skills, stay in touch with supervisors, and track and report important data about health issues in their communities.

### Kilkari app:

- It delivers 72 audio messages about pregnancy, child birth and child care directly to families' mobile phones from the second trimester of pregnancy until the child is one year old. Kilkari has been launched in Jharkhand, Odisha, Uttar Pradesh, Uttarakhand and High Priority Districts (HPDs) of Madhya Pradesh and Rajasthan in the first phase.

### MOBILE ACADEMY

- It is a free audio training course designed to expand and refresh the knowledge base of Accredited Social Health Activists (ASHAs) and improve their communication skills. Mobile Academy has been launched in Jharkhand, Madhya Pradesh, Rajasthan and Uttarakhand.

### M-CESSATION:

- This programme being provided as part of any mHealth initiative, aims at reaching out to those willing to quit tobacco use and 'support them towards successful quitting through text messages sent via mobile phones. e-Hosoltal:  
It is an online registration services framework portal where people can avail online services such as registration and appointment, pay fees, view diagnostics reports and check for the availability of blood in government hospitals in this portal.

### ANM ON LINE (ANMOL):

- The application aims at bringing awareness to the remotest populations, underserved communities and urban slums and through images and videos, and educating them about initiatives on health, maintenance of good hygiene, basic health care and precautions.

### MERA ASPATAAL:

- It is a Government of India initiative by the Ministry of Health and Family Welfare, to capture patient feedback for the services received at the hospital through user-friendly multiple channels such as Short Message Service (SMS), Outbound Dialling (OBD) mobile application and web portal.



## BUILDING AGRICULTURE INNOVATION SYSTEM

- India needs to rapidly move towards 'innovation led agricultural growth'.
- This has to be achieved with speed, scale and sustainability.
- The combination of scarcity and aspiration had helped to India develop its own brand of innovation — getting more from less for more people, not just for more profit. This was called the MLM paradigm, i.e. 'More from Less for More'.
- This means getting more output or productivity by using less resource (land, water, money, inputs) to create benefits for more and more people, not just more and more profit.
- It is important to note that Indian demand for food grains would increase from 192 million tonnes in 2000 to 342 million tonnes in 2030 and the challenge is that this 'more' has to be created with 'less'.

### MAJOR CHALLENGES:-

#### Land

- Availability of 'Less land' is also due to degradation caused by soil erosion, soil salinity and water-logging problems. Available estimates show that over 120 million hectares of land is degraded.
- However, the most powerful way of getting 'more from less' is the power of using new technology.
- For instance, GM crops present a great opportunity of getting 'more from less'. Also, within the next so many years, fifty percent of our crops will be GM crops for which right policies are required and right policies are those that are 'promotional but precautionary'.
- Innovation through technology-enabled supply chain through the use of RFID, advanced GIS/GPS, tracing and traceability systems could get 'more from less' by reducing wastage and ensuring quality throughout the supply chain.
- 'more from less' can also be achieved by using leakage-free public distribution system, which uses computerized allocation of food grains, GPS/SMS monitoring, verifiable digital identity and web portal for public grievances.
- The second powerful way of getting 'more from less' is to empower more and more farmers with more and more knowledge.
- The third way of getting more from less' is by using the power of 'collective intelligence'.
- The fourth Strategy is 'collective intelligence must be used in removing drudgery in farm fields.
- The decade of 2010-20 was declared as the Indian Decade of Innovation.
- India in innovation based on the report published by Global Innovation Index: India's ranking among 143 nations has slipped from 62 (2011) to 64 (2012) to 66 (2013) to 76 (2014), 81 (2015). However, in the subsequent years, it has steadily improved, 66 (2016), 60 (2017) and 57 (2018).

### KRISHI VIGYAN KENDRA: PROMOTING SCIENTIFIC TEMPER

- Innovation in agriculture has always shaped the destiny of a promising country like India. In order to draw true potential of farmers towards the state of the art technologies for the betterment of agriculture, Indian government has set up a big chain of over 700 Krishi Vigyan Kendras (KVKs) across the country.
- KVKs are emerging as the regional knowledge hubs and gaining trust of the farmer community.

### ORIGIN, Philosophy & Objectives of KVK:

- The concept of Krishi Vigyan Kendra was given by Dr. M. S. Swaminathan, initiator of green revolution in India and the father of Indian agricultural research.
- In light of his Inspiration, the Government of India established first KVK in Pondicherry during 1974 with the financial support and able guidance of Indian Council of Agriculture Research (ICAR).
- In Kapgari Village of West Medinipur district, the first KVK in West Bengal and second in India was established in the year 1976.  
Since then, KVKs have been established in all Indian states and the number continues to grow. Presently, around 695 Krishi Vigyan Kendras are existing in different districts of India.
- ICAR has 11 Agricultural Technology Application Research Institutes (ATARIs) throughout the country and all the Krishi Vigyan Kendras fall under ATARI.  
The objective of the ATARI is to plan, monitor, evaluate and guide the programmes of the KVKs.

**The objectives cum activities of Krishi Vigyan Kendras can be summarised as below:-**

- On Farm Testing of new Technologies
- Frontline Demonstration Centre
- Capacity Building
- Multi sector Support and Advisory Services

Aligned to strengthen the efficiency of KVKs, a study was conducted by the National Institute of Labour Economics Research and Development (NILERD), an autonomous institute under NITI Aayog in the year 2017. The study intended to examine the efficacy of KVKs' services, assess them in terms of infrastructure and human resources, impact of new knowledge and practices on farmers' farming methods and the impact of new knowledge adoption by farmers on their income and quality of life. This study was based on field survey of 46 KVKs, covering about 1800 farmers in five States (Rajasthan, Madhya Pradesh, Maharashtra, Tamil Nadu and Arunachal Pradesh) following stratified random sampling technique.

**The study found that:-**

- About 40% farmers reported that they implemented the technology immediately after its dissemination by KVK and that 25% did so from the next agricultural season.  
With the intervention by KVKs, about 80% of the farmers have modified their agricultural patterns which were related to diversification of crops and changes in cropping pattern, seed planting technique, use of fertilizers and pesticides, changes in machinery used and in water use pattern.
- More than 50% of the farmers have mechanized their farm operations; however, ownership of farm machinery and technology adoption increased with the size of holdings and education level of the farmers.

**KRISHI VIGYAN KENDRA PORTAL: EXTENDED ARM TO THE FARMERS**

- Till the recent past, the efficacy of KVKs was difficult to measure due to the large number of farmers served by a single KVK and largely offline communication between the KVK and farmers. For this reason, research over the last 25 years has focused on the capacity of KVKs to make use of ICT for the purpose of a better management of communications with farmers.
- In 2016, Indian government launched Krishi Vigyan Kendra Portal to provide the information and advisory to the farmers and facilitate online monitoring of the KVK activities. At this portal, major events are reported on regular basis and reports are submitted online on monthly basis. This portal provides information of future plans and programmes of KVKs which benefit farmers, entrepreneurs and youth in joining different training programmes being organised by KVKs.

## NEW SCHEME TO PROMOTE YOUNG ENTREPRENEURS IN COOPERATIVES

- To cater to the needs and aspirations of the youth, the National Cooperative Development Corporation (NCDC) has come up with a youth-friendly scheme 'Yuva Sahakar-Cooperative Enterprise Support and Innovation Scheme' for attracting them to cooperative business ventures. The newly launched scheme would encourage cooperatives to venture into new and innovative areas. The scheme will be linked to Rs 1000 crore 'Cooperative Start-up and Innovation Fund (CSIF)' created by the NCDC. It would have more incentives for cooperatives of North Eastern region, Aspirational Districts and cooperatives with women or SC or ST or PwDk members. The funding for the project will be up to 80% of the project cost for these special categories as against 70% for others.
- NCDC, being the most preferred financial institution in the world of cooperatives, has also embarked on Sahakar 22, a Mission for Doubling Farmers' Income by 2022. The NCDC has the unique distinction of being the sole statutory organisation functioning as an apex financial and developmental institution exclusively devoted to cooperative sector. It has extended financial assistance of Rs 63702.61 crore during 2014-2018 (as on November 13), 220% more than Rs 19850.6 during 2010-14. KNOWLEDGE MANAGEMENT THROUGH DIGITAL TECHNOLOGIES.
- Adopting a suitable Knowledge Management system or combination of systems and tools is important to reach-out the target audience (84 crores population in 6,50,000 villages) with intended information and knowledge.
- Traditional Knowledge Management systems including classroom teaching and distance mode programs in rural development sector, mostly resulted in 'knowledge push' and very less scope for interactivity. These systems are more 'process-centric' rather than 'people-centric'.
- But, rapid technological developments over the years, have lead to paradigm shift in reaching-out information and knowledge to rural communities, owing to the affordability of internet and mobile phones in rural India. The recent trends in Information and Communication Technology (ICT), including Web Portals, Social Media, Expert Systems, e-Learning, Mobile Apps, Internet of Things (IoT), Digital Videos, Community Radio etc. have made 'Knowledge Sharing more efficient and timely.

## Web Portal :A powerful Knowledge Management tool

- Web portals are specially designed single access points to information collected from diverse sources.
- Web portals can be classified as horizontal (providing broad range of content for general user) or vertical (targeted offering for niche users), also called vortal. Some of the key web-portals hosting credible information on Rural Development in India, include — Vikaspedia, India Panchayat Knowledge Portal, India Portal, Ministry of Rural Development Portal, NIRD&PR portal, Panchayat Enterprise Suite, Digital India Portal and DISHA Portal monitoring 42 National Flagship Schemes.
- In India, most of the websites (76%), particularly Government websites, are available only in English and about 24% of the websites host bilingual content (Hindi/regional language).

## SOCIAL MEDIA : A COST EFFECTIVE TOOL FOR KNOWLEDGE SHARING

- With increasing reach among especially the youth, through increasing mobile phone subscriptions and decreasing data tariffs, social media is the best knowledge management tool as on today to reach-out the target group in rural areas in shorter time and more effectively. Social Media includes social networking sites (Facebook, LinkedIn), Messenger Apps (WhatsApp), Wogs (Slogger, WordPress), microblogs (Twitter), video sharing tools (YouTube), podcasts, Wikis and many more.

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**VIKASPEDIA KNOWLEDGE PORTAL**


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- Launched in 2008, as part of India Development Gateway initiative of Government of India, Vikaspedia portal is aimed at Smart Phones: Dynamic power house of Knowledge

Strategic reforms in telecommunications sector since 1990's have facilitated strong ICT infrastructure in India, particularly it revolutionised the mobile penetration in rural India. As on 31st August 2018, the total number of mobile users in India were 1167 million (91% of total population), including 519 million subscribers from rural areas, as estimated by Telephone Regulatory Authority of India (TRAI).

**Some of the successful mobile based services implemented in India, is listed below.**

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**RURAL DEVELOPMENT:**


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- DISHA, Gram Somvad, Awaos App (PMAY-G), Mission Antyadaya App, My SHG App

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**AGRICULTURE AND ALLIED SECTORS:**


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- IFFCO Kisan Sanchar Ltd (1KSL), Fisher Friend, mKisan, Reuters, Market Light (RML), mKRISHI, Kisan Call Centre, Annapurna Krishi Prosaar Seva, eNAM

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**BANKING:**


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- BHIMApp, PhonePe, PayTm, FreeCharge, Airtel Money, Idea Money

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**HEALTH:**


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- mSWASTHYA, MOTHER, Indian Blood Donors, Blood4India, eMamta, eAushadhi, Sanjeevani, 1mg App, mTIKKA

Understanding the need for promoting mobile based services, Ministry of Electronics and Information Technology, Government of India has launched 'Mobile Seva' initiative for mainstreaming mobile governance in the country. It provides an integrated platform for all Government departments and agencies in the country for delivery of public services to citizens over mobile devices using SMS, USSD, IVRS and mobile applications.

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## **EXPERT SYSTEM: A VIRTUAL EXPERT TOOL PROVIDING SOLUTIONS FOR COMMON PROBLEMS**

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- An Expert System is basically a software application that attempts to reproduce the performance of an expert in a particular domain. Expert system adopts artificial intelligence to solve a particular problem with the help of pre-set conditions in the software application. There are expert systems available in Agriculture and allied sectors developed by Indian Council of Agricultural Research (ICAR) and are widely used in Krishi Vigyan Kendras (KVKs) and other organisations working in remote villages. 'Plantix' is a mobile based plant disease diagnostic tool getting popular in recent days.

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**E-LEARNING :**


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- Massive Online Open Courses (MOOCs) are recent trends adopted by many organisations to offer free online courses. Popular MOOC platforms include, SWAYAM (MHRD, Government of India), Coursera, edX, Khan Academy, Udacity and Future-Learn.

### ADOPTING ICTS FOR CAPACITY BUILDING OF PANCHAYATI RAJ INSTITUTIONS (PRIs):

- There are 2,62,547 Panchayati Raj Institutions functioning in India (as on October 2018), which includes 2,55,576 Gram Panchayats, 6354 Block Panchayats and 617 District Panchayats.
- The chronic PRIs management problems are compounded by the presence of a large number of Elected Representatives (ERs) across three levels, to the tune of 31.0 lakhs (including 14.39 lakh Elected Women Representatives), coupled with higher attrition rate with every election cycle and low levels of managerial experience/capacities and exposure.
- Approximately 30 lakh functionaries assist the elected representatives to manage the PRIs.
- In order to address a major problem in terms of constraints associated with capacity building effort by various organisations and enabling them with continued learning, National Institute of Rural Development and Panchayati Raj (NIRD&PR), Hyderabad has adopted Information and Communication Technology (ICT) as the best way to reach-out and impart training to the 60 lakh Elected Representatives and Functionaries associated with PRIs.

### COMMUNITY RADIO:

- Community Radio is a broadcasting system established by the efforts of a specific community,
- As on today, there are 186 Community Radio stations operational in India, including 40 in rural areas.
- The 'Sangam Radio' started in 2008, by Deccan Development Society (DDS) in Telangana, is the first NGO operated Community Radio, successfully operated by women's collectives for the past 10 years.
- However, unlike other countries, Community Radios are not so successful in India, owing to many reasons including lack of funding, program skills, technology and licencing issues.

### INNOVATIVE TECHNOLOGIES FOR HIGHER PRODUCTIVITY

- India has achieved a remarkable growth in production and productivity of various agricultural commodities over the last five decades.
- Major changes in agricultural production took place in mid-1960s with introduction and adaptation of new production technologies which is known as "Green Revolution" technology.
- Initially introduced in late 1960s it spread into other parts of the country during 1980s.
- The agriculture sector observed spectacular growth of over 4% per annum during 1980 to 1990.
- However, this growth rate did not sustain during 1990s due to several reasons including slowdown in public investment, low yield growth, decline in food productivity, declining water table and environment led stress problems, climate changes etc.
- Agriculture is still the main livelihood of approximately half of the rural households in India and contributing over 16% to its gross domestic product as per G01, 2018.
- The population of India is growing at 1.24% per annum and is expected to increase from 1.21 billion in 2011 to about 1.46 billion in 2030.
- It is estimated that in the year 2035 the total domestic food grains demand will be 398.6 mt and milk 237.8 mt against 264 mt and 132.4 mt respectively in 2013-14.
- To meet the estimated demand, the yield level over the base period yield (1994-95) is required to be enhanced by more than 50%.
- These targets could be achieved in a scenario of several odd factors which will constraint the sustainable development of agriculture. climate form the essence of all kinds of life and provide support to its various processes. Intensive input based high tech agriculture during last three decades has stressed these resources.



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### REASONS FOR INEFFICIENT PRODUCTION:-

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- Degrading quality of natural resource base.
- Climate change and environmental degradation especially in African and Asian continents including India.
- Unsustainable management of natural resources and environment systems.
- Geographic information systems (GIS), global positioning systems (GPS) and remote sensing (RS) have enabled farmers to refine nutrient recommendation and water management models to the site-specific conditions of each field.

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### INNOVATIONS IN EFFICIENT INPUT RESOURCES UTILISATION:

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- Site-specific Nutrient Management (SSNM):
- Real-time Nitrogen supply
- Use Decision Support System (DSS)
- Improving water productivity
- Sustained Adoption of Micro-Irrigation
- Nanotechnology
- Crop Diversification
- Integrated Farming System
- Conservative Agriculture
- Integrated Crop Management.

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### TECHNOLOGY INTERVENTIONS IN SANITATION

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- The Swachh Bharat Mission, launched in 2014, is a unique programme that has brought focus on the cleaning up of cities and villages, in addition to the elimination of open defecation.
- As India moves towards achievement of universal access to toilets, the issue of Solid Waste Management in both urban and rural areas is getting special attention.
- Every year, about 55 million tonnes of municipal solid waste (MSW) and 38 billion litres of sewage are generated in the urban areas of India.

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#### 1. WASTE TO ENERGY:

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- Waste-to-energy (WtE) also called by the term energy-from-waste (EfW) is the process of generating energy in the form of electricity or heat from the primary treatment of waste material.

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#### 2. Incineration

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#### 3. OTHER TECHNOLOGIES:

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There are many other new and emerging technologies that have the potential to produce more electric power from the same amount of fuel than would be possible by direct combustion.

**These technologies include the following:**

##### A. Thermal Technologies

- Gasification
- Thermal depolymerization
- Pyrolysis
- Plasma arc gasification or plasma gasification process (PGP)

#### **B. NON-THERMAL TECHNOLOGIES:**

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- Anaerobic digestion
- Fermentation production
- Esterification

### **INDIA: WASTE TO ENERGY POTENTIAL**

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- The Indian Government has recognized waste to energy as a renewable technology and supports it through various subsidies and incentives.
- The Ministry of New and Renewable Energy (MNRE), is actively promoting technology options available for energy recovery from urban and industrial wastes.
- According to the MNRE, there exists a potential of about 1700 MW from urban waste (1500 from MSW and 225 MW from sewage) and about 1300 MW from industrial waste.
- Indian Renewable Energy Development Agency (IREDA) estimates indicate that India has so far realized only about 2% of its waste-to-energy potential.
- To promote biofuels in the country, a National Policy on Biofuels, revised in 2018, highlights its strategic importance as it converges well with the other important initiatives such as Make in India, Swachh Bharat Mission, Skill Development and offers possibilities to integrate other programmes of doubling of Farmers Income, Import Reduction, Employment Generation, and promoting Waste to Wealth.
- The policy has the objective of reaching 20 per cent ethanol blending and 5 per cent biodiesel blending by 2030.
- A plant to convert plastic waste into bio-diesel to be made operational at the Indian Institute of Petroleum (IIP) in Dehradun, has the capacity to convert one ton of plastic waste into 800 litres biofuel which will be of highest quality and it can be used in any diesel automotive vehicle.

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#### **Gobardhan:**

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- As a part of Swachh Bharat Mission, the Government launched the GOBAR-DHAN -'Galvanizing Organic Bio-Agro Resources Dhan' scheme in Feb 2018.
- This initiative of the Ministry of Drinking Water and Sanitation, aims to support biodegradable waste recovery and conversion of waste into resources. This aims to support, the creation of clean villages which is the objective of Swachh Bharat Mission (Gramin), and provide economic and resource benefits to farmers and households.
- The GOBAR-DHAN scheme is a crucial component of the ODE Plus (Open defecation free plus) strategy of SBM(G) and will focus on supporting villages in management of bio-waste. • According to 19th Livestock Census of India, 2012, there are about 300 million bovines, 65.07 million sheep, 135.2 million goats and about 10.3 million pigs.
- At least 5,257 tonnes waste/ day is estimated to be generated from livestock alone.
- In addition, according to Indian Agricultural Research Institute's estimates in 2014, India generated 620 million tonnes of crop residue, of which 300 million tonnes are treated as waste and 100 million tonnes are burnt on farms.

**AS PER MINISTRY OF DRINKING WATER AND SANITATION 2018:-**

- GOBAR-DHAN scheme proposes to cover 700 projects across the country in 2018-19 with upto Rs. 10 lakhs available per GP.
- Eleven schemes under GOBAR-DHAN are in the process of being set up.

**TECHNOLOGY FOR MANAGING PLASTIC WASTE:****4 main ways of managing plastic:**

- Re-extrusion
- Mechanical Recycling
- Chemical and Thermal Recycling
- Energy Recovery

**SOME EXAMPLES OF USE OF PLASTIC WASTE IN INDIA:****According to Ministry of Drinking Water and Sanitation 2018:-**

- i. Plastics for road construction: More than 1200 kms of plastic waste mixed roads in rural areas have been laid by DRDA, Erode Tamil Nadu. Waste to fuel plant in Sriperumbudur in Tamil Nadu.
- ii. Waste to fuel plant in Sriperumbudur in Tamil Nadu run by Paterson Energy. The plant sources plastic waste from nearby automobile industries and paper manufacturers to run a plant at a capacity of 7.5 tonnes/day.

**DISEASE MANAGEMENT IN HORTICULTURAL CROPS**

- Demand for eco-friendly bio-pesticides and other methods in disease management is gaining momentum from the fact that slowly India is moving towards organic production of crops which need alternative approaches of crop protection. There are numbers of alternative approaches like botanical pesticides, bio-pesticides, plant resistance, manipulation of cultural practices, use of organic amendments, use of physical approaches like soil solarisation and modern molecular techniques of developing Transgenic. In addition, tapping the potential of resistance sources through biotechnological tools have also been effectively used for the management of plant diseases.
- Food and Agriculture Organization (FAO) of the United Nations estimates that pests i.e. insects, weeds, plant diseases, rodents and birds cause up to 35 percent of the losses in the crop production worldwide, annually.
- When losses due to pests are combined with postharvest losses, worldwide food losses would amount to 45 percent.
- It is reported that less than 0.1 per cent of pesticide sprayed reaches the sites of action, due to loss of pesticide in air during application and as run-off, spray drift, off-target deposition and photo degradation affecting both the environment and application costs.
- It is estimated that approximately 1.8 billion people are engaged in agriculture and most use pesticides to protect food and commercial products that they produce.
- Worldwide, 4.6 million tonnes of chemical pesticides are sprayed into the environment every year.
- Developing countries account for 25 percent of world pesticide use in farming, but account for 99 percent of the world's deaths due to pesticides.
- Recent estimates indicate that the economic impact of pesticides on non-target species (including humans) is approximately \$8 billion annually in developing countries.
- About 25 million agricultural workers experience unintentional pesticide poisonings each year around the world.

- In India, According to a report of the Ministry of Agriculture, residues of chemical pesticides were detected in 9.2 percent of the samples of different food articles collected between 2006 and 2012, out of which 1.5 percent of the samples contained residues above maximum permissible level.
- Almost 90 per cent of the microbial biopesticides currently available in the market are derived from only one pathogenic bacterium i.e. *Bacillus thuringiensis* or Bt which is used against insect-pests.
- In plant disease management, *Trichoderma* spp. are the most widely used microbial biopesticide.
- *Agrobacterium radiobacter* K1026 is used against crown gall disease worldwide.
- One of the most successful examples of microbial biopesticide use is in the management of diamondback moth (*Plutella xylostella*) which is the most destructive insect pest on Brassicas vegetables in tropical Asia and Africa.
- Against diseases of vegetable crops, the major microbial biopesticides used are *Trichoderma viride*, *E. harzionum*, *Pseudomonas fluorescent* and *Bacillus subtilis*.
- Currently, biopesticides comprise a small share of the total crop protection market globally, with a value of about \$3 billion worldwide, accounting for just 5 per cent of the total crop protection market.
- According to the figures from BPIA (Bio-Pesticides Industry Alliance), the world market for biopesticides grew at a double-digit rate (10%) from USD 670 million to USD 1 billion, between 2005 and 2010.
- Further, between 2010-11 and 2016-17, usage of bio-pesticides increased by 23 per cent, while that of chemical pesticides grew only by 2 per cent.
- Data from the Directorate of Plant Protection, Quarantine & Storage, Ministry of Agriculture & Farmers Welfare, indicate that in 2010-11, the all-India consumption of bio-pesticide was 5,151 tonnes, which has increased to 6,340 tonnes for 2016-17.
- Bio-pesticides market in India, generated revenue of \$102 Million in 2016 and is anticipated to contribute \$778 Million by 2025, growing at a CAGR of 25.4 per cent.
- Globally, there were more than 430 registered bio-pesticide active ingredients and 1320 active product registrations in 2014.

### BOTANICAL PESTICIDES

- Botanicals have low mammalian toxicity, target specificity, biodegradability and contain many active ingredients in low concentrations, thus possess biocidal activity against several insect pests and pathogens. Among such plants, neem is one of the most important trees which have a great potential for disease and insect-pest management in India and other parts of the world.
- This single tree has such potential that it can meet more than 50 per cent requirement of pesticides in crop production.
- India has more than 18 million trees of neem with seed potential of 4,14,000 tonnes which can yield 85,000 tonnes of oil and 3,30,000 tonnes of oil cakes.
- Neem pesticides have been reported to control more than 200 species of insect-pests, nematodes and also effective against more than 50 diseases.
- Neem contains at least 35 biologically active ingredients of which triterpenoids, nimbin, azadirachtin are present predominantly in the seeds, leaves and other parts of the plant.

### Scope of Bio-pesticides:

- The use of biopesticides in agriculture is fully aligned with market trends that promote healthy eating without neglecting environmental conservation. Consumers are increasingly demanding residue-free food. The trend is becoming more and more powerful.

- Organic agriculture is practiced in 172 countries around the world and 43.7 million hectares of agricultural land are managed organically by approximately 2.3 million farmers.
- The global sales of organic food and drink reached 80 billion US dollars in 2014.
- Australia is the country with the largest organic agricultural area (17.2 million hectares, with 97 per cent of that area used for grazing), followed by Argentina (3.1 million hectares) and the United States of America (2.2 million hectares).
- In India, area under certified cultivable organic farming has increased to 1.49 million ha with production of around 1.35 million metric tonnes which will have tremendous requirement of different organic inputs.
- According to the U.S. Department of Agriculture's National Agricultural Statistics Service, US farms produced and sold \$7.6 billion in certified organic commodities which was 23 per cent more than the previous year.
- As a result, there has been 11 per cent increase of organic farms in 2016 and a total acreage reached to 5 million acres, up 15 per cent from 2015.
- In 2016, Spain surpassed the figure of two million hectares dedicated to organic farming, registering an increase of 8.5 per cent than in 2015.
- According to Eurostat data, between 2012 and 2016, the area under organic farming grew by 18.7 per cent in the European Union.
- In 2009, the European Union voted a directive to phase-out a number of chemical pesticides in agriculture and governments of Sweden, Denmark and the Netherlands took the lead to announce measures for 50 per cent reduction in on-farm chemical pesticide use.
- France has also taken initiative to halve the consumption of pesticides in agriculture by 2025.
- India needs to take lead by mix of initiatives may be in the form of gradual reduction of toxic chemicals and by incentivising the production and use of bio-pesticides to promote chemical free farming.

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## **SWACHH BHARAT MISSION LEADS COUNTRYWIDE WORLD TOILET DAY CELEBRATIONS**

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- The World Toilet Day was celebrated on 19th November, 2018, by people from across the country with mass awareness and mobilization activities. The focus was on usage of toilets, which is closely linked to the Prime Minister's call for a Swachh Bharat by October 2019.
- The Prime Minister Shri Narendra Modi reiterated the country's commitment towards enhancing cleanliness and sanitation facilities.
- The Swachh Bharat World Toilet Day Contest was organized by the Ministry of Drinking Water and Sanitation.

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## **TECHNOLOGY INNOVATIONS FOR SOIL HEALTH PRESERVATION**

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- Preserving soil health is vital to human health, ecosystem functions and nature conservation. Soil health is a burning global issue now than ever before. Its management is vital to ensuring food and nutritional security, preserving soil biodiversity, enhancing use efficiency of inputs, and mitigating global warming potential.

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### **SOIL HEALTH:-**

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- Soil health and soil quality are considered synonymous and can be used interchangeably. However, one



key distinction is that soil quality includes both inherent and dynamic quality. Soil health concept involves integration of physical, chemical and biological properties of a soil and role of its harmonious blend in sustaining growth, productivity and environmental security.

#### **SUSTAINABLE SOIL HEALTH MANAGEMENT:**

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- Minimum soil erosion.
- Good soil physical properties.
- Sufficient soil cover.
- Stable soil organic matter.
- Improved soil fertility and productivity.
- Absence of Soil salinization, sodification and alkalinization.
- Absence of soil Contaminants.

#### **GOOD PRACTICES FOR SOIL HEALTH PRESERVATION:**

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- Prevent soil erosion
- Increase soil organic matter content
- Soil Nutrient Balance and Cycles
- Mitigating Soil Salinization and Alkalinization
- Minimizing soil contamination
- Conserving soil Biodiversity

#### **TECHNOLOGICAL OPTIONS FOR SOIL HEALTH MANAGEMENT**

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- Conservation Agriculture
- Farming systems approach
- Degraded land restoration
- Application of Organic amendments

#### **USE OF ICTs IN EDUCATION**

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In the 21st Century, mastering the skills of computers can be considered alongside 3Rs (Reading, Writing and Arithmetic) as the fundamental requirements for a fully literate person.

No wonder government has undertaken several initiatives in recent years to augment the digital literacy of its citizens.

**Various efforts can broadly be categorised as under the following.**

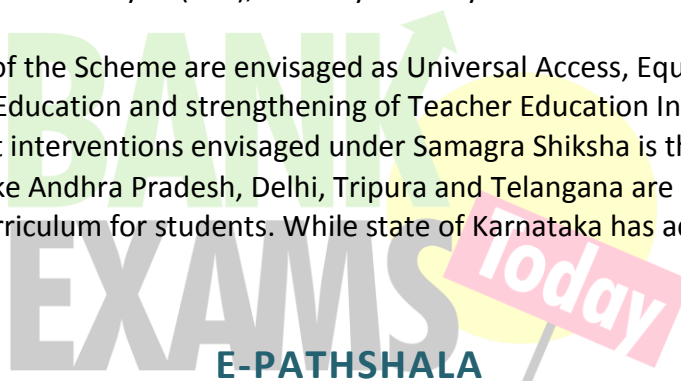
- Through formal school education system where in subjects such as Information Technology is offered to students as part of main subjects at secondary level while a subject on Computer Science is offered at the senior secondary level.
- Through vocational courses on IT under National Skill Qualification Framework (NSQF), which envisages a smooth transition for students from what is considered main subjects to the vocational stream without worrying about certifications or mobility in career. Government of India has invested heavily in skill development of youth by enlisting National Skill Development Corporation (NSDC), Sector Skills Council (SSC), Pandit Sundarlal Sharma Central Institute of Vocational Education (PSSCIVE), National Council of Educational Research and Training (NCERT) and State Governments.
- Enhancing the technological competencies of teachers during both pre-service and in-service teachers training and

- creating a digital environment in the country by the massive use of digital technologies in increasing access, enhancing quality of education, ensuring inclusion in the educational systems. The focus of technological integration into the education cannot be different from the central concerns of education which are to improve the quality of education for children, ensuring joyful learning environment for every child of the country; making learning constructive, critical, inclusive and collaborative and finally, building on a lifelong intellectual partnership with technology by constantly reflecting and analysing one's learning.

So, overall technology should be used in providing quality education to 26 crore students studying in 15 lakh schools (66 % under government control) having 85 lakh teachers with majority of schools (close to 84 percent) falling in rural areas of the country.

**In such a context, India's policy initiatives have kept pace with the technological evolution. A journey which began in 1972 in the form of Educational Technology scheme under which 100 % assistance was given to establish 6 State Institutes of Educational Technology (SIETs) and States/UTs were assisted for procuring radio cum cassettes players and colour television sets has travelled a long distance indeed.**

- The Union Budget, 2018-19, has proposed to start 'Samagra Shiksha' - an overarching programme for the school education sector extending from pre-school to class 12th by subsuming the erstwhile Schemes of Sarva Shiksha Abhiyan (SSA), Rashtriya Madhyamik Shiksha Abhiyan (RMSA) and Teacher Education (TE).
- The main outcomes of the Scheme are envisaged as Universal Access, Equity and Quality, promoting Vocationalisation of Education and strengthening of Teacher Education Institutions (TEIs).
- One of the important interventions envisaged under Samagra Shiksha is the Digital Initiatives.
- Some of the states like Andhra Pradesh, Delhi, Tripura and Telangana are in the process of implementing ICT curriculum for students. While state of Karnataka has adopted this curriculum for its teachers.



- Government of India has launched e-pathshala portal and mobile app in 2015. A joint initiative of Ministry of Human Resource Development and NCERT, this portal/app has all the textbooks of NCERT from Class I to XII in digital form.
- More than 35 million users access the contents on web portal of e-pathshala while about 1.8 million users access these contents through app.
- National Repository of Open Educational Resources was launched in 2013. It is a storehouse of all types of e-contents (more than 13000 contents are available now) arranged thematically and mapped according to the NCERT curriculum. More than 30 organisations have joined hands to share their respective e-contents under creative commons license on this repository.
- A bouquet of channels (32 DTH TV channels to be precise) was launched by the Hon'ble President of India on 9th July 2017 in New Delhi under the SWAYAM PRABHA initiative. The channels are uplinked from Bhaskaracharya Institute for Space Applications and Geo-Informatics (BISAG), Gandhinagar. The contents are provided by NPTEL, IITs, UGC, CEC, IGNOU, NCERT and NIOS. The INFLIBNET Centre maintains the web portal.
- Along with SWAYAM PRABHA, SWAYAM was also launched on 9th July 2017 by the Hon'ble President of India.
- SWAYAM, an acronym for Study Webs of Active — Learning for Young Aspiring Minds, is a digital platform which hosts several courses offered by the best teachers of universities/colleges/ schools free

of cost to the students living in any part of the country.

- SWAYAM has been developed by the Ministry of Human Resource Development (MHRD) and All India Council for Technical Education (AICTE) with the help of Microsoft. In order to ensure that the best quality contents are produced and delivered, nine National Coordinators have been appointed. They are AICTE for self-paced and international courses, NPTEL for engineering, UGC for non technical post-graduation education, CEC for under-graduate education, NCERT & NIOS for school education, IGNOU for out of the school students, IIMB for management studies and NITTTR for Teacher Training programme. University Grants Commission (UGC) has made provisions for transferring credits for the courses done on SWAYAM.
- Such courses are also known as MOOCs (Massive Open Online Courses).
- MOOCs is an excellent example of use of internet in education. Through MOOCs, India tends to achieve all three concerns of education, viz., access, quality and equity. MOOCs is a relatively recent development and can be used in variety of ways from offering courses offered in colleges and universities to courses designed for mid-career professionals to in-house programs for skill training and so on.
- ShaGun portal was launched by the MHRD, Government of India (GoI) last year to monitor the progress of SSA scheme on the regular basis and also to make this portal a repository of best practices, innovations, success stories and resources available in the States/Union territories (UTs). ShaGun stands for Shag meaning schools and Gunvatta implying quality.
- **Shaala siddhi launched by National Institute of Educational Planning and Administration (NIEPA), New Delhi aims to improve the school functioning by evaluating schools holistically on 7 key domains such as**
  - enabling resource of schools,
  - teaching-learning and assessment,
  - learners progress attainment,
  - teacher performance,
  - leadership and management,
  - inclusion health and safety and
  - productive community participation.
- Similarly, Kendriya Vidyalaya's Shaala Darpan is an e-government platform for all KV schools in the country to improve quality of learning, efficiency of school administration, governance of schools and service delivery to key stakeholders.
- DIKSHA, a joint initiative of MHRD and National Council for Teacher Education (NCTE) was launched by the Hon'ble Vice President this year to make one stop resource for all requirements of a teacher.

## RENEWABLE ENERGY ADOPTION FOR RURAL AREAS

- With increasing pollution of the biosphere due to the burning of fossil fuels and cutting of forests, development of renewable energy has become a major societal challenge. Renewable energy, with its India has substantial renewable energy sources, including a large land mass that receives among the highest solar irradiation in the world, a long coastline and high wind velocities that provide many opportunities for both land-based and offshore wind farms, significant annual production of biomass, and numerous rivers and waterways that have potential for hydropower.
- A village is deemed "electrified", if at least 10% of the households and public places such as schools and health centres are connected and receive electricity from the grid, through the transformer established in the village. This would still leave 90 % of people living in these villages "un-electrified".
- Homes without electricity are spread across major states such as Madhya Pradesh, Rajasthan, Bihar,

Assam, Odisha, and Jharkhand each having nearly 6 million unconnected households.

- According to Debajit Palit, Associate Director at The Energy and Resources Institute, 14.6 million households in the giant north Indian state of Uttar Pradesh lack access to electricity.
- The government did embark on an ambitious \$2.5 billion program named "Saubhagya", in order to provide power connections to every household by the end of March 2019.
- It is a known fact that India relies on coal, to meet 60% of its electricity demands. With stagnation in the production of coal, it would be an uphill task for the government to provide uninterrupted power to its citizens.
- A study by Tafesse et al, 2018, empirically tested the impact of cooperatives on Renewable Energy adoption in rural parts of Ethiopia and have come up with some interesting findings.
- Renewable energy commonly refers to those energies that do not pollute the environment and could be recycled naturally. International experts have categorized renewable energy as traditional and new. The former referring to giant hydropower and biomass burnt directly, while the latter refers to small hydropower, geothermal energy, wind energy, biomass energy, solar energy, ocean energy, etc.
- India has substantial renewable energy sources, including a large land mass that receives among the highest solar irradiation in the world, a long coastline and high wind velocities that provide many opportunities for both land-based and offshore wind farms, significant annual production of biomass, and numerous rivers and waterways that have potential for hydropower (NREL, 2010).
- The Ministry of New and Renewable Energy (MNRE) is promoting multifaceted biomass gasifier based power plants for producing electricity using locally available biomass resources such as wood chips, rice husk, arhar stalks, cotton stalks and other agro-residues in rural areas.
- Increasing the share of renewables in the energy mix is high on the policy agenda in countries around the world.
- Several governments have set highly ambitious targets and have started to implement support schemes aimed at facilitating implementation.
- Recent research indicates that successfully implemented renewable energy projects are usually managed by co-op ventures rather than profit motive driven corporations.
- Co-ops are autonomous associations of people united voluntarily, in order to satisfy their mutual economic, social, and cultural needs and aspirations through jointly owned and consensually controlled enterprise (ICA, 1995).
- In rural India, the solution for rapid economic development can come in the form of rural cooperatives.
- Rural India requires institutions that are helpful in creating confidence, organizing people and utilizing their resources effectively.
- From this point of view, rural cooperatives have a vital role to play.
- A recent study from Bihar suggests that a critical determinant of electricity access in rural India is proximity to the Central power grid. This essentially suggests remote villages in rural India would be deprived of access to power.
- Hence, it is imperative that rural India develops and adopts self-sustaining community-managed local generation, storage and grid-connected electricity models (popularly termed microgrids).
- The Government of India should consider setting up of the solar plants through a large number of Renewable Energy Cooperatives rather than through setting up Mega Solar parks.
- It is better to set up 500 numbers of 1 MW plant in each village rather than setting up a single 500 MW in one location.
- Providing grid electricity for the rural population is not economical due to the scattered ways of settlement and, low and seasonal income of the rural households.
- Off-grid rural electrification with RE is the best alternative to provide electricity for the rural population

(Kotu, 2012).

- For instance, a village in Germany runs a successful microgrid rural cooperative model that generates four times the electricity needed to power individual businesses and homes of the community. While Germany is well-known for its proactive collective renewable energy initiatives, a good number of success stories are emerging from different parts of India.
- A biomass-based rural cooperative in Tumkur district of Karnataka owes its success to institutional aspects like well-defined property rights in ownership, institutionalised markets and decentralised environmental governance. The biomass is derived through tree-based farming, which provides employment to 30 households.

## DIGITAL TECHNOLOGY IN FINANCIAL INCLUSION

- Financial Inclusion is the way the Governments strive to take the common man along by bringing them into the formal channel of economy thereby ensuring that even the person standing in the last is not left out from the benefits of the economic growth and is added in the mainstream economy thereby encouraging the poor persons to save, safely invest in various financial products and to borrow from the formal channel when they need to borrow.
- Scope of the financial Inclusion is not limited to only banking services but it extends to other financial services as well like Insurance, equity products & pension products etc. Thus, financial inclusion is not just about opening a simple bank account with a branch in an unbanked area.
- One of the most crucial of the several steps taken by this government is JAM- Jan Dhan, Aadhar & Mobile.
- With a view to increase the penetration of banking services and to ensure that all households have at least one bank account, a National Mission on Financial Inclusion named as Pradhan Mantri Jan Dhan Yojana was announced by Prime Minister Sh. Narendra Modi on 15th August, 2014 and the scheme was formally launched on 28th August, 2014.
- The use of technology, by way of every Bank A/c to be on-line with RuPay Card & Mobile Banking Facility, use of e-KYC to ease the account opening process, use of Aadhaar Enabled Payment System (AEPS) for interoperability, support for setting up FLCs, support for demonstrating banking technology (Mobile Van fitted with ATM), on-line Monitoring through system generated MIS and facility of Call Centre & Toll free number has resulted in astounding success of the scheme.
- To expand the network of ATMs, the RBI has allowed non-bank entities to start ATMs (called 'White label ATMs'). The RuPay Cards have significantly increased its market share in the country so far. The card has been provided to the account holders of PMJDY.
- Financial Literacy Centers were started by commercial banks at the request of RBI to give awareness and education to the public to access financial products.
- The launch of direct benefit transfers through the support of Aadhaar and Bank Account is one of the biggest developments that activated and retained people in the newly opened account.
- As a part of its financial inclusion plan, the RBI started the Business Correspondent model in 2006. Business Correspondents (Ks) are representatives appointed by banks to act as their agents, who provide banking services in remote locations.
- The Digital India initiative, coupled with a payment infrastructure, is laying the cornerstone for a digital economy, keeping in mind the increasing willingness of people to use the internet and the rising data traffic in the country, an investment of \$18.4 billion has been made to provide last mile internet connectivity, better access to government services, and development of IT skills, provision of broadband Internet access to 250,000 village-clusters by 2019 at a cost of about \$5.9 billion.
- Rupay Kisan Cards have been providing impetus to cashless transactions among the farming



community. NABARD has extended support to Cooperative banks and RRBs in procuring EMV chip-based Rupay Kisan Cards.

- Direct Benefits Transfer scheme was initiated to facilitate disbursements of government entitlements such as those under the social security pension scheme, handicapped old age pension scheme, etc., of any central or state government bodies, using Aadhaar and authentication thereof, as supported by UIDAI.
- Payments banks are a new model of banks conceptualised by RBI. The main objective of payments bank is to widen the spread of payment and financial services to small business, low-income households, migrant labour workforce in secured technology-driven environment in remote areas of the country.
- To promote digital transactions for personal consumption expenditure, two schemes viz. Lucky Grahak Yojana and Digi Vyapara Yojana were funded through Financial Inclusion Fund for consumers and merchants respectively. National Payments Corporation of India (NPCI) determines the winners for cash rewards by choosing them through an electronic draw of lots from amongst the digital transaction IDs generated from 8 Nov. 2016, during the course of such transactions.

## YOJANA MAGAZINE SUMMARY: DECEMBER 2018

### DIGITAL INDIA

#### TOWARDS AN INCLUSIVE AND EMPOWERED NATION

- Digital India is a visionary initiative of the Prime Minister to transform India by leveraging the power of Information Technology. Today, India is recognised in the world for its thriving IT industry that is present in more than 200 cities of 80 countries.

**The country's growth of IT industry in India can be divided into three phases:-**

- **Phase I-** During this phase the Indian IT professionals and IT companies travel to different parts of the world and established their presence.
- **Phase II-** During this phase the Global IT Giants started investing in India and tapped its vast domestic market. It is a matter of great assurance that India has the biggest user base for many of the IT and internet companies today.
- **Phase III-** This is the current phase where India is witnessing great growth in innovation and Entrepreneurship led by startups which are mostly founded by young Indians.
- India's vibrant IT industry has been growing very fast. In the year 2017-18 the total revenues of India's IT industry was 167 billion dollars and the export made were to the tune of 125 billion dollars.

### DIGITAL IDENTITY

- To provide a unique digital identity, Aadhar has covered around 122 crore residents of the country today, financial entitlements under 434 government services are being delivered using Aadhaar based

direct benefit transfer. The Supreme Court, in its historic judgement on AADHAAR, has not only upheld the constitutional validity of Aadhaar but also described it as a tool for empowerment of poor people.

### BHARAT NET

- Bharat net aims to provide high speed internet in rural areas of India by building Optical Fibre network connecting all the 2.50 lakh Gram Panchayat of India. About 2,91, 689 km of optical fibres have been laid, connecting 1,19, 947 Gram Panchayat by 3rd November 2018.

### NATIONAL KNOWLEDGE NETWORK

- National Knowledge network is a state of the art network to promote collaboration and exchange of knowledge among educational and research Institutions. Some of the NKN enabled applications are virtual classrooms, collaborative research groups over NKN (closed user groups), NDL , NPTEL various grids like (cancer grid, brain grid, climate change grid) etc. As on October 2018, 16,728 edge links to institutions have been commissioned and made operational under NKN across the country which includes 388 links migrated from NMEICT to NKN. 497 district links to NIC District Centre have also been Commission under NKN.

### GI CLOUD (MEGHRAJ)

- In order to utilise and harness the benefits of cloud computing, this initiative aims to accelerate delivery of services in the country while optimising ICT spending of the government. I has ensured optimum utilisation of the infrastructure and speed up the development and deployment of eGov applicationa. More than 890 applications are running on 15 300 virtual servers.

### E-SIGN

- Electronic Signature service is an innovative initiative for allowing easy, efficient and Secure signing of electronic documents by authenticating signer using e-KYC services.
- 5 e-sign providers have been onboarded and more than 5.89 crore is science have been issued.

### DIGITAL INDIA FOR BETTER GOVERNANCE

#### JAM (JAN DHAN, AADHAAR, MOBILE) TRINITY FOR DIRECT BENEFIT TRANSFER

- The combination of 32.94 crore Jan dhan bank accounts, 121 crore mobile phones and digital identity through 122 crore Aadhar is helping the poor receive the benefits directly into their bank accounts. Financial entitlements under 434 government schemes are being delivered through direct benefit transfer. In last 5 years, a total of Rs. 5.09 lakh crore have been transferred directly into the bank accounts of beneficiaries leading to a saving of rupees 90,000 crore.

### DIGITAL PAYMENTS

- The growth of digital payments ecosystem is set to transform the economy. Over the past four years, digital payment transaction have grown multifold from 316 crore transactions in 2015-16 to 2071 crore transactions in 2017-18. Today BHIM-UPI (Unified Payment Interface) platform and Rupay debit

card have become very popular digital payment instruments for sending, collecting the money and for payments at merchant outlets. In September, 2018, more than 48 crore transactions of value rupees 74,978 crore by made using BHIM- UPI platform.

## UMANG

- It is a single mobile app that offers more than 307 government services. The target is to provide more than 1200 Digital Services on a single mobile apps. More than 8.4 million users have downloaded this app since its launch in November 2017.

## DIGITAL DELIVERY OF SERVICES

Some of these popular Digital Services are:-

### I) NATIONAL SCHOLARSHIP PORTAL

- It has 1.08 crore students registered with scholarships worth Rs. 5,295 crores disbursed in the last three years.

### II) JEEVAN PRAMAAN

- 1.73 crore digital life certificate have been submitted since 2014.

### III) E-HOSPITAL AN ONLINE REGISTRATION SERVICES

- Implemented in 318 district, 5.6 crore ehospital transactions have taken place in all states since September 2015.

### IV) SOIL HEALTH CARD

- So far, 13 crore cards have been issued.

### V) ENAM

- eNAM and electronic National agriculture market. Over 585 market in 16 states have already been integrated. It has around 93 lakh farmers and 84000 traders registered.

### VI) DIGILOCKER

- With more than 1.57 crore registered users, 68 issuers and 27 requesters, digilocker provide access to over 336 crore certificate in digital format on a single platform. Various important documents like PAN card, driving licence, Aadhar can be stored in digital form on digilocker.

### VII) EVISA

- e-Tourist Visa has been introduced for tourist coming from 163 countries at 24 Airports and 5 seaports. Since launch of the scheme, November 2014, more than 41 lakhs e-visa have been issued.

### VIII) E-COURTS

- With e-courts mobile app and Portal it has become easy to keep a track of case status of cases going on in different courts across india.

## IX) NATIONAL JUDICIAL DATA GRID

- There is a comprehensive database of 9.16 crore Court cases and 5.63 judgements that has been integrated with eCourts.

## X) GEM

- Government e-Marketplace is a transparent online Marketplace for government procurements. Over 29,812 organisations, 1,55,821 service providers and 6,01,749 products have been registered on this platform.

## DIGITAL INDIA FOR EMPLOYMENT, ENTREPRENEURSHIP AND EMPOWERMENT

### I) DIGITAL SERVICE DELIVERY NEAR DOOR STEP (COMMON SERVICES CENTRE)

- A vast network of more than 3.06 lakh of Digital Services delivery centres, spread across 2.10 lakh gram panchayats of the country has been created to provide access to Digital Services especially in rural areas at affordable cost. These centres have also led to empowerment of marginalised sections of the society by creating jobs for 12 lakh people and by promoting rural entrepreneurs, out of which 61,055 are women. CSCs have also undertaken the Stree Swabhiman initiative to create awareness about menstrual health and hygiene among rural women. Under this initiative, more than 300 micro sanitary pad manufacturing units have been opened in rural areas.

### II) DIGITAL LITERACY FOR THE MASSES

- In order to make one person e-literate in every household in the country, two schemes launched that is NTLM and DISHA, wherein a total of 53.7 lakh persons were trained and certified in digital literacy in the country. Government has approved a new scheme 'Pradhan Mantri Gramin digital Saksharta Abhiyan (PMGDISHA)' to usher digital literacy in rural India to cover 6 crore rural households.
- So far, 1.47 crore candidates have been enrolled under the scheme out of which 1.43 crore candidates have been trained and 74.5 candidates have been certified. This is the largest digital literacy mission of the world.

## BPO PROMOTION IN SMALL TOWNS

- India BPO promotion scheme and North-East BPO promotion scheme has been launched under digital India program. Today, more than 230 BPO units have come up in about 100 small towns of India across 20 States and 2 union territories, including in places like Visakhapatnam, Bhimavaram, Jammu, Sopore, Shimla, Patna, Muzaffarpur, Sagar, Nashik, Nagpur, Sangli, Aurangabad, Jaipur, Amritsar, Gwalior, Coimbatore, Madurai, Auroville, Bareilly, Lucknow, Kanpur, Guwahati, Kohima etc.

## DIGITAL INDIA FOR MAKE IN INDIA

### PROMOTING OF ELECTRONICS MANUFACTURING

- Government of India has undertaken various initiative to promote electronics manufacturing in India with the target to reduce imports from 2 units in 2014, India now have 127 units manufacturing mobile

handset and components. The duty on import of mobile components fell from over 29% to 12.5% in 2016-17 and domestic mobile handset manufacturing output increased from 60 million units in 2014-15 to 225 million in 2017-18. The Ministry of Electronics and IT has received 245 applications for investing over 1 billion dollar under the governments modified specific incentive package scheme of which it has approved 142 applications representing investments. Out of these, 74 companies have started commercial production. This has created more than 4.5 lakh job opportunities (direct and indirect). There are about 35 manufacturing units of LCD / LED TV and 128 units of LED products in the country. Under Electronics Manufacturing Cluster (EMC) scheme has accorded approval to 23 projects in 15 States across the country.

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### **INITIATIVE IN EMERGING TECHNOLOGIES**

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- Centre of Excellence are being set up in the areas of Internet of Things, Internal Security, Large Area Flexible Electronics, Intellectual Property Rights, Textile Graphics for Visually impaired, Agriculture and Environment ESDM, fintech language Technology, Automotive electronics, virtual Augmented reality, Medical Tech and health Informatics, Block chain, gaming and animation and biometrics.

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### **CYBER SECURITY**

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- To create an inclusive, safe and Secure cyberspace for sustainable development National Cyber coordination Centre has been made operational in 2017.
- India's digital economy could grow to 1 trillion US dollar by 2025 with a focus efforts but could end up at about half that level with a business as usual approach. Regulatory facilitation and debottlenecking by government are critical across sectors for Rapid progress necessary for full realisation of the potential.
- While all of these development are usually encouraging and give rise to well-founded optimism about the future of India's digital economy(IT), the path is not easy. PM Launches historic Support and Outreach Initiative for MSME Sector

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### **THE PM LAUNCHED A HISTORIC SUPPORT AND OUTREACH INITIATIVE FOR MSME SECTOR**

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- As a part pf this programme, the Prime Minister unveiled 12 key initiatives which will help the growth, expansion and facilitation of MSMEs across the country.

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### **TOWARDS A DIGITAL FUTURE**

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India is today among the top three Global economies of digital consumer. The digital India program is generating Pathways to a future powered by technology and achieving a high growth of digital economy to reach a level of a trillion dollars by 2025.

- It was in 1997 that the first steps towards a citizen focused e-governance program were taken initially in the state of Andhra Pradesh.
- Approval of the SWAN project and early discussions at the highest levels of government on the contours of a national e-governance plan took place in 2003.
- These efforts culminated in the approval of national e-governance plan and the game changing common services Centre project in 2006 by the Union Cabinet.



- During this period that is from 2004 to 2013, some of the more ambitious projects like UID (later renamed as Aadhaar), passport seva MCA21 etc. Were initiated.
- Parallel development in the telecom sector unfolded at a staggering, globally unprecedented pace. The country went from 100 to 1000 million Telecom subscribers in a little over a decade, broadband coverage was expanding and the National Optical Fibre Network (later renamed as Bharat broadband) was launched.

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## POTENTIAL OF DIGITAL ECONOMY

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The last five years have been one of the major development, namely the Rapid growth of the third largest setup ecosystem in the world with around 7500 Tech startups.

- The startup eco-system is increasing creating innovative products and services focused on solving Indian problems in Healthcare, agriculture, fintech, cyber security energy etc.
- The Aadhar project was taken to its logistic conclusion by a vigorous drive, the JAM program (Jan Dhan, Aadhar and mobile program) saw over 200 million people benefiting from financial inclusion through bank account and direct benefit transfer.
- The CSC program has expanded to 2,50,000 panchayats and now provides employment to nearly a million people in rural heartland.
- The Indian IT industry had also grown from strength to strength and had become a 150 + billion dollar Behemoth that was globally respected and often, evide.
- The last five years have seen one other major development namely, the rapid growth of the third largest start up eco-system in the world with around 7, 500 tech start ups.

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## DIGITAL SERVICES DELIVERY

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E-commerce, transportation, payment wallets, Hospital / accommodation / cinema booking, local food and provision delivery services enable by mobile apps are now familiar to most urban citizens and increasingly smaller towns as well. Global products like IBM Watson already provide a range of Medical Services across countries including treatment recommendation based on patients record but within India, well known product in Healthcare such as Practo, Portea, lybrate etc. are connecting doctors and medical professionals to patients in ways that make it easy to reach the right person from the comfort of your home.

- Artoo has built an intelligent landing system specifically designed for micro-enterprise lending.
- Dheyantra has built a product that enables Vernacular interaction and engagement with end customers using AI and NLP.
- AI and Internet of Medical Things (IoMT) are transforming Healthcare.

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## CHALLENGES

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- India's digital economy could grow to 1 trillion US dollar by 2025 with a focus efforts but could end up at about half that level with a business as usual approach. Regulatory facilitation and debottlenecking by government are critical across sectors for Rapid progress necessary for full realisation of the potential.
- While all of these development are usually encouraging and give rise to well-founded optimism about the future of India's digital economy(IT), the path is not easy.

## INDIA SURGES 23 RANKS IN EASE OF DOING BUSINESS WITH PORT-LED DEVELOPMENT UNDER SAGARMALA

- As per the World Bank report 2019 on Ease of Doing Business, India has taken a huge leap of 23 ranks from 100 in 2017-18 to 77 in 2018-19 indicating it is continuing its steady shift towards global standards. One of the key indices which has contributed immensely toward this growth is 'Trading across borders' which shows an impressive improvement from 146 rank last year to 80th rank this year.
- The Ministry of Shipping has been taking initiatives to improve the parameter of 'Trading across border' as 92 per cent of India's Export- Import trade by volume is handled at ports.
- The report mentions that this is mainly due to India's continued reform agenda, which has made it the top-ranked economy in the region. Upgradation of port infrastructure, improvement of processes, and digitization of document submission has substantially reduced Export/Import cargo handling time at ports which has significantly contributed towards improving the trading across border parameter and India's impressive growth in the World Bank's report. The World Bank has recognized India as one of the top improvers for the year.

## REGULATING THE DIGITAL REVOLUTION

- The Telecom Sector is witnessing the biggest transformation in the past several decades, New technologies and services based on mobile connectivity, social media, data-analytics, cloud computing etc. are being designed today. TRAI has a very important role today in not only regulating the Digital revolution in the telecom sector but also be a front-runner in adaptively regulating emerging technologies.
- The world is witnessing emerging technologies like Artificial Intelligence, Internet of Things (IoT), Machine Learning (ML), Machine to Machine (M2M) Communications, Big Data Analytics, Distributed Ledger Technologies( Block Chain) etc. Emergence of these technologies has opened new avenues and methods for the consumers to interact with each other.
- Emerging technologies, along with the fast pace of commercialization of these technologies, has broken the popular myth that the regulations can be made deliberately at a slower pace and would be in place unchanged for a long time.
- **The challenges faced by the tradition regulation can be broadly classified into:**
  - Business Challenges
  - Technological challenges
- One of the major challenges in the telecom sector today is to simultaneously regulate the legacy as well as the new digital networks.
- India is the second largest market in the world. Though a large number of initiatives have been undertaken both by the Government as well as the private sector but still a large population remains devoid of connectivity to the Internet. Spreading awareness as well as connecting every individual are keys to the socio-economic metamorphosis of our country.
- Based on the emerging technologies, a Regulator therefore may have to consider the following approaches while formulating the regulations today:-
- Regulations should be Adaptive:

- An adaptive regulatory regime would foster innovation, provide a platform for the industry to grow, enhance user satisfaction, provide consumer protection and help the government to regulate.
- Use of Regulatory Sand-boxes.
- Collaborative Regulations

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### TRAI:

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- For regulating the digital revolution in telecom sector in India, TRAI has taken considerable steps in the past five years. In order to protect the consumers' interests TRAI has launched various apps. Recently, TRAI has launched an online portal for presenting and comparing the tariffs offered by various service providers for telecommunication services.
- In the field of broadcasting and cable service also, TRAI has completely revamped the regulatory framework.

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## AADHAAR: THE DIGITAL HIGHWAY TO NEW INDIA

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- Aadhaar as empowerment enabler will be, as always, a game changer for the poor and for India.
- Aadhaar is helping eliminate middlemen, ghosts, fakes, and duplicates in schemes like PDS, MGNREGS, PAHAL, Scholarships, etc., which has already led to savings of over Rs. 90,000 crore during the last three years.
- According to an estimate of the World Bank, if Aadhaar is used across all welfare schemes, it will help save Government about US \$1 billion every year.
- Aadhaar is the first and biggest public owned world's largest biometric technology platform which being constitutionally valid, would now not only empower 122 crore people with biometric based unique identity but would also provide a nationwide infrastructure to establish voluntarily their identity online anywhere, anytime and enable them to receive their entitlements and exercise their rights.
- Aadhaar is also emerging as a great enabler of alternate digital payment system for those who cannot use debit, credit card, internet banking, etc.
- Aadhaar enabled Payment System (AePS) deployed on a handheld device makes it possible for people to use their Aadhaar and fingerprint to withdraw or transfer money at their doorsteps. There are more than 7 crore people using AePS facility every month.
- Aadhaar not only sets the direction of digital destiny of India but also helps leapfrog a country of 132 crore people on the path of digital leadership of the world.

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## SECURE DIGITAL INDIA

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- As India heads towards becoming a trillion dollar digital economy, India and its citizens are also now truly plugged into the global 'Digital Village', and actually shaping the contours of democratization of technology, and harnessing digital for Inclusion.

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### SOME OF THE KEY INDICATORS OF DIGITALIZATION:-

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- internet penetration,

- availability of smart phones,
- government services online,
- Industry 4.0, which essentially means cyber physical transformation of manufacturing, ushers in a new age of connected things, smart manufacturing, and tailored products and services.
- Organizations are also pro actively leveraging Artificial Intelligence, Machine Learning & Deep Learning (under the bigger umbrella of Cognitive Computing) to disrupt the way the businesses are run and solutions are developed to meet the expectations of consumers.

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### CONCERNS OF DIGITAL SPACE

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- Cyber space is now the fifth domain of warfare.
- The World Economic Forum 2018 Risk report called out Cyber Risk as one of the top three risks along with environment disasters.

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### CHANGING PARADIGM OF CYBER SECURITY

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**The indicative list of next generation cyber security strategy elements are as follows:-**

1. Security of Recognition Technologies
2. Extended Perimeter Security with a focus on supply chain
3. Context Aware Security
4. The Shift from Detection to Response
5. Protecting Machines
6. Providing Resiliency to e-Infra
7. Converging Security Disciplines.

These elements and many more are expected to be the driving force of the cyber security landscape in the era of 'Digital India'.

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### ADDRESSING CYBER SECURITY CONCERNS

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The Cyber Security challenge we face needs serious attention of all stakeholders, especially Industry and Government. The two, along with other key entities including Sectoral Regulators and National Cyber Security machinery need to partner and devise institutional arrangements to respond to challenges and enable better preparedness to withstand/ counter attacks. **Some of the measures are discussed below:**

1. Policy and regulatory response to drive sectors and entities to Cyber Security Preparedness.
2. The Cyber Security Frameworks by RBI, IRDAI for Banking and Insurance Sectors, Cyber Security Framework for Smart Cities by MoHUA are steps in this direction.
3. Coordination and collaboration for collective defence and quick response.
4. Need for Sectoral CERTS and State Level CERTs to bolster the efforts of a national CERT.
5. Cyber Security Preparedness in India including large enterprises, SMBs and PSUs needs to be stepped up.

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### TRANSFORMATIVE IMPACT OF DIGITAL INDIA

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- The Digital India Programme was launched by the Government in 2015 with the aim to develop India into a knowledge economy and a digitally empowered society.
- The initiatives under Digital India, coupled with evolving technology, have led India to become a land of vast possibilities, where hope and talent meet opportunities digitally.
- India is among the top countries of the world that have effectively utilised technology and innovation to transform the governance outlook from government-centric to citizen-centric.
- The remarkable increase in digital adoption is evident in the improvement in India's position in United Nation's E-Government Index 2018 that highlights that India's relative capabilities of utilising ICT for governance have improved relatively faster than the entire Asia region.
- There have been significant improvements in UN-Online Service Index, where India has scored 0.95 in 2018.
- There has been a consistent growth in e-participation index too, that has grown to 0.96 in 2018.
- The citizens of the country have been given a Digital Identity through Aadhaar and more than 122 crore residents have already been covered.
- Aadhaar has been seeded with several databases like Liquid Petroleum Gas (LPG), Public Distribution System (PDS), National Social Assistance Programme (NSAP) etc. to enable correct identification of the beneficiary and ensure that the benefits reach the beneficiary promptly and directly.
- India has moved up the ladder of digital adoption with the multifold growth in digital payment transactions. It has risen from 335 crore transactions in 2014-15 to 2070.98 crore transactions in 2017-18.
- The advantage of digital payment is being well exploited through direct benefit transfer which has reassured the commitment of the government towards the Welfare of the people. So far, Rs. 5.06 lakhs crore Direct Benefit Transfer have taken place and this has led to the savings of around Rs. 90,000 crore.
- Around 434 schemes are covered under direct benefit transfer.

### DIGITAL DEVELOPING SERVICE

- Digital India has changed the landscape of delivery of services and governance. The Common Service Centres are ICT enabled rural enterprises in the country and provide plethora of services at the door step of the citizens. Over 300 services ranging from Education, Health, Agriculture, Certificate related are being provided in around 3.07 lakh CSCs.
- DigiLocker has enabled people to store, share and verify their documents and certificates through cloud.
- With more than 1.59 crore registered users 2.14 crore uploaded documents.
- National Scholarship Portal has become a source of facilitating education. Since its launch in 2015, more than Rs. 5,257 crore have been disbursed to 1.8 crore students/beneficiaries.
- Online Registration System and e-Hospital have facilitated the Aadhaar based online registration and appointment for patients, reduced tiring queues in hospitals.
- 318 hospitals across India have been enabled with eHospital facility and 5.6 crore hospital transactions have been done.
- Jeevan Pramaan, provides the ease to pensioners to generate their Digital Life Certificate at home, bank, CSC centre, government office etc, using Aadhaar biometric authentication.
- So far, around 1.75 crore Digital life Certificates have been generated.
- To sustain the people throughout their digital journey, a Unified Mobile Application for New Age Governance (UMANG) has been launched. It is a single mobile app that offers more than 307



government services, with the target being to provide more than 1200 digital services on a single mobile app.

- More than 8.4 million users have downloaded this app since its launch in November 2017.

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### **GOVERNMENT E-MARKETPLACE**

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- To address the challenges in public procurements, Government e-Marketplace (GeM) was launched. GeM provides an online marketplace for public procurement for both goods and services.
- There are 1.55 lakh sellers and service providers, 29,729 buyers organizations and 5.97 lakh products on the platform.

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### **JOB CREATION**

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- Government of India has taken significant initiatives in the area of Electronics Manufacturing, BPO Promotion, IT-ITeS etc. Indian start-ups are already developing to take advantage of the humungous potential created through this transformation —more than 1,200 startups came up in 2018, including eight unicorns, taking the total number to 7,200 startups.
- Mobile manufacturing has increased multi-fold, from 2 units in 2014 to 127 units manufacturing mobile handset and components. This has generated 4.5 lakh direct and indirect jobs.
- Greenfield Electronic Manufacturing Clusters (EMC), approved for 20 locations and 23 Common Facility Centres (CFC), are poised to create approx 6.5 lakh jobs.
- The BPOs have reached the small towns of the country covering around 100 cities across 20 States and 2 UTs.
- To keep up the accelerated pace of the digital disruption and the ever changing digital economy, Pradhan Mantri Gramin Saksharta Abhiyan (PMGDISHA) was launched with the aim to make 6 crore people digitally literate.
- Over, 1.23 crore people have been imparted training.
- With the proliferation of emerging technologies in mind, 20 Centres of Excellence (CoEs) are being planned in the areas of Fintech, IoT in Agriculture, Virtual reality, Blockchain, Medical Technology, Electronics Products, Nanoelectronics etc. This will provide an apt platform for research and innovation boosting the growth of startups.
- India is at a tipping point where robust foundation of Digital India and increased access to information and services are enabling India to optimally harness digital technologies in the core economic and social sectors, leading to \$ 1 trillion Digital Economy while sustaining 55-60 million jobs by 2025.
- About \$390-500 billion of this \$1 trillion economic value would come from digital applications in sectors like agriculture, health, education.

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### **'GLOBAL IT CHALLENGE FOR YOUTH WITH DISABILITIES 2018'**

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- A three day event-the "Global IT Challenge for Youth with Disabilities, 2018" was organised by the Department of Empowerment of Persons with Disabilities (DEPwD), Ministry of Social Justice and Empowerment in association with Rehabilitation International Korea and their associated partner LG Electronics from 9th to 11th November, 2018.
- 96 youth with disabilities from 18 countries participated in the Challenge. The event comprised of 55 awards in various categories including awards for best volunteer and three awards namely, "Best,

Excellent and Good" in individual and group events in each category i.e. visual, hearing, physical and developmental/intellectual disability.

- Thailand won maximum i.e. six awards followed by Philippines with five awards. India bagged three awards including Super Challenger awards.
- Shri Saurav Kumar Sinha from India won the Super Challenger award.
- Ms. Fayza Putri, Adila from Indonesia won the 'Global IT Leader Award'.

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## DIGITAL INDIA - AT THE HEART OF POORNA SWARAJ

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- Digital India providing information equality to everyone is the final realisation of poorna swaraj for every individual.
- Digital India spans three fundamental blocks - universal broadband, 100 per cent digital services and Open APIs.
- According to India's CEC in 2015, it was observed that the PDS was most effective at reaching the poorest and the masses.
- Even in the PDS, grains do not reach 25-50 per cent of the poor. Other programs like fertiliser subsidy, electricity and water are far worse.
- The cause is quite obvious-a country as vast as India requires systems and layers of processes and people responsible for implementation.
- Since Independence, India's share of global trade has barely budged and account for 2 per cent of global exports, while India's share of global GDP has declined to around 3.1 per cent from the 4 per cent it used to be at independence.

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### THREE BLOCKS OF DIGITAL INDIA

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- Delivering every service digitally dissolves friction while bringing transparency and trust at all levels.
- And every digital government service available as an Open API ensures uniformity of access, sparking a cambrian explosion of services using governance services. Aadhar, GSTN, eSign, UPI are all vibrant examples of this approach.
- Digital India's Open APIs are solely responsible for India's leadership position in the global FinTech revolution underway.
- When every citizen, every entrepreneur including farmers and every organisation can access governance directly, digitally and instantly in this manner, India will leap forward from the current 77th in ease of doing business to top 20, where India needs to be to achieve its promise of a top ten economy, not in aggregate but per capita.

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### ERA OF INFINITE PRODUCTIVITY

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- India is heading into Every global economy will go through social upheaval as jobs disappear and people are left to fend for themselves. India is already witnessing this trend - where we are growing as an economy but formal jobs are not growing at the same rate. The World Bank has assessed that India will lose 69 per cent of its existing jobs.
- This new infinity economy has two sources of growth for India (or any nation). Innovation Enterprises owned by Indians situated in India will be the primary source of Indian government revenue which fuels our social programs and diffense.

- So, there is a need to implement all digital India fully in all three dimensions to create an environment of zero friction enterprise.
- These enterprise will be staffed by best and brightest in the world, which Indian Higher Education produces in numbers.
- Such enterprises will no longer be \$ 1 billion unicorns, they will be \$ 100 billion singularities which even added size will grow 22-30% CAGR.
- Already India's digital deficit spanning electronics and software product revenue is around \$70+ Billion and growing at 25+per cent CAGR.

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### **SINGULARITY ENTERPRISES**

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- India is a country of about 160 million small and micro enterprises of which 80 million are known. These 160 million small and micro-enterprises, if truly empowered, will not just create self-sufficiency for themselves. At scale they will solve two nation scale problems:-
- Agricultural income by collaborating with farmers to augment farm produce with derivative products, where at least a third of the net value of farm output will vest with the farmer.
- Employment problem at a massive, hyperlocal scale.

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### **ELECTRONIC MANUFACTURING: SCOPE AND FUTURE IN INDIA**

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- Electronics Industry is one of the largest and fastest growing industries in the world.
- Government of India attaches high priority to promote electronics manufacturing in the country under the "Make in India" and "Digital India" flagship programs.
- Over 120 new manufacturing units have been established across the country during the past 3-4 years generating employment for 4.5 lakhs combining both direct and indirect employment.
- Mobile handset and its components manufacturing eco-system is undoubtedly considered to be the Champion product category under the "Make in India" flagship program of the Government.
- During 2017-18 India has overtaken Vietnam to become the 2nd largest mobile handset production geography after China with approx. 225 mn units of handsets being produced during this period.
- This is considered to be a major achievement for the industry and the Government despite the fact that during 2014-15 handset production dwindled to 58 million units valued at Rs. 18900 crs. after closure of the Nokia plant.
- Production of handsets has since been growing at a rapid pace year-on-year and there has been a corresponding reduction of imported handsets which has reached 60 mn units during 2017-18.
- By volume and Rs. 30000 by value. This is a shining success story scripted under the "Make in India" flagship program of the Government.
- Government of India notified and started implementing the Phased Manufacturing Program (PMP) in various phases. The aims and objectives behind implementation of the PMP are to widen and deepen the components manufacturing eco-system in the country with a major focus to enhance value addition and generate significant employment.
- As per ICEA estimates, PMP alone does have the potential to create 47 lakh jobs through establishment of 1400 factories in the mobile components space alone.

Some of the stalwart policy interventions undertaken by the Government of India during the past 3-4 years under the "Make in India" initiative to encourage and promote electronics manufacturing eco-system in India with a major focus on mobile handsets and its components eco-system.

- Effective outreach initiatives global manufacturing powerhouse jointly was undertaken by Government of India (MeitY, DIPP etc.) and major Industry Associations such as ICEA (India Cellular & Electronics Association) to important geographies such as China, Taiwan, Japan, USA, must be given the highest thrust area Korea, Germany etc.
- As per the vision propounded by the India Cellular & Electronics Association (ICEA) (the apex industry body representing the entire electronics sector), which is further elucidated in the just published report "Making India the global manufacturing Powerhouse for mobile handsets and components" jointly undertaken by ICEA and McKinsey, clearly highlights about a Mega opportunity/ potential which India can galvanize to become a global manufacturing powerhouse for mobile handset eco-system and electronics overall during the next decade.

## TECHNOLOGY AREAS FOR INDIAN LANGUAGES

### TECHNOLOGY AREAS

Here are the Indian language technology areas:-

#### 1. LOCALIZATION

- Availability of Indian language support on all electronic devices.
- Use of Standards.

#### 2. CREATING E-CONTENT IN INDIAN LANGUAGES

- Creating by original writing
- Creating through translation

#### 3. AUTOMATIC MACHINE TRANSLATION

- English to/from Indian languages (ILs)
- Among Indian languages

#### 4. CROSS LANGUAGE ACCESS TO CONTENT

- Cross lingual search (information retrieval) across Indian languages as well as English

#### 5. SPEECH PROCESSING

- Text-to-speech (ITS) for ILs (e.g. machine reading out text in a language)
- Speech-to-text (ASR) for ILs (e.g. interacting with computers through telephone)

#### 6. OPTICAL CHARACTER RECOGNITION

- Optical character recognition Technology Areas (OCR) for ILs (e.g , converting e scanned images of pages to text)
- Online handwriting recognition for ILs (e.g., stylus based input to mobile devices)

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## IMPACT OF AUDIO DIGITAL LIBRARY

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- Availability of information in spoken language form for illiterate and others
- Promotes research in speech technology for Indian languages.
- Enable to develop speech technology products useful for common man.

### Examples:

- Speech-speech translation systems for information exchange
- Screen readers for illiterate and physically challenged
- Naturally speaking dialog systems for information access over voice mode

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## DIGITAL SIGNATURE

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- Digital Signature or eSign is an online electronic signature service. It is a part of the Government of India's flagship programme- 'Digital India' which is aimed at transforming India into a digitally empowered society and knowledge economy.
- The Information Technology Act 2000 provides the required legal sanctity to digital signatures.
- As per Section 18 of the Act, the digital signatures are accepted at par with handwritten signatures and the electronic documents that have been digitally signed are treated at par with paper documents.
- To make it easy and user friendly, in January 2015, the government announced a method that facilitates Certifying Authority to offer e-Sign service to citizens who have Aadhaar ID.
- Now, an eSign can be integrated with service delivery applications via an open API ( Application Programme Interface).

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## BENEFITS OF E-SIGN SERVICE

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1. Secure online service eSign services
2. No Physical verification required
3. No need of Hardware tokens
4. Multiple ways to authenticate
5. Privacy is preserved

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## NORTH EAST DIARY

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### REPORT ON THE VISION DOCUMENT FOR DIGITAL NORTH EAST 2022

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- The Government of India accords highest priority towards the sustainable development of North Eastern Region that stands apart with its rich and distinct cultural heritage and strategic position.
- Digital North East is envisioned as an integral part of the Digital India programme. which would potential.
- Taking this forward, the 'Vision Document for 'Digital North East 2022' was released, by the Ministry of Electronics and Information Technology, Government of India on 11 August, 2018 at Guwahati, Assam.
- The Vision Document provides a roadmap for bringing about a Digital transformation of the North Eastern Region through an accelerated implementation of the various initiatives under the Digital India



programme of the Government. The Document identifies eight digital thrust areas namely; Digital infrastructure, Digital services, Digital empowerment, Promotion of Electronic manufacturing, Promotion of IT and ITeS including BPOs, Digital payments, Innovation and Startups and Cyber security for realisation of Digital North East 2022.

- The major objectives of the Vision Document for Digital North East 2022 include high speed broadband connectivity to all Gram Panchayats, mobile connectivity to uncovered villages of NER, creation of Cloud Hub with Disaster Recovery Centre, expansion of Common Services Centres, provide better access to quality health, education and agricultural services through digital technology, promote local tourism, art and culture, handicrafts. handloom. establish Start-up Hub in NE, promote entrepreneurship and employment opportunities in Electronics manufacturing. BPO. IT-ITeS industry etc.
- The Vision Document has been formulated with the collaboration of various Central Ministries specially, Ministry for Development of North Eastern Region (DoNER) and Department of Telecommunication (DoT).

### DIGITAL LIBRARY IN INDIA - A PARADIGM SHIFT

- In India, a number of digital library initiatives and digitization programmes have been initiated across the country. Most of the digital library initiatives are government funded.

#### CONCEPT OF DIGITAL LIBRARY

- The concept of digital libraries in India began in the mid 1990s with the spread of information technology, the internet and the support of the Central Government. Digitization of Libraries — Few Initiatives

#### DIGITAL LIBRARY OF INDIA (DLI)

- DLI project started in early 2000 with the vision to archive all the significant literary, artistic and scientific works of mankind and to preserve digitally and make them available freely for every one over Internet for education, study, appreciation and for future generations.
- The Project was initiated by the Office of the Principal Scientific Advisor to the Government of India and subsequently taken over by the Department of Electronics and Information Technology (DEITY), Ministry of Communications and Information Technology (MCIT), Government of India of India.
- Digital Library of India has currently 550,603 books with 191,677,823 pages (191.657 Million approx.) in Portable Document Format (PDF). This project is funded by the Department of Electronics and Information Technology (DEITY), Ministry of Communication and Information Technology (MCIT), Govt. of India. DLI is being hosted by Indian Institute of Science, Bangalore.

#### INFORMATION AND LIBRARY NETWORK (INFLIBNET)

- Information and Library Network (INFLIBNET) Centre is an autonomous Inter-University Centre of the University Grants Commission (UGC) of India. It is a major National Programme initiated by the UGC in March 1991 with its Head Quarters at Gujarat University Campus, Ahmedabad. Initially started as a project under the IUCAA, it became an independent Inter-University Centre in June 1996.

#### SHODHGANGA: A RESERVOIR OF INDIAN THESES

- "Shodhganga" is the name coined to denote digital repository of Indian Electronic Theses and Dissertations set-up by the INFLIBNET Centre.
- Under the initiative called ShodhGangotri, research scholars/ research supervisors in universities are requested to deposit electronic version of approved synopsis submitted by research scholars to the universities for registering themselves for the Ph.D programme.
- Synopsis in ShodhGangotri would later be mapped to full-text theses in "ShodhGanga".

### NATIONAL LIBRARY AND INFORMATION SERVICES INFRASTRUCTURE FOR SCHOLARLY CONTENT (N-LIST)

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- The Project entitled "National Library and Information Services Infrastructure for Scholarly Content (N-LIST)", being jointly executed by the UGC-INFONET Digital Library Consortium, INFLIBNET Centre and the INDEST-AICTE Consortium, IIT Delhi.

### E-SHODHSINDHU

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- Based on the recommendation of an Expert Committee, the MHRD has formed e-ShodhSindhu merging three consortia initiatives, namely UGC-INFONET Digital Library Consortium, NLIST and INDEST-AICTE Consortium. The UGC-INFONET Digital Library Consortium is now merged into e-Shodh Sindhu Consortium.

### NATIONAL DIGITAL LIBRARY (NDL)

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- Ministry of Human Resource Development its National Mission on Education through information and Communication Technology (NMEICT) has entrusted IIT Kharagpur to host, coordinate and set up the National Digital Library (NDL) towards building' national asset.
- The objective of the project is to a integrate all the existing digitized and digital contents available with different institutions. More specifically, it is to provide a single window access with e-learning facility to different groups of users ranging from primary to higher education.

## GOVERNMENT SPONSORED SCHEMES

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### DAIRY ENTREPRENEURSHIP DEVELOPMENT SCHEME

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#### KEY INFORMATION:

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- **Launched on:** 2005-06
- **Launched by:** The Department of Animal Husbandry, Dairying and Fisheries (DAHD&F)
- **Revision of scheme:** 1st September 2010

#### OBJECTIVE:

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- To continue assistance to set up small dairy farms and other parts to bring structural changes in the dairy sector.
- To support setting up of modern dairy farms for the production of pure and fresh milk
- To boost heifer calf rearing, thereby conserving good breeding stock

- To bring fundamental changes in the unorganised sector so that original processing of milk can be taken up at the village level itself
- To improve the quality and traditional technology to handle milk on a commercial range
- To create self-employment and provide infrastructure mainly for unorganised sector

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#### BENEFICIARY:

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- Farmers, individual entrepreneurs, NGOs, companies, groups of organised and unorganised sectors.
- Groups of the organised sector which includes Self-help Groups (SHGs), dairy cooperative societies, milk unions, milk federations, and all that.
- An individual will be qualified to avail assistance for all the components under the scheme but only once for each component.
- More than one member of a family can be supported under the scheme granted; they set up separate units with separate infrastructure at different locations.
- The extent between the boundaries of two such farms should be at least 500 metres.

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### CAPITAL INVESTMENT SUBSIDY SCHEME FOR COMMERCIAL PRODUCTION UNITS FOR ORGANIC/ BIOLOGICAL INPUTS

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#### KEY INFORMATION:

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- **Implementing year:** 2004-05
- **Launched by:** The Department of Agriculture & Cooperation through National Centre of Organic Farming (NCOF) in collaboration with NABARD or National Cooperative Development Corporation (NCDC).

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#### OBJECTIVE:

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- To support and develop organic farming in the nation by advancing accessible organic inputs like bio fertilisers, bio pesticides and fruit & vegetable market waste compost and how to generate a better return for the product.
- To boost agricultural productivity while conserving soil health and environmental protection.
- To lessen the total dependence on chemical fertilizers and pesticides by expanding the availability and advancing the quality of bio fertilisers, bio pesticides and composts in the farming sector.
- To turn organic waste into plant-nutrient sources
- To prevent pollution and environment degeneration by proper resolution and utilization of organic trash.

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#### KEY FACTS:

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- The scheme is being performed since 2004-05 and executed by the Department of Agriculture & Cooperation through National Centre of Organic Farming (NCOF) in collaboration with NABARD or National Cooperative Development Corporation (NCDC).

- The increasing and random use of synthetic fertilizers and pesticides and deteriorating soil health and productivity are affecting people from all over the world.
- Raising awareness for safe and healthy food has emphasized the importance of organic farming, which is a holistic system based on the basic system of minimizing the use of external inputs and avoiding the use of synthetic fertilizers and pesticides.
- By viewing this challenge, there is a need in the country to increase the infrastructure for production of quality organic and biological inputs.
- Therefore, under the National Project on Organic Farming, a Capital Investment Subsidy Scheme for Commercial Production Units for organic/ biological Inputs has been started.

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### BENEFICIARY:

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- Bio fertilisers and bio pesticides production Units
- Fruit & vegetable waste compost units
- Individuals, group of farmers or growers, proprietary, and partnership firms, Co-operatives, the fertilizer industry
- Companies and Corporations
- Non-Governmental Organizations (NGOs)
- Agricultural Produce Market Committees (APMCs)
- Municipalities

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## AGRICLINIC AND AGRIBUSINESS CENTRES SCHEME

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### AGRI-CLINICS

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- Agri-Clinics are visualized to give expert guidance and services to farmers on various perspectives to improve the productivity of crops or animals and to increase the earnings of farmers.
- **Agri-clinics provide support in the following areas which are as under :**
  - Soil health
  - Cropping practices
  - Plant protection
  - Crop insurance
  - Post-harvest technology
  - Clinical services for animals, feed and fodder management
  - Prices of various crops in the market, etc.

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### AGRI-BUSINESS CENTRES

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- Agri-Business Centres are business units of agri-ventures set by trained agriculture professionals.
- That type of ventures includes maintenance and custom hiring of farming equipment, the sale of inputs and other services in agriculture and allied areas which includes post-harvest management and market linkages to generate income and entrepreneurship development.
- The scheme includes full monetary support for training and handholding, provision of loan and credit-linked back ended the composite subsidy.

## OBJECTIVES OF THE SCHEME

- To enhance efforts of public extension by providing necessary extension and other services to the farmers on payment basis or freely as per business model of agripreneur, local needs and affordability of target group.
- To promote and develop agricultural development
- To generate gainful self-employment possibilities for the jobless agricultural graduates, agricultural diploma degree holders, intermediate in agriculture and biological science graduate with Post Graduation in agriculture-related courses.

## BENEFICIARY:

**This scheme is open to the following categories of candidates are as under:**

- Graduates in agriculture and allied subjects from the State Agriculture Universities (SAUs) or Central Agricultural Universities or Universities approved by ICAR/UGC.
- Degree in Agriculture and allied subjects offered by other agencies are also considered subject to the approval of Department of Agriculture & Cooperation, the State Government of India, on the recommendation of the State Government.
- Diploma (with at least 50% marks) or Post Graduate Diploma holders in Agriculture and allied subjects from State Agricultural Universities, State Agriculture and Allied Departments and State Department of Technical Education.
- Diploma in Agriculture and allied subjects offered by other agencies are also considered subject to the approval of Department of Agriculture & Cooperation, the State Government of India on the recommendation of the State Government
- Biological Science Graduates with Post Graduation in Agriculture & allied subjects
- Degree courses recognized by UGC having more than 60 percent of the course content in Agriculture and allied subjects
- Diploma/Post Graduate Diploma courses with more than 60 percent of course content in Agriculture and allied subjects, after B.Sc. with Biological Sciences, from recognized colleges and universities.
- Agriculture-related courses at intermediate (i.e. plus two) level, with at least 55% marks.

## NATIONAL LIVESTOCK MISSION

### KEY INFORMATION:

- **Launched by:** The Ministry of Agriculture and Farmers Welfare, the government of India
- **Launched on:** 2014-15

### OBJECTIVE:

- The sustainable development of the livestock sector.

### KEY FACTS:



- NABARD is the subsidy channelizing agency which works under Entrepreneurship Development & Employment Generation (EDGE) component of National Livestock Mission which includes Poultry Venture Capital Fund (PVCF), Integrated Development of Small Ruminants and Rabbit (IDSRR), Pig Development (PD), Salvaging and Rearing of Male Buffalo Calves (SRMBC).

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### QUALIFIED FINANCIAL INSTITUTIONS:

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- Commercial Banks
- Regional Rural Banks
- State Cooperative Banks
- State Cooperative Agriculture and Rural Development Banks
- Other institutions eligible for refinancing from NABARD

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### INTEREST SUBVENTION SCHEME

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#### KEY INFORMATION:

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- **Launched on:** 2006-07
- **Launched by:** The finance minister in the budget of the year 2006-07

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#### OBJECTIVE:

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- To ensure that farmers receive short-term credit at 7 %, with an upper limit of Rs. 3.00 lakh on the principal amount.

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#### KEY FACTS:

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- The amount of subsidy was to be calculated on the amount of crop loan from the date of payment up to the date of repayment.
- In pursuance of this notice, the Government of India has granted interest subsidy of 2 % to Public Sector Banks, Regional Rural Banks (RRBs) and Cooperative Banks with respect of short-term production credit up to Rs. 3.00 lakh provided to farmers out of their own resources, granted that they make available short-term credit at the rate of 7 percent per annum at ground level.
- **The scheme has continued in the following years with certain adjustments and changes in the rate of subvention which are as under.**
  - 2007-08 - 2%
  - 2008-09 - 3%
  - 2009-10 - 2%
  - 2010-11 - 1.5%
  - 2011-12 - 2%
  - 2012-13 - 2%
  - 2013-14 - 2%
  - 2014-15 - 2%
  - 2015-16 - 2%
  - 2016-17 - 2%

- The incentive to farmers on timely repayments
- Since the financial year 2009-10, the government of India has proposed an additional incentive for farmers who repay the loans quickly on or before the due date or the date fixed by the lending bank, subject to a maximum period of one year.
- **The year-wise rate of incentive to timely-paying farmers was as under:-**
  - 2009-10 - 1%
  - 2010-11 - 2%
  - 2011-12 - 3%
  - 2012-13 - 3%
  - 2013-14 - 3%
  - 2014-15 - 3%
  - 2015-16 - 3%
  - 2016-17 - 3%

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### RELIEF TO FARMERS:

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- To grant relief to farmers affected by natural calamities, Interest Subvention of 2% has been made available to lending banks for the first year on the restructured amount of crop loans.
- Interest Subsidy to Small and Marginal Farmers on Negotiable Warehouse Receipts
- In order to curb distress sale of products by farmers and to promote them to store their products in warehouses.
- Post-harvest loans against Negotiable Warehouse Receipts (NWR) provided by banks to Small and marginal farmers (SF/MF) who have Kisan Credit Cards are qualified for interest subsidy, for a period up to six months on the same rate as available to crop loan.
- SF/MF, who have not get crop loans by the banking system, are not eligible.
- No additional subvention towards timely repayment, as is available for crop loans, is visualized under the scheme.

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### INTEREST SUBVENTION TO NABARD

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- Interest subsidy is available to NABARD to provide concessional refinance to RRBs and Cooperative Banks.
- NABARD is reversed to the extent of the difference between the weighted average costs of funds assembled and refinance rate. Further, the administrative cost of 20 basis points is also granted by the government of India.

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### GSS – ENSURING END USE OF SUBSIDY RELEASED

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- To ensure end use of subsidy released under various schemes of GoI routed through NABARD, the banks have been advised to ensure that credit and subsidy are not mis-utilised by the beneficiaries. In the event of such misuse, the financing bank is required to refund the subsidy released in respect of the unit concerned to NABARD immediately.

## IMPORTANT CIRCULARS FROM MINISTRY OF AGRICULTURE & FARMERS WELFARE

### PULSES AND OILSEEDS AMOUNTING TO RS. 44,142 CRORE PROCURED FROM FARMERS DURING 2014-15 TO 2018-19

- Government has undertaken various interventions to boost the pulse and oilseeds production during last four and a half years to achieve self-sufficiency in the country.
- The country has reported production of 25.23 Million Tonnes of pulses during 2017-18 against production of 14.66 Million Tonnes in the year 2009-10, an increase of 72.10% and the production of oilseeds has increased from 24.88 Million Tonnes to 31.3 Million Tonnes during the same period, registering an increase of 25.80%.
- The bold step to raise Minimum Support Price (MSP) of pulses Production to 1.5 times of cost of production results in encourage the farmers to grow more pulses and oilseeds.
- The MSP of Moong has increased from Rs. 4500 per quintal in 2013-14 to Rs. 6979 in 2018-19. Similarly for Urad from Rs. 4300 to Rs. 5600 per quintal and for Sunflower from Rs. 3700 to Rs. 5388 per quintal.
- During 5 years from 2009-10 to 2013-14, only a quantity of 7.28 lakh MT of pulses and oilseeds valuing Rs. 3117.38 Crore was procured at MSP and the period from 2014-15 to 2018-19, a quantity of 93.97 lakh MT of pulses and oilseeds valuing Rs. 44,142.50 Crore were procured at MSP by Govt. of India.
- The PM-AASHA scheme provides for a budgetary support of Rs. 15,053 Cr.
- As against a Govt. Guarantee of Rs. 2,500 Crore upto the year 2013-14, a Govt. Guarantee of Rs 18,250 Cr for the Years 2018-20 has been made available for smooth PSS operations.

### DISTRIBUTION OF SOIL HEALTH CARDS (SHC) FOR OPTIMAL UTILIZATION OF FERTILIZERS

- Under the scheme soil health cards are provided to all farmers so as to enable the farmers to apply appropriate recommended dosages of nutrients for crop production and improving soil health and its fertility.
- **The unique features of SHC scheme are:-**
  - Collecting soil samples at a grid of 2.5 ha in irrigated area and 10 ha in un-irrigated areas.
  - Uniform approach in soil testing adopted for 12 parameters viz. primary nutrients (NPK); secondary nutrient (S); micronutrients (B,Zn, Mn. Fe & Cu); and other (pH, EC & OC) for comprehensiveness.
  - GPS enabled soil sampling to create a systematic database and allow monitoring of changes in the soil health over the years.
- In the 1st cycle which was implemented in year **2015 to 2017**, 2.53 crore soil samples were analysed and 10.73 crore soil health cards distributed to farmers.
- The **2nd cycle (2017-19)** was started from 1st May, 2017 and against target of 2.73 crore soil samples, 1.98 crore samples tested and 6.73 crore cards have been distributed to farmers.
- The target is to cover 12.04 crore farmers.

## AN INTERNATIONAL HOSTEL CONSTRUCTED IN PUSA, ICAR NEW DELHI

- **Union Agriculture & Farmers Welfare Minister Shri Radha Mohan Singh** laid the foundation stone of **Pusa Kisan Haat** in ICAR's Agricultural Technology Information Centre (ATIC) in **New Delhi**.
- Pusa Kisan Haat will be built across 2.5 acres in which 60 stalls measuring 3m x 3m will be erected in which farmers can sell their agricultural produce and value-added products.
- It will also have '**Technology Park**' in which farmers can see Live crop technologies of Pusa.
- Facilities like food plaza, open-air theater with a seating capacity of 100 people, conference hall, museum, Lab and lecture hall. It will also have facility for agricultural consultation services, seeds and literature for farmers.
- For attracting Youth towards the Agriculture education, **International hostel** is being constructed.
- Hostel will be spread across 2 hectares with a built up area of 14,480 sqm. It will have 50 apartments with two bedrooms & kitchen, 50 single rooms with bath amenities and 400 single rooms. A food court catering to 600 students will also be constructed in this hostel along with a gym, games and activity room, sitting lodge; covered parking whose terrace will be useful for organizing cultural events.

## FOOD AND AGRICULTURE ORGANISATION (FAO) COUNCIL APPROVES INDIA'S PROPOSAL TO OBSERVE AN INTERNATIONAL YEAR OF MILLETS IN 2023

- Food and Agriculture Organization (FAO) Council approved India's proposal to observe an International Year of Millets in 2023.
- It is said that **2018 is celebrating as the National Year of Millets for promoting cultivation and consumption of these nutri-cereals**.
- This is further supported by increase in Minimum Support Prices (MSP) of millets.
- Millets consists of Jowar, Bajra, Ragi and minor millets together termed as nutri-cereals.
- The MSP of Jowar has been increased to Rs 2450 per quintal from Rs 1725, Bajra to Rs 1950 from Rs 1425 and Ragi to Rs 2897 from Rs 1900 per quintal from 2018-19. Through the Department of Food and Public Distribution, State Governments are allowed to procure jowar, bajra, maize and ragi from farmers at MSP.
- FAO Council also approved **India's membership to the Executive Board of the United Nations World Food Program (WFP) for 2020 and 2021**.

## TO CONNECT WITH DIRECT BENEFIT TRANSFER (DBT), AN ONLINE PORTAL "ENSURE" HAS BEEN LAUNCHED

- **Union Minister of Agriculture and Farmers' Welfare Shri Radha Mohan Singh** launched a portal **"ENSURE"**- National Livestock Mission-EDEG developed by NABARD and operated under the **Department of Animal Husbandry, Dairying & Fisheries**.
- Under the Mission's component called **Entrepreneurship Development and Employment Generation (EDEG)**, subsidy payment for activities related to poultry, small ruminants, pigs etc. through Direct Benefit Transfer (DBT) goes directly to the beneficiary's account.

- The burden of extra interest due to delay in the disbursement of the subsidy would now be **reduced after the launch of the portal**.

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## INCREASE IN MSP

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- Government fixes Minimum Support Prices (MSPs) of 22 mandated Kharif and Rabi crops and Fair & Remunerative Prices (FRP) for Sugarcane on the basis of recommendations of Commission for Agricultural Costs & Prices (CACP), after considering the views of State Governments and Central Ministries/Departments.
- MSP for Toria and De-Husked coconut is also fixed on the basis of MSPs of Rapeseed/Mustard and Copra respectively.
- This decision (Increase in the MSPs) was a historic one as it fulfills the commitment to the farmers to provide 50 per cent return over cost of production for the first time for all mandated crops.

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## PRADHAN MANTRI FASAL BIMA YOJANA

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- Pradhan Mantri Fasal Bima Yojana (PMFBY) has been under implementation in the country including the States of Andhra Pradesh and Telangana since Kharif 2016 season.
- Due to use of manual process for transmission yield data; late release of their share in premium subsidy by some States like Andhra Pradesh and Telangana; yield related disputes between insurance companies and States, non-receipt of account details of some farmers for transfer of claims etc. settlement of claims in some States has been delayed under the scheme.
- To resolve this issue, timelines have been tightened and penalty provision of 12% interest rate per annum by Insurance Company to farmers for delay in settlement claims beyond 10 days of prescribed cut-off date for payment of claims; 12% interest rate for delay in release of State share of Subsidy beyond three months of prescribed cut-off date/submission of requisition by Insurance Companies etc. have been prescribed in the revised Operational Guidelines issued recently.

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## AGRICULTURAL MARKETING

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- Government has operationalised e-National Agriculture Market (e-NAM) with integration of 585 regulated markets across the country including 58 number of Madhya Pradesh.
- In Madhya Pradesh, the organised wholesale marketing of agricultural produce is being carried out by the network of 555 regulated market yards.
- There is no State-wise allocation of funds under e-NAM. However, Rs.17.40 crore has already been released to Madhya Pradesh for integration of 58 e-NAM Mandis.
- MP Government allocates Rs.125 crore per year from Kisan Sadak Nidhi Fund for improving marketing facilities in the State and also spending about Rs.150 crore for development of Fruits and Vegetables market yards.

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## IMPACT OF DEMONETIZATION ON FARMERS

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- Total quantity of certified/quality seeds sold to the farmers in the Country was 304.04 lakh quintals in 2015-16 increased to 348.58 lakh quintals in 2016-17.



- Total quantity of fertilizers sold to the farmers in the Country were 92.99 lakh Metric Tons in November and December, 2015 increased to 99.63 lakh Metric Tons in November and December, 2016. State-wise details of rabi and kharif crops sown from 2014 to 2018 are in annexure I and II respectively.
- The national growth rate of crop sector in 2014-15 was -3.7 per cent, in 2015-16 was -3.2 per cent and in 2016-17 was 6.9 per cent.
- In the year 2016-17, growth rate of crop sector was increased to 6.9 percent.

### REDUCTION OF PREMIUM OF PMFBY

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- There is one premium rate on pan-India basis for farmers which is maximum 1.5%, 2% and 5% of sum insured for Rabi, Kharif and annual horticultural / commercial crops, respectively.
- Insurers save premium in good seasons/years and pay high claims, if any, in bad years from the savings made in the good years. As against the premium collected from farmers amounting to Rs.4216.04 crore in 2016-17, claims of Rs. 16279.25 crore have been paid to farmers. Similarly, claims of Rs.16967.92 crore have been paid during 2017-18 (Kharif 2017) against premium collected from farmers amounting to 3038.70 crore.
- The farmers in most affected areas/States received higher claims and the claim ratio was high in these States viz. Kerala 210% and Karnataka-132%, during Kharif 2016, Tamil Nadu – 287% and Andhra Pradesh 159% during Rabi 2016-17. Similarly during Kharif 2017, the higher claim ratio is in the States of Chhattisgarh – 425%, Haryana – 201%, Madhya Pradesh – 135% and Odisha – 204%.

### CROP PRODUCTION

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- Department of Agriculture, Cooperation & Farmers Welfare fixes target for the production of foodgrains at 290.25 million tonnes for the 2018-19. The production of foodgrains in the country has been estimated at 284.83 million tonnes (4th Advance Estimates) for 2017-18, which is a record.
- As per the India Meteorological Department (IMD), the rainfall in the country was normal (-9%) during South-West monsoon season (June to September 2018).
- The production of foodgrains in the country during Kharif 2018 has been estimated at 141.59 million tonnes (1st Advance Estimates) against 140.73 million tonnes (4th Advance Estimates) during kharif 2017, which is higher by 0.86 million tonnes.

### PRODUCTION IN SUGARCANE

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- Normal area (average of latest five years) under sugarcane cultivation in the country is 48.84 lakh hectares. During 2015-16 area under sugarcane was estimated above the normal area coverage at 49.27 lakh hectares. The area under sugarcane declined to 44.36 lakh hectares during 2016-17 due to lesser area coverage in Maharashtra and then increased to 47.32 lakh hectares during 2017-18.
- For enhancing production and productivity of sugarcane, Sugarcane Development Programme under National Food Security Mission-Commercial Crops (NFSM-CC), is implemented.
- The components under NFSM-CC Sugarcane includes demonstration on inter-cropping and single bud chip technology with sugarcane, assistance for breeder seed production, production / supply of tissue culture plantlets/seedlings, distribution of plant protection chemicals and bio-agents, etc.

- Central Government also fixes Fair and Remunerative Price (FRP) of sugarcane to induce farmers to sow sugarcane. FRP is a minimum benchmark price below which sugar mills cannot purchase cane from the cane growers.

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## IMPLEMENTATION OF SWAMINATHAN COMMITTEE REPORT

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- National Commission on Farmers headed by Dr. M. S. Swaminathan submitted its report in 2006. One of the recommendations of Commission was that MSP should be at least 50 percent more than the weighted average cost of production. This recommendation was not incorporated in the National policy for Farmers 2007. However, recently Government has increased the MSP for all Kharif and Rabi crops and other commercial crops for the season 2018-19 with a return of atleast 50 percent over cost of production, which was a historic decision by the Government.

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## IMPLEMENTATION OF MODERN TECHNIQUES IN AGRICULTURE

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- Government has been taking various initiatives to create awareness among farmers about new techniques through such programmes as extension reforms, Mass Media Support to Agricultural Extension, Kisan Call Centers, Agri-Clinics and Agri-business Centers, Exhibitions/Fairs, etc. A Centrally Sponsored Scheme 'Support to State Extension Programmes for Extension Reforms' popularly known as ATMA Scheme is being implemented in 676 districts of 29 states & 3 UTs of the country, including all the districts of Maharashtra & Jharkhand.

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## INDIAN COUNCIL OF AGRICULTURAL RESEARCH (ICAR) HAS APPROVED REGISTRATION OF RECORD 15 NEW BREEDS OF LIVESTOCK AND POULTRY

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- ICAR has approved registration of record 15 new breeds of livestock and poultry
- 15 newly registered breeds include two cattle breeds - Ladakhi (J&K) and Konkan Kapila (Maharashtra & Goa); three buffalo breeds - Luit (Assam & Manipur), Bargur (Tamil Nadu), Chhattisgarhi (Chhattisgarh); one sheep breed – Panchali (Gujarat); six goat breeds – Kahmi (Gujarat), Rohilkhandi (UP), Assam Hill (Assam & Meghalaya), Bidri (Karnataka), Nandidurga (Karnataka), Bhakarwali (J&K); one pig breed – Ghurrah (UP); one donkey breed – Halari (Gujarat) and one chicken breed – Uttara (Uttarakhand).

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## MOBILE APPLICATION FOR FARMERS

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- Department of Agriculture, Cooperation and Farmers Welfare has developed **Kisan Suvidha mobile application** to facilitate dissemination of information to farmers on the critical parameters viz., Weather; Market Prices; Plant Protection; Agro-advisory; Extreme Weather Alerts; Dealers–Seed, Pesticide, Fertilizer, Farm Machinery; Soil Health Card; Cold Storages & Godowns, Veterinary Centres and Diagnostic Labs.
- Farmers can get information on farm subsidies; dealers of Seed, Pesticide, Fertilizer, Farm Machinery; crop insurance and subsidies; under various schemes through main portal of the Department of Agriculture, Cooperation and Farmers Welfare i.e. **agricoop.gov.in**. and Farmers' portal i.e. **https://farmer.gov.in/**. Farmers' portal provides information on all agriculture related areas

through a single umbrella and they also get scheme-wise information from the portals of the Sub-mission on Agriculture Mechanization.

## SELLING OF AGRICULTURAL PRODUCE AT MSP

- Government fixes minimum support prices (MSPs) of 22 mandated agricultural crops and fair and remunerative price (FRP) for sugarcane on the basis of recommendations of the Commission for Agricultural Costs and Prices (CACP).
- It has increased the MSPs for all mandated crops with a return of atleast 50 percent of cost of production for the season 2018-19 to provide 50 per cent return over cost of production for the first time.
- The costs include all paid out costs such as those incurred on account of hired human labour, bullock labour/machine labour, rent paid for leased in land, expenses incurred in cash and kind on the use of material inputs like seeds, fertilizers, manures, irrigation charges, depreciation on implements and farm buildings, interest on working capital, diesel/electricity for operation of pump sets etc, miscellaneous expenses and imputed value of family labour.

## NATIONAL MISSION FOR SUSTAINABLE AGRICULTURE

### National Mission for Sustainable Agriculture (NMSA)

**Aim at:** Making agriculture more productive, sustainable, remunerative and climate resilient by promoting location specific integrated /composite farming systems; soil and moisture conservation measures; comprehensive soil health management; efficient water management practices and mainstreaming rainfed technologies.

### Components:

- **On Farm Water Management (OFWM):** Objective of enhancing water use efficiency by promoting technological interventions like drip & sprinkler technologies, efficient water application & distribution system, secondary storage.
- **Soil Health Management (SHM):** Aims at promoting Integrated Nutrient Management (INM) through judicious use of chemical fertilizers including secondary and micro nutrients in conjunction with organic manures and bio fertilizers for improving soil health and its productivity, strengthening of soil and fertilizer testing facilities to improve soil test based recommendations to farmers for improving soil fertility.
- **Rainfed Area Development Programme:** Focuses on Integrated Farming System for enhancing productivity and minimizing risks associated with climatic variability.
- These components have been subsumed under the '**Per Drop More Crop (PDMC)**' component of **Pradhan Mantri Krishi Sinchayee Yojana (PMKSY)** during 2015-16.
- **"Soil Health Card"** Scheme is under implementation in the country since, February, 2015 to provide Soil Health Card to all farmers in the country. Soil Health Card will provide information to farmers on soil nutrients status of their soil and recommendation on appropriate dosage of nutrients to be applied for improving soil health and its fertility.

## USE OF BANNED PESTICIDES

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- Ministry of Agriculture and Farmers Welfare is implementing “**Monitoring of Pesticide Residues at National Level**” (MPRNL) scheme, under which food commodities are collected and analyzed for the presence of pesticide residues.
- During 2012-18, a total of 1,21,944 samples have been collected and analyzed, out of which 2,878 (2.4 %) samples were found exceeding Food Safety and Standards Authority of India (FSSAI) Maximum Residue Level (MRL). No residues of the banned pesticides have been detected in food commodities under MPRNL Scheme.

## SOIL HEALTH CARDS

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- **During the 1st Cycle (2015-16 & 2016-17)** 253.49 lakh soil samples were collected and 1073.89 lakh soil health cards were distributed to farmers.
- **During the 2nd Cycle (2017-18 & 2018-19)** as on 11.12.2018, 255.48 lakh soil samples have been collected and 643.25 lakh soil health cards have been distributed to farmers.
- **From 2014-15 to 2017-18**, a sum of Rs.40677.00 lakh has been released to State Governments for implementation of the soil health card scheme.
- **As a Result**, there is a decrease in use of chemical fertilizers in the range of 8-10% and increase in yield of crops to the tune of 5-6%.

## UNDER MODI GOVERNMENT, INDIA HAS ACHIEVED FOOD SECURITY AND BECOME A NET EXPORTER OF AGRICULTURE COMMODITIES

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- Prime Minister Shri Narendra Modi has resolved to double farmers' income by 2022 through a series of focused programmes including Soil Health Card, organic farming, crop insurance, irrigation, e-NAM and focus on strengthening post-harvest management so as to ensure better returns to the farmers.
- Minister urged both sides to prioritize the sectors for cooperation and also identify nodal officers so that progress can be made on the MoU signed between the two countries.

## AGRI-INCUBATION CENTERS ARE ENCOURAGING NEW STARTUPS

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- Technologies developed by ICAR have significantly contributed to increase in agriculture production like foodgrain, horticultural crops, milk, fish and eggs production.
- The Attracting and Retaining Youth in Agriculture (ARYA) scheme and student READY (Rural Entrepreneurship Awareness Development Yojana) schemes are proving to be very effective in attracting rural educated youth to agriculture.
- The ICAR has also setup a network of **25 Agri-business Incubation (ABI) Centers**, keeping in view the spectrum of technologies, available infrastructure and the core competency of the institutes. The efforts of these centers are resulting in new startups which are coming in the market.

## CABINET APPROVES HIKE IN MSP FOR COPRA

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- Cabinet Committee on Economic Affairs, chaired by the Prime Minister Shri Narendra Modi, has given its approval for increase in the Minimum Support Price (MSP) for Fair Average Quality (FAQ) of "Milling Copra" has been increased to Rs.9521/- per quintal for 2019 season from Rs. 7511/-per quintal in 2018 and the MSP of "Ball Copra" has been increased to Rs.9920/- per quintal for 2019 season from Rs. 7750/- per quintal in 2018.

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## CENTRE DOUBLES EXPORT INCENTIVE FOR ONION FARMERS

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- Government has increased the export incentives granted for Onions under the Merchandise Exports from India Scheme (MEIS) from existing 5% to 10% in the interest of farmers.
- The export incentive for fresh inions was zero before July, 2018. During July, 2018, the incentives were introduced at the rate of 5%. Now, with the current increase, Onions enjoy one of the highest incentives for Agro-exports.

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## IMPORTANT CIRCULARS FROM MINISTRY OF RURAL DEVELOPMENT

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### MAINTENANCE OF ROADS UNDER PMGSY

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- Ministry of Rural Development have extended support to the States in the maintenance management of rural roads including **25 States**:
  - Assam,
  - Andhra Pradesh,
  - Arunachal Pradesh,
  - Bihar,
  - Chhattisgarh,
  - Gujarat,
  - Haryana,
  - Himachal Pradesh,
  - Jharkhand,
  - Karnataka,
  - Kerala,
  - Madhya Pradesh,
  - Manipur,
  - Meghalaya,
  - Mizoram,
  - Nagaland,
  - Punjab,
  - Odisha,
  - Rajasthan,
  - Sikkim,
  - Tamil Nadu,
  - Telangana,

- Uttar Pradesh,
- Uttarakhand,
- West Bengal
- Financial incentives amounting to Rs. 1076.49 crore and Rs. 842.50 crore were awarded in fiscal year 2016-17 and 2017-18 respectively.
- Ministry has sanctioned 54,494 Km of road length so far under New Technology and 21,995 Km have been completed as on 6th December, 2018.

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## WELFARE SCHEMES FOR RURAL MASSES

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- Government organized **“Gram Swaraj Abhiyan (GSA)”** from 14th April to 05th May, 2018 and also extended the campaign to villages having population of more than 1,000 in 117 Aspiration Districts from 1st June 2018 to 15th August 2018.
- **“Sabka Sath, Sabka Gaon, Sabka Vikas”**, was to promote social harmony, spread awareness about pro-poor initiatives of the government and reach out to poor households to enroll them as also to obtain their feedback on various welfare programmes.
- During GSA, farmers meeting was also organized at block level in rural areas of the country with the aim of **“Doubling the farmers’ income till 2022”**.

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## RURAL ROAD CONNECTIVITY

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- Ministry of Railways requested Ministry of Rural Development that while sanctioning any work of road under PMGSY scheme, suitable provision should be made in the estimate to include provision of a subway to facilitate crossings of railway tracks or road alignment should be planned in such a way that it should connect to the existing level crossing or subway.

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## WOMEN PARTICIPATION UNDER MGNREGS

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- The women participation rate in Mahatma Gandhi National Rural Employment Guarantee Scheme (MGNREGS) has been 55% in FY 2015-16, 56% in FY 2016-17, 53% in FY 2017-18 and 53% in 2018-19 (as on 07.12.2018) which has been above the statutory requirement of 1/3rd women participation under MGNREGS, as per the Mahatma Gandhi National Rural Employment Guarantee Act, 2005.

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## MORD SIGNS MOU WITH MARUTI SUZUKI INDIA LTD

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- MoRD signed MOU with Maruti Suzuki India Ltd for training rural youth for skill development in presence of Hon’ble Minister Shri. Narendra Singh Tomar. This partnership between the government and the leading industry from the automotive sector will provide training to atleast 5000 candidates in two years with assured placement to the rural youth of our country.

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## BASIC FACILITIES UNDER SAGY

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- 26 Central Schemes have been amended or enabled to accord priority for the SAGY Gram Panchayats. A compilation of 223 Central Sector/ Centrally Sponsored and 1,806 State Schemes for convergence



under SAGY for the benefit of Members of Parliament, District and Village level officials has been prepared.

- Ministry has published a document named 'SAHYOG' providing information on the existing social security schemes collated from respective Ministries to enrich the knowledge of villagers and village level functionaries to achieve 100% enrollment into the social/ financial Security Schemes in SAGY Gram Panchayats.
- Ministry of Rural Development has coordinated with other Central Ministries/ Departments for ensuring provision of four key basic services viz. power, drinking water, roads and education in all SAGY Gram Panchayats.
- Ministry organised capacity building exercises for 373 SAGY functionaries from the Phase-II/III Gram Panchayats during April-June 2018 recognising that the implementation of SAGY requires highly motivated and knowledgeable personnel.
- Ministry has met with the representatives of Industry and Professional Associations linked with Ministry of Corporate Affairs and oriented them on the opportunities presented by SAGY, Mission Antyodaya and other schemes for converging private / corporate investments with the government initiatives for the development of villages.

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## START-UP VILLAGE ENTREPRENEURSHIP PROGRAMME (SVEP)

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**Aim at:** Helping rural households including women to set-up enterprises.

- This enterprise formation started in 2017-18. As on 30th November 2018, a total of 30,352 enterprises were formed across 20 States where the scheme is operational.
- The total SVEP proposals approved till 30th November 2018 is 131. Of these Kudumbashree NRO, Kerala is supporting implementation of 69 projects, Entrepreneurship Development Institute of India (EDII) NRO, Ahmedabad is supporting implementation of 42 projects and other Project Implementing Agencies (PIA) are supporting implementation of 20 projects.

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## REVAMPING OF PENSION SCHEMES

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- Decision has been taken for revamping the NSAP scheme by way of changes in admissible rates and the criteria.
- **The objectives of this evaluation is:**
  - To cover wide range of issues like assessment of implementation of NSAP to ascertain the progress in terms of targets & achievements,
  - evaluation of the selection processes adopted by various States for identification of beneficiaries,
  - issues related to shifting from below poverty line (BPL) to Socio Economic Census (SECC) 2011 as criteria for identification of beneficiaries,
  - evaluate the disbursement processes,
  - mode of disbursement,
  - periodicity and timely receipts of benefits,
  - assess the progress and effectiveness of the Direct Benefit Transfer (DBT) processes,
  - evaluate the status of Digitization,
  - Aadhaar enrolment & verification processes,

- matter relating to Aadhaar,
- Aadhaar seeding,
- mapping of records.

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## IMPLEMENTATION OF PMGSY

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- Union Finance Minister in his Budget Speech for the year 2018-19 announced that “Task of connecting all eligible habitations with an all-weather road has been substantially completed, with the target date brought forward to March, 2019 from March 2022.
- Major link routes are Ambited which connect habitations to agricultural and rural markets (GrAMs), higher secondary schools and hospitals. Prime Minister Gram Sadak Yojana Phase-III will include such linkages”. The Ministry of Rural Development has accordingly moved a proposal for approval of the competent authority.

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## GRAM PARIVAHAN YOJANA

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- Ministry is implementing Aajeevika Grameen Express Yojana (AGEY)
- **Aim At:** To provide connectivity to rural areas through vehicles operated by SHG members. State Rural Livelihoods Missions (SRLMs) in consultation with Community Based Organisations (CBOs) under DAY – NRLM identify routes where roads have been constructed under Pradhan Mantri Gram Sadak Yojana (PMGSY) but has poor transport services.
- **AGEY has the following two objectives:**
  - To provide safe, affordable and community monitored rural transport services to connect remote villages with key services and amenities (including access to markets, education and health) for the overall economic development of the area by making use of the supports available within the framework of DAY-NRLM.
  - To provide an alternative source of livelihoods to members of Self Help Groups (SHGs) and their families under DAY-NRLM by facilitating them to operate public transport services in backward rural areas, as identified by the States.