



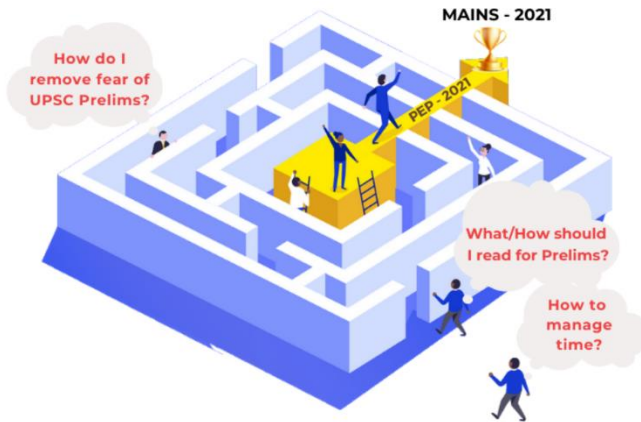
YK GIST - DECEMBER

**INDIAN SOCIETY
DIGITAL INDIA**



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PRELIMS EXCLUSIVE PROGRAMME (PEP)- CLAS



PEP-2021

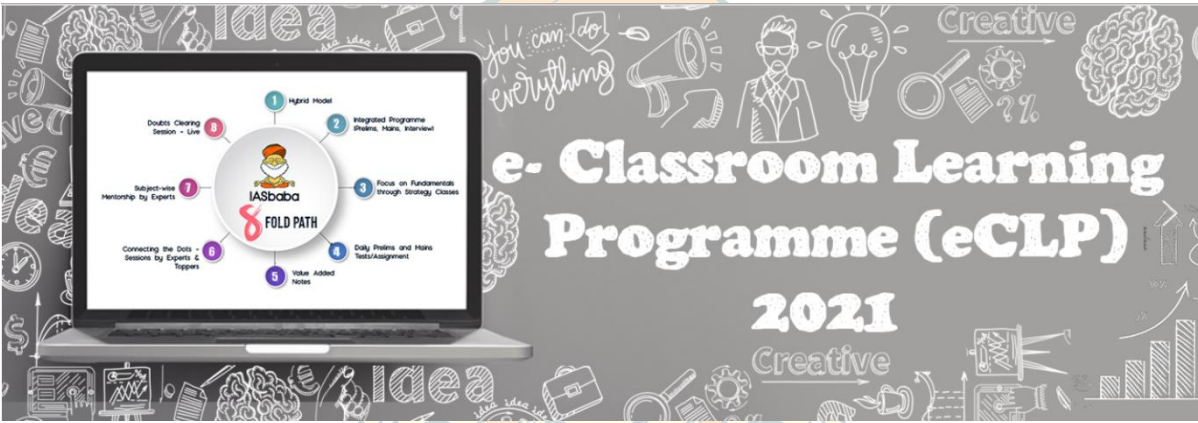
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Preface

This is our 69th edition of Yojana Gist and 60th edition of Kurukshetra Gist, released for the month of December 2020. It is increasingly finding a place in the questions of both UPSC Prelims and Mains and therefore, we've come up with this initiative to equip you with knowledge that'll help you in your preparation for the CSE.

Every issue deal with topics comprehensively sharing views from a wide spectrum ranging from academicians to policy makers to scholars. The magazine is essential to build an in-depth understanding of various socio-economic issues.

From the exam point of view, however, not all articles are important. Some go into scholarly depths and others discuss agendas that are not relevant for your preparation. Added to this is the difficulty of going through a large volume of information, facts and analysis to finally extract their essence that may be useful for the exam.

We are not discouraging from reading the magazine itself. So, do not take this as a document which you take read, remember and reproduce in the examination. Its only purpose is to equip you with the right understanding. But, if you do not have enough time to go through the magazines, you can rely on the content provided here for it sums up the most essential points from all the articles.

You need not put hours and hours in reading and making its notes in pages. We believe, a smart study, rather than hard study, can improve your preparation levels.

Think, learn, practice and keep improving!

You know that's your success mantra 😊

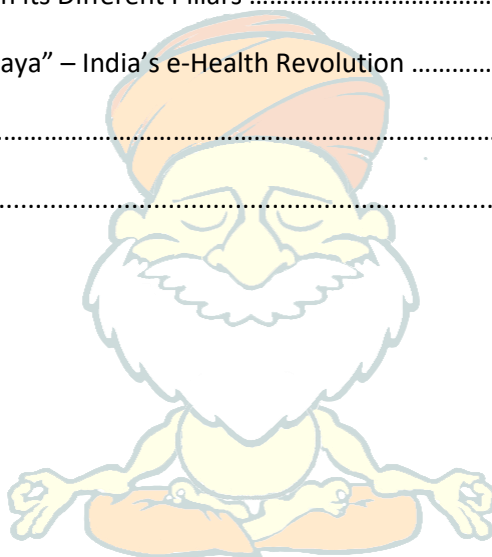
Table of Contents

INDIAN SOCIETY

A. Welfare of Marginalised Communities	4
B. Equality in Workplace and Home	13
C. Food for All.....	15
D. Multi-Dimensional Poverty Index (MPI).....	20

DIGITAL INDIA

A. Realising Digital India through its Different Pillars	23
B. Towards “Sarve Santu Niramaya” – India’s e-Health Revolution	28
C. Rural e-Governance	32
D. Digitising Indian Agriculture.....	36



INDIAN SOCIETY

A. Welfare of Marginalised Communities

A marginalized population is a group of individuals or a particular cluster, who due to various reasons, is socially, economically and educationally marginalized and thus deprived of joining the mainstream of society. Since independence, society and governments have been making efforts at every level to mainstream them. The Union Ministry of Social Justice and Empowerment was constituted to enable the same.

Department of social Justice and Empowerment

Objective:

- Educational, economic and social empowerment of Scheduled Castes (SCs), Other Backward Classes (OBCs), Economically Backward classes (EBCs) and De-notified and Nomadic Tribes (DNTs);
- Supporting Senior Citizens by way of their maintenance;
- Welfare, security, health care, productive and independent living;
- Prevention & Treatment of Alcoholism and Substance Abuse (Drugs); e
- Educational, economic and social empowerment of transgender persons as well as educational and economic development, educational and economic empowerment of economically backward classes, and rehabilitation of beggars

Points to note:

- In the year 1985-86, the erstwhile Ministry of Welfare was bifurcated into the Department of Women and Child Development and the Department of Welfare.
- Now the two departments have been created under the Ministry of Social Justice & Empowerment
 - (i) Department of Social Justice and Empowerment (Samajik Nyaya and Adhikarita Vibhag)
 - (ii) Department of Disability Affairs (Nishaktata Karya Vibhag)

Department of Empowerment of Persons with Disabilities

- The Department of Empowerment of Persons with Disabilities was carved out of the Ministry of Social Justice and Empowerment on May 12, 2012 as Department of Disability Affairs to ensure greater focus on policy matters to address disability issues effectively and to act as the nodal department for greater coordination among stakeholders, organisations, state governments and related Central Ministries.
- The main objective of the Department is to build an inclusive society with equal opportunities and empowering through related legislation/policies/programmed/schemes.

For SC-ST-OBC Students	
Pre and Post Matric Scholarships	<p>Objective:</p> <ul style="list-style-type: none"> • To provide funds to the students of SC category. • To provide free coaching to SC and OBC students for employment and higher education. <p>Under Pre-matric and Post-Matric Scholarship Scheme for OBC/EBC and DNT, 6 crores (approx.) beneficiaries have been covered in respect of educational places during the year 2014-19.</p>

<p>Dr. Ambedkar Medical Aid Scheme</p>	<ul style="list-style-type: none"> • Launched in 2009 to provide medical treatment facility to the patients of the economically weaker sections of the scheduled castes and tribes suffering from serious ailments. • The main objective of Special Central Assistance (SCA) to Scheduled Caste Sub Plan (SCSP) is to give a thrust to the development programmes for Scheduled Castes through Income Generation Scheme, Skill Development Programmes and infrastructure development.
<p>Pradhan Mantri Adarsh Gram Yojna</p>	<ul style="list-style-type: none"> • Launched during 2009-10 in 1000 scheduled caste majority villages, and was extended to 1500 more villages in 2015. • An online system has been put in place for effective planning, monitoring and implementation to identify gaps in the identifies indicators from which the Village Development Plan (VDP) can be created through convergence of other schemes and progress can be tracked and monitored
<p>Venture Capital Funds</p>	<ul style="list-style-type: none"> • Launched in December 2015 with an initial capital of Rs. 200 to promote and provide concessional finance to Scheduled Castes entrepreneurs. • Under this scheme, a fund of about 400 crores has been allocated to 107 Scheduled Castes entrepreneurs till February 2020. • The objective of a similar scheme for the economic development of OBCs, launched in 2017-18, is to promote entrepreneurs of the targeted beneficiaries through concessional finance for employment generation. • Recently, two new schemes V1SVAS and AS11M have been launched to promote entrepreneurship among these sections. • Ambedkar Social Innovation & Incubation Mission launched recently <ul style="list-style-type: none"> ○ To promote innovation and enterprise among SC students studying in higher educational institutions. ○ Under the initiative, 1,000 SC youth will be identified in the next four years with start-up ideas through the Technology Business Incubators in various higher educational institutions. ○ They will be funded 30 lakh rupees in three years as equity funding to translate their start-up ideas into commercial ventures. ○ Successful ventures would further qualify for venture funding of up to five Crore rupees from the Venture Capital Fund for SCs.
<p>For Persons who are Differently- Abled (Divyangs)</p>	
<p>Persons with Disabilities</p>	<ul style="list-style-type: none"> • The Rights of Persons with Disabilities Act, 2016 has been formed. • The reservation in jobs and education has also been increased from 3 to 4 percent and 3 to 5 percent respectively. • The Government launched the Sugamya Bharat Abhiyan in 2015. Under this, Rs. 443.63 crore has been released for 1152 state government buildings and retro fitting has been done in 998 central government buildings

Scholarship scheme for Disabled Students	<ul style="list-style-type: none"> This scheme has been fully implemented from 2014-15. Before this, there was only a National Fellowship Scheme which was available only for M. Phil, and PhD Divyang students. Now 6 component schemes: Pre-Matric, Post-Matric, Top Class, National Overseas, National Fellowship and Free Coaching have been implemented.
Specialised Unique Disability Identity (UDID) Project	<ul style="list-style-type: none"> Under this, targets have been set up to give a unique identity to all PwDs. This scheme has been implemented in all states and union territories, and till May 2020, 48.97 lakh UDIDs cards have been issued in 707 districts.
National Institutes and Composite Regional Centre	<ul style="list-style-type: none"> At present, there are a total of nine national institutes and 20 Composite Regional Centers
Indian Sign Language Research and Training Centre	<ul style="list-style-type: none"> This is a new national institute established by the government in 2015. The institute has developed a dictionary with 6000 words and expressions.
National Institute of Mental Health Rehabilitation	<ul style="list-style-type: none"> The Union Government has decided to set up this institute in Sehore (Madhya Pradesh). Work has begun and the total cost of this project is Rs. 179 crores.
Centre for Disability Sports	<ul style="list-style-type: none"> It is proposed to start a Centre for Disability Sports in each of the five regions of the country. Artificial Limbs Manufacturing Corporation of India (ALIMCO) has signed a MoU with the Motivational Charitable Trust of England for modern wheelchairs. ALIMCO's new production unit has been set up in Ujjain. State-of-the-art Limb Fitting Centre has been established in Faridabad.
Accessible India campaign	<ul style="list-style-type: none"> Aimed at making public spaces friendly for persons with disabilities. Under the Rights of PwD Act, 2016, all existing and new public buildings have to follow the accessibility standards notified on June 15, 2017. The existing buildings were given five years to comply.

Kiran: Mental Health Rehabilitation Helpline launched

- 24/7 toll-free helpline 'Kiran' was recently launched.
- Launched by:** The Ministry of Social Justice and Empowerment
- Objective:** To provide support to people facing anxiety, stress, depression, suicidal thoughts and other mental health concerns.
- Coordinated by:** The National Institute for the Empowerment of Persons with Multiple Disabilities (NIEPMD), Chennai (Tamil Nadu) and National Institute of Mental Health Rehabilitation (NIMHR), Sehore (Madhya Pradesh).

Key takeaways

- It will cater to – People in Distress, pandemic induced psychological issues and Mental Health Emergency.
- It will offer mental health rehabilitation services with the objective of early screening, first-aid, psychological support, distress management, promoting positive behaviours, etc.
- It will be available in 13 languages and has 660 clinical/rehabilitation psychologists and 668 psychiatrists as volunteers.

- Helpline operators had been sensitised not to ask the caller for name or any identification details.

4% mandatory reservation under Rights of Persons with Disabilities (RPwD) Act, 2016:

- Section 34(1) of RPwD mandates a minimum 4% reservation for the benchmark disabled of the total number of vacancies in the cadre strength in each group of posts meant to be filled with such disabled.
- It mandates equal distribution of one (20% each) among the disabled classes of the blind, deaf, locomotor plus the combined class of autism, etc. with those having multiple disabilities.

Rights of Persons with Disabilities Act, 2016

- The Act replaces the Persons with Disabilities (Equal Opportunities, Protection of Rights and Full Participation) Act, 1995.
- It fulfills the obligations to the United National Convention on the Rights of Persons with Disabilities (UNCRPD), to which India is a signatory.
- Following **reservation benefits** have been provided for persons with benchmark disabilities and those with high support needs
 - Reservation in higher education (not less than 5%),
 - Reservation in government jobs (not less than 4 %),
 - Reservation in allocation of land, poverty alleviation schemes (5% allotment)
- Every child with benchmark disability between the age group of 6 and 18 years shall have the right to free education.
- **Broad based Central & State Advisory Boards on Disability** are to be set up to serve as apex policy making bodies at the Central and State level.
- National and State Fund will be created to provide financial support to the persons with disabilities.
- The Chief Commissioner for Persons with Disabilities and the State Commissioners will act as regulatory bodies and Grievance Redressal agencies and also monitor implementation of the Act.
- Punishments: Whoever intentionally insults or intimidates a person with disability, or sexually exploits a woman or child with disability, shall be punishable with imprisonment between six months to five years and fine.
- Special Courts will be designated in each district to handle cases concerning violation of rights of PwDs.

Did You Know?

Reservation for disabled is called horizontal reservation which cuts across all vertical categories such as SC, ST, OBC & General

UN's guidelines on access to social justice for people with disabilities

- **Principle 1:** All persons with disabilities have legal capacity. No one shall be denied access to justice on the basis of disability.
 - **Principle 2:** Facilities and services must be universally accessible to ensure equal access to justice without discrimination.
 - **Principle 3:** They have the right to appropriate procedural accommodations.
-

- **Principle 4:** They have the right to access legal notices and information in a timely and accessible manner on an equal basis with others.
- **Principle 5:** They are entitled to all substantive and procedural safeguards recognized in international law on an equal basis with others, and States must provide the necessary accommodations to guarantee due process.
- **Principle 6:** They have the right to free or affordable legal assistance.
- **Principle 7:** They have the right to participate in the administration of justice on an equal basis with others.
- **Principle 8:** They have the rights to report complaints and initiate legal proceedings concerning human rights violations and crimes, have their complaints investigated and be afforded effective remedies.
- **Principle 9:** Effective and robust monitoring mechanisms play a critical role in supporting access to justice for them.
- **Principle 10:** All those working in the justice system must be provided with awareness-raising and training programmes addressing the rights of persons with disabilities, in particular in the context of access to justice.

Disability is also a matter of perspective.

Disability is an impairment that can be cognitive, developmental, intellectual, mental, physical, sensory, or some combination of these. It may be present from the birth or occur during a person's lifetime. It hampers or reduces a person's ability to carry out his day-to-day activities.

Disability can be seen through various perspectives-

- It can be social, which means people are disabled by the barriers in society rather than by their own impairment or differences. For example, not having accessible toilets in buildings, assumptions that disabled people cannot do certain things.
- It can be medical, where medically a person lacks in something as compared to a healthy individual. It categorizes disability into physical and mental.
- It can also be seen as enhancement of one particular sense in a person and lack of another. It is often seen in people disabled from birth, where lack of one sense is compensated by very powerful another sense, like a blind person has a very powerful sense of hearing.
- It also varies due to attitude of the person. Certain people because of their will power and positive attitudes have converted their disability into an opportunity. For example, Stephen Hawking despite being suffering from ALS turned out to be a great scientist and Deepa Malik worked on her strengths to win a medal in Paralympics.
- It also changes over time. What used to be a disability in the past, might be cured or rectified through a simple procedure now.

Efforts toward Rehabilitation and Acceptance of Invisible Disabilities

Today, India has more than 10 million children with autism, 10 million people with epilepsy, more than 150 million people with a need of intervention for mental illness, and many more with varied physical disabilities; living in relatively large cities. Around 71% disabilities are living in rural areas, which make getting intervention an even more difficult process for them.

Creating Awareness and Infrastructure

- The first step towards rehabilitation is to create awareness; that there indeed exist certain lifelong debilitating disorders which require special assistance and provisions from the community.
- The Rights for Persons with Disabilities Act, 2016 is a step toward such awareness. Apart from covering 21 categories of disabilities from the previous 7 categories under the 1995 Act, this new

Act also includes some of the seemingly invisible conditions such as autism and learning disabilities within its ambit.

The Special Needs of Childhood Developmental Disabilities: Early intervention can work wonders, when brain and body cells are most malleable and receptive to training and therapy. Hence the need for early detection at the primary health centre level, and continuous monitoring through home visits by trained healthcare workers.

Special Education and Vocational Training - Focus on the Strengths: The person with disability can be trained and rehabilitated in many ways by following the golden rule of focusing on the person's strengths. Setting up of Indian Sign language research and training center to benefit persons with hearing disabilities.

Need for Innovation, Use of Technology and AI

- AI is changing the way therapy can be provided to certain disorders and disabilities. Most used in the case of autistic children, apps and devices are being tailored to suit the special and unique needs of a young child.
- Applications in handheld smart phones are assisting parents in providing, augmenting and assisting the communication requirements of a child by providing visuals, sounds and situations. Not only that, such apps are reducing the expense and resource burden on the family to undergo expensive and exclusive therapies on a daily basis.

Inclusion and Social Acceptance: People living with disorders and disabilities need to be encouraged to share their story with those around them so that people can better understand how to support them. India has a great vibrant culture.

People with disabilities need to be accepted as normal people in the society as this will help in clearing up the prejudices around them and can help them in leading a normal and healthy life.

To get rid of the issue of Substance Abuse

- A national Survey has been done in the year 2018 on the Drug use in India as a part of National-action Plan to curb the demand of Drugs.
- A national action scheme formulated to cut down on drug demand for the period 2018-2025 aims at prevention, treatment and rehabilitation of individuals from drug abuse.

'Nasha Mukh Bharat' or drug-free India campaign

- **26th June** – International Day Against Drug Abuse and Illicit Trafficking
- Ministry of Social Justice and Empowerment launched drug-free India campaign – 'Nasha Mukh Bharat'
- Annual anti-drug action plan (2020-21) would focus on 272 most affected districts and launch a three-pronged attack combining efforts of Narcotics Bureau, Outreach/Awareness by Social Justice and Treatment through the Health Dept.

Aim/Objectives:

- It will focus on institutional support and also on community outreach programmes in the districts identified by Narcotics Control Bureau.
- Change in the strategy against drugs – from institutional level to level of society.
- It will launch campaigns in schools and colleges to prevent drug abuse among youth.

Integrated Rehabilitation Centre for Addicts (IRCA)

- It is funded by the Ministry of Social Justice and Empowerment
- It provides composite/ integrated services for the rehabilitation of the substance dependent person.
- IRCA is responsible for preventive education and awareness generation which target groups (vulnerable and at-risk groups) in their neighborhood.

- IRCA envisages total recovery of the addicted person leading to his socio-economic rehabilitation through an appropriate combination of individual counseling.

According to 2020 World Drug Report released by United Nations Office on Drugs and Crime (UNODC):

- Economic hardship caused by the pandemic may push people into making drugs for a living.
- Adverse impact of pandemic could lead to an increase in the number of people resorting to illicit activities.

Report by Ministry of Social Justice and Empowerment. Government of India and National Drug Dependence Treatment Centre, AIIMS

It was undertaken to understand the pattern and extent of substance use in India. It was one-of-a-kind initiatives to map the estimates of substance use in the entire length and breadth of the country. The findings were released in February 2019

- The research found that alcohol (a psychoactive drug) is most used by Indians.
- Sixteen crore people (approximately) are consuming alcohol (14.6% of population between 10-75 years).
- Cannabis and opioids are second in terms of use (2.8% of population) followed by other forms of substance use.
- Highlights the major lack of resources to tackle the situation. With over 134 crore people to look after, India has merely close to 10000 trained psychiatrists and clinical psychologists.
- We have 122 Government-run de-addiction centers, 29 Drug Treatment Centres (DTCs), and 216 Opioid Substitution Therapy (OST) centers.
- This glaring gap only is being widened with a lot of people getting into substance use. Looking at this gap, India needs to invest in its care services for those who need them and the development of its services by using the allocation of resources optimally.

Action Against Substance Use

- Awareness and sensitization programmes in school will go a long way to control the crisis at hand. The distinction one needs to make here is that the information given to students should be factual, objective, informative and backed by evidence rather than the messages that might monger fear.
- The community response needs to be strengthened against the substance use. It will require developing an integrated model of prevention and treatment in the community.

For Transgender Persons

A. Launch of 'National Portal for Transgender Persons'

Launched by: Ministry for Social Justice & Empowerment

Key takeaways

- National Portal for Transgender Persons was developed after the Notification of Transgender Persons (Protection of Rights) Rules, 2020 was released.
- This Portal would help a transgender person in applying for a Certificate and Identity card digitally from anywhere in the country.
- The most important benefit is that it helps the transgender person to get the I-Card without any physical interface and without having to visit any office.
- Through the Portal, they can monitor the status of their application that ensures transparency in the process.
- Getting Transgender Certificate and Identity Cards as per their self-perceived identity is an important provision of The [Transgender Persons \(Protection of Rights\) Act, 2019](#).

B. Inauguration of Garima Greh: A Shelter Home for Transgender Persons

- Will be run in association with Lakshya Trust, a Community based organisation entirely run by the Transgenders.
- The purpose of the Shelter Home is to provide shelter to Transgender persons, with basic amenities like shelter, food, medical care and recreational facilities.
- Besides, it will provide support for the capacity-building/skill development of persons in the Community, which will enable them to lead a life of dignity and respect.

C. The Transgender Persons (Protection of Rights) Act, 2019

It came into effect on 10th January 2020 which is the first concrete step towards ensuring welfare of Transgender persons.

- To implement the provisions of the Act the Ministry of Social Justice & Empowerment issued the Transgender Persons (Protection of Rights) Rules, 2020 which have been notified in the Gazette of India.
- The Rules ensure that comprehensive welfare measures reach the Transgender Community and help them come into the mainstream of the Society.
- The right to self-perceived gender identity and the procedure to issue the Transgender certificate and Identity card has been defined in the Rules.
- The process has been made smooth and hassle free to ensure that Transgender persons are able to attain their self-perceived identity card without any inconvenience.

D. National Council for Transgender Persons constituted

- National Council for Transgender Persons has been recently constituted.
- **Ministry:** The Ministry of Social Justice and Empowerment.

Key takeaways

- **Council's chairperson:** The Social Justice Minister.
- **Members:**
 - Officials from some other Ministries.
 - Five nominated members from the transgender community.
- **Associated Act:** Transgender Persons (Protection of Rights) Act, 2019.
- **Functions:**
 - Advising the central government on the formulation of policies, with respect to transgender persons
 - Monitoring and evaluating the impact of policies
 - Reviewing and coordinating the activities of all the departments
 - Redressing grievances of transgender persons
 - Performing other functions as prescribed by the Centre.

Rehabilitation of Beggars

- **The Ministry of Social Justice & Empowerment** is exploring the possibilities of a scheme for persons engaged in the act of begging.
- The Scheme would cover identification, rehabilitation, provision of medical facilities, counselling, education, skill development with the support of State governments & NGOs.
- The Ministry provides funds to the **National Backward Classes Finance & Development Corporation (NBCFDC)** for skill development programmes for beggars.
- The Ministry has released an amount of Rs. 3.2 crores to National Backward Classes Finance and Development Corporation (NBCFDC) and National Institute of Social Defence (NISD) to conduct skill development programmes for persons engaged in begging.

About NBCFDC

- NBCFDC is a Government of India Undertaking under the aegis of **Ministry of Social Justice and Empowerment**.
- It was incorporated under Section 25 of the Companies Act 1956 on 13th January 1992 as a Company not for profit.
- Its objective is to promote economic and developmental activities for the benefit of Backward Classes and to assist the poorer section of these classes in skill development and self-employment ventures.

Reforms for the welfare of Senior Citizens:

Article 41 of the Constitution provides that the state shall, within the limits of its capacity and development, make effective provision for securing the right to work, to education and to public assistance in cases of unemployment, old age, sickness and disablement and in other cases of undeserved want.

Article 47 also provides that the state shall regard the raising of the level of nutrition and the standard of living of its people and the improvement of public health among its primary duties.

- Implementation of old age homes and electronic transfer of grant money through a web-supported portal (egrant).
- Greater increase in quantum of the grant amount.
- Constitution of Senior Citizen Welfare Fund for new and innovative welfare schemes for senior citizens.
- **Launch of Rashtriya Vayoshri Yojana (RVY)**, which aims at providing free of cost physical aids and assisted-living devices for senior citizens belonging to BPL category who are suffering from an age-related disability
- **Launch of Pradhan Mantri Vaya Vandana Yojana:** Pradhan Mantri Vaya Vandana Yojana, or PMVVY, is a social security scheme for senior citizens, which is being implemented through the Life Insurance Corporation of India (LIC). This gives an assured minimum pension.
- **Supreme Court directed States** to provide care, support and priority medical treatment for senior citizens, especially those living alone or quarantined, amid the pandemic

Difficulties faced by older people due to COVID-19 Pandemic

- **High Vulnerability to COVID-19 mortality:** If infected, the odds of survival for older people are the lowest.
- **Danger of being neglected:** When isolated to save them from infection, they are likely to suffer from neglect — from lack of care and loneliness.
- **Denied healthcare for other diseases:** Outpatient treatment of nearly all major non-communicable diseases has been severely affected due to COVID care. Older people seem to be missing out on treatment for illnesses.
- **Vulnerable to Mental ill-health problems:** Lack of access to healthcare services could aggravate physical disabilities, hinder the effective management of communicable diseases and lead to mental ill-health problems amongst the elderly.
- **Dependence on Children/ others:** The precarious nature of economic work of older persons and inadequate salaries means that more than 80% of such people in the workforce are either partially or fully dependent on others, who are anyway facing difficult circumstances
- **Technology Challenges:** Internet play an important role in maintaining access to essential care, services etc. In India, only 7% of older people have smartphones. The literacy rate among this segment is also low, further limiting access to technology and important information.

- **Inadequate Government Support:** In its first relief package, the government announced a one-off payment of Rs 1,000 and an increase in the pension for 30 million widows and senior citizens. But this will reach only to about 20% of the older people. There was no support for senior citizens in the second relief package.

What are the tools of social empowerment? How does social empowerment lead to social justice?

Social empowerment is understood as the process of developing a sense of autonomy and self-confidence, and acting individually and collectively to change social relationships and the institutions and discourses that exclude poor people and keep them in poverty.

Tools of Social empowerment

1. **Constitutional Safeguards:** Constitution is best tool of empowerment. Fundamental rights enshrined in constitution ensured a right of dignity and respect to all sections of society.
2. **Various acts and policies to tackle discrimination and corruption:** Ex: SC/ST act which empowers the weaker section of society to speak against their perpetrators. RTI act empowers them to seek information.
3. **Institutional safeguards:** In order to ensure the rights guaranteed by constitution are enforced commissions like NCW, NCM work on complaints and investigate matter.
4. **International bodies like UN:** SDG goals which stress around holistic development in the form of elimination of poverty, universal access to health care, education, and housing.
5. **Specific schemes by Government:** Schemes like Stand up India, Skill India, and Make in India focus on empowering the weaker sections.
6. **Pressure groups:** Various pressure groups and NGOs have often helped in empowerment and bring about substantial change.
7. **Role of mass and social media:** Media has been helpful by providing a voice to weaker section of society by highlighting their plights and demands.

Social empowerment leads to social justice in following ways

1. **Constitutional Safeguards:** The constitution has specifically tried to provide representation to SC/ST; due to this many leaders from community have emerged who have led to empowerment of their communities.
2. **Government Schemes:** Various schemes of government has helped to empower weaker sections and provided them jobs and improving their standard of living

For India to become a developed nation social empowerment of its weaker sections need to be fastened and efforts are constantly taken to achieve the same through various policies and initiatives.

B. Equality in Workplace and Home

Vulnerability is the state of being exposed to the possibility of being attacked, either physically, mentally or emotionally. It is a state of being in distress. Constant state of vulnerability hampers natural growth, physical and mental of an individual and society. It arises because of natural biological, economic and also structural man-made reasons. It is both intrinsic and structural.

And vulnerability is intrinsic to Gender- Patriarchy, the feature of Indian society makes women vulnerable. Women are the worst sufferers of evils like rapes, child marriages, dowry and domestic violence. Also, because of biological reasons, women are more vulnerable than men in certain aspects. This vulnerability is intrinsic in sex. For example, air pollution affects more women negatively than men.

Women in India remain vulnerable throughout their journey from “the womb to their tomb”. Multiple reasons contribute to their misery:

1. Biological
 - They are physically weaker than men
 - Prone to sexual violence such as rape, harassment etc.
 - Attributes like menstrual cycle, child-bearing capacity create barriers in daily life – both professional and personal
2. Social
 - Patriarchal nature of Indian society which considers women inherently inferior
 - Economic dependence, lack of education opportunities add to their vulnerability
 - Unequal gender roles which restrict women to homemaking and caretaking

Impact of Lockdown on women

The pandemic is deepening pre-existing inequalities, exposing vulnerabilities in social, political and economic systems which are in turn amplifying the impacts of the pandemic.

The Silent Pandemic

Globally, violence against women affects one in three women. Closer home, the National Family Health Survey-4 (2015-16) (NFHS-4) suggests that

- 30 per cent women in India in the age group of 15-49 have experienced physical violence since the age of 15.
- 6 per cent women in the same age group have experienced sexual violence at least once in their lifetime.
- About 31 per cent of married women have experienced physical, sexual or emotional violence by their spouses.

What is the experience with regard to gender during crisis?

- **Vulnerability to deaths:** Women lack many life skills such as swimming and climbing
- **Gender insensitive Temporary facilities:** Women face hygiene challenges in shelter camps set up post-calamities
- **Difficulties in Post-crisis rehabilitation:** Slowdown leaves women with additional wage cuts post crisis especially when pay disparity between genders is a norm.
- **Loss of livelihoods:** Women are also engaged in post-calamity care, missing job opportunities.

Impact of lockdown on domestic violence in India

In India, the National Commission of Women has recorded 291 complaints of domestic violence in March and is now only receiving complaints via email.

- **Increased Disease vulnerability:** According to WHO around 70% of the world's health workers are women, 79% of nurses are women.
- **Attack on women workers:** There are incidents where ASHA workers, who work at the ground level in tracing & tracking epidemic spread, are attacked while on COVID-19 duty, primarily due to fake news/rumours
- **Increased instances of sexual abuse & gender violence** during lockdown when men don't have access to alcohol and thus vent out their frustration on women.
- **Entrenchment of Patriarchy:** Even in households where both partners work, during the lockdown, women not only Work from Home but also have additional household work
- **Psychological anxiety:** The fear of job loss and reduced income can create mental pressure on women
- **Culture of silence:** Hormone-induced depression, Premenstrual syndrome (PMS) pregnancy-related depressive conditions, postpartum depression are some of the health issues that gets intensified during lockdown. This is because both men & women are trained to follow the culture of silence regarding these issues.

Measures for Women Safety

- **Sexual Harassment of Women at Workplace (Prevention, Prohibition, Redressal) Act:** The National Commission of Women reviewed the Sexual Harassment of Women at Workplace (Prevention, Prohibition, Redressal) Act where the Commission observed regarding constitution of an Internal Complaints Committee is not adhered by many. The Commission also observed that the definition of sexual harassment at workplace needs to be expanded to include gender-based cybercrimes.
- During the imposition of the nationwide lockdown over coronavirus, the Commission launched a WhatsApp emergency helpline number for reporting cases of domestic violence. The Commission in collaboration with Tata Institute of Social Sciences (TISS) runs a project to empower women and to help women survivors of violence.
- The first step towards making women more comfortable in reporting about the violence against them is to change the mindset of police.
- To address the objective of making police more sensitive towards grievances of women, Commission has been conducting the One Day Gender Sensitisation Workshops across the country for police personnel. The programme aims at bringing behavioral change in police personnel to enable them to act without prejudice and compassion while dealing victims of gender-based crimes and women in general.
- Under the joint collaborative programme of National Legal Services Authority and NCW, women especially belonging to the lower strata of the society are given practical knowledge about the basic legal rights and remedies provided under various women related laws, thereby making them fit to face the challenges in real life situations
- NCW initiated a comprehensive Gender Sensitisation and Legal Awareness Programme in collaboration with Kendriya Vidyalaya Sangathan at Kendriya Vidyalayas, for students of Class 11th and 12th under which a booklet of 'Major Laws Relating to Women', as well as content on 'Gender Sensitisation.

Over the years, women have had to face issues besides the ones commonly shared by humankind and it is to be said that women have fought all their battles valorously. It is our collective responsibility as a

society to ensure equality for women and we must not stop till every woman, no matter which background she comes from can live a free and dignified life.

C. Food for All

Sustainable Development Goal 2 – “End hunger, achieve food security and improved nutrition and promote sustainable agriculture”

Hunger is usually understood to refer to the distress associated with a lack of sufficient calories. In the Global Hunger Index (GHI) Report, hunger refers to the index based on four component indicators, and together, the component indicators reflect deficiencies in calories as well as in micronutrients.

Undernutrition is the result of inadequate intake of food in terms of either quantity or quality, poor utilisation of nutrients due to infections or other illnesses, or a combination of these factors.

Malnutrition refers more broadly to both undernutrition (problems caused by deficiencies) and over nutrition (problems caused by unbalanced diets, such as consuming too many calories in relation to requirements with or without low intake of micronutrient-rich foods).

Computation of Gross Hunger Index (GHI)

First, for each country, values are determined for three dimensions- inadequate food supply, child undernutrition and child mortality rate with indicators of undernourishment for the first dimension, wasting and stunting for the second dimension and 5 mortality rate for the third dimension.

- Undernourishment: the share of the population that is under-nourished (PUN).
- Child Wasting: the share of children under the age of five who are wasted (CWA).
- Child Stunting: the share of children under the age of five who are stunted (CST).
- Child Mortality: the mortality rate of children under the age of five (CM).

Second, each of the four component indicators is given a standardized score on a 100-point scale. Values less than 10 reflect low hunger, values from 20 to 34.9 indicate ‘serious hunger’; values from 35 to 49.9 are ‘alarming’; and values of 50 or more are ‘extremely alarming’.

India’s Global Hunger Index

- India ranked 102nd on the Global Hunger Index, despite high food production.
- Nutritional security requires measures to improve protein and vitamin deficiencies.

Prevalence of Malnutrition in India - Stunting, Wasting and Underweight children

- A number of the most populous states including Bihar, Madhya Pradesh, Rajasthan and Uttar Pradesh had a high (37-42%) stunting prevalence.
- High prevalence of wasting (> 20%) included Madhya Pradesh, West Bengal, Tamil Nadu and Jharkhand

What are the four pillar of food security?

The Food and Agriculture Organisation (FAO) states that the four pillars of food security are

1. Availability
2. Access
3. Stability
4. Utilisation

Despite having reasonable success on the food security front, India has fared poorly on the barometer of nutritional security.

As per the report 'National Food and Nutrition Security Analysis' of World Food Programme (WFP) and the Ministry of Statistics and Programme Implementation, malnutrition amongst children in India is projected to remain high, despite all the progress made in food security, which indicates India has fared poorly on nutritional security.

Food security is defined as the availability and the access of food to all people; whereas nutrition security demands the intake of a wide range of foods which provides the essential needed nutrients. As per 'National Food and Nutrition Security Analysis', Access to nutritious food has not increased due to following reasons.

- Food grain yields have risen 33% over the last two decades, but are still only half of 2030 target yields.
- The consumer's access to rice, wheat and other cereals has not increased at the same rate, due to population growth, inequality, food wastage and losses, and exports.
- As a result, the average per capita consumption of energy among the poorest 30% of the population is 1811 kilocalories, much lower than the norm of 2155 kilocalories per day.

Hence, it is evident that though India has fared well on food security front, it fared poorly on nutritional security front.

Reasons for poor performance on Nutritional security front:

- **Too much emphasis on under nutrition:** For several decades India was dealing with only one form of malnutrition- under nutrition. However, in the last decade, the double burden which includes both over- and under nutrition, is becoming more prominent and poses a new challenge for India.
- **Micronutrient deficiency:** Despite positive trends and patterns in improving food security, the prevalence of malnutrition in India remains high, with many people, especially women and children, suffering from micronutrient deficiency.
- **Performance of States:** In Bihar and Uttar Pradesh the stunting rate is around 48% and 46% respectively. It shows that in these states almost every 2nd child is stunted. Whereas in Kerala and Goa, it is only one in five children.
- **Vulnerable and Marginalised sections:** There are high rates of stunting among children in the poorest wealth quintile is (51.4%), Scheduled Tribes (43.6%) and Scheduled Castes (42.5%), and children born to mothers with no education (51%).
- **Slow decline of child stunting:** Over the last decade, child stunting has reduced at a rate of about 1% per year, the slowest decline among emerging economies. At this rate, 31.4% of children will still be stunted by the 2022 deadline. Almost one in three Indian children under five years will still be stunted by 2022 going by current trends.
- **As per comprehensive 'National Nutrition Survey'** conducted by the Ministry of Health and Family Welfare and the United Nations Children Fund (UNICEF) to measure malnutrition hard evidence of the coexistence of obesity and undernutrition, among school-going children has been recorded in India.
- According to UNICEF, 38% of children younger than five years of age in India are stunted, a manifestation of chronic undernutrition. Stunting and other forms of under-nutrition are thought to be responsible for nearly half of all child deaths globally.
- Also, as per, The State of Food Security and Nutrition in the World 2020, Hundreds of millions of people in India cannot afford a healthy or nutritious diet. Which shows that there is access to food. However, there is less or no access to nutritious food.

- This analysis confirms the fact that the problem of poor nutrition in India is largely on account of the unaffordability of good diets, and not on account of lack of information on nutrition or tastes or cultural preferences. The reasons for non-affordability are different such as a greater number of people in a household, less per capita income, etc.
- Those we officially count as poor in India – with a cut-off that is lower than the international norm of \$1.9 a day – cannot afford a nutrient-adequate diet let alone a healthy diet.
- Also, the Covid-19 pandemic has aggravated this situation as the number of people who cannot afford a healthy diet have risen in the last three months, as employment and incomes collapsed for the majority of workers in the informal sector.

India, currently has the largest number of undernourished people in the world i.e., around 195 million. Nearly 47 million or 4 out of 10 children in India do not meet their full human potential because of chronic undernutrition or stunting. Also, as per the Global Hunger Index, 2020, India was ranked 94th out of 107 qualifying countries. The situation is grim and the country is battling widespread hunger and thereby aggravating the problem of nutritional security.

Measures to address the anomaly of nutritional security vs. food security:

- **Sustainability of nutritious food productivity:** Innovative and low-cost farming technologies, increase in the irrigation coverage and enhancing knowledge of farmers in areas such as appropriate use of land and water should be encouraged to improve the sustainability of food productivity.
- **Redefine poverty line:** The Indian poverty line of 2011-12, as defined by the Tendulkar Committee, amounted to ₹33 per day in urban areas and ₹27 per day in rural areas, and corresponded roughly to \$1 a day at international PPP prices. It needs to be redefined as per Indian needs.
- **Agricultural Diversification:** Farmers should be encouraged and incentivised for agricultural diversification. For this the government could improve policy support for improving agricultural produce of traditional crops in the country. For instance, Rashtriya Krishi Vikas Yojana initiated with objective of making farming a remunerative economic activity through strengthening the farmer's effort, risk mitigation and promoting agri-business entrepreneurship. Major focus is on pre & post-harvest infrastructure, besides promoting agri-entrepreneurship and innovations.
- **NFSA's Life-cycle approach:** It is important to pay attention to the life cycle approach advocated in the National Food Security Act, 2013, particularly the first thousand days in a child's life when the cognitive abilities of the child are shaped. Otherwise, there may be negative effects on nutritional security in the medium to longer term.
- **Improving forward and backward linkages in agriculture:** Storage capacity should be improved to prevent post-harvest losses.
- **Fortification of Food:** The targeting efficiency of all food safety nets should be improved, especially that of the Targeted Public Distribution System (TPDS), to ensure that the poorest are included. It should be complimented by fortified food. For instance, Golden rice variety.
- **Child feeding practices** should be improved in the country, especially at the critical ages when solid foods are introduced to the diet. For instance, Under the Pradhan Mantri Matru Vandana Yojana (PMMVY), Rs.6,000 is transferred directly to the bank accounts of pregnant women for availing better facilities for their delivery.
- **Fortification, diversification and supplementation** may be used as simultaneous strategies to address micro and macronutrient deficiencies.
 - For instance, POSHAN Abhiyaan, launched in 2017-18, aims to reduce stunting, under-nutrition, anaemia and low birth weight babies through synergy and convergence among different programmes, better monitoring and improved community mobilisation.

- Mid-day Meal (MDM) scheme aims to improve nutritional levels among school children which also has a direct and positive impact on enrolment, retention and attendance in schools. However, lacunas in its implementation are observed which needs to be checked. For instance, incidences of mixing large quantity of water with 1 packet of milk powder, also in one of the schools in Uttar Pradesh Salt was provided as a substitute for sabji with Roti.

COVID-19 and Food Security

An invisible crisis is building in the wake of COVID-19. According to a UN report titled The State of Food Security and Nutrition 2020, the pandemic will add 83 – 132 million more people to the total number of undernourished in the world. This is one of the most severe and long-term impacts of the pandemic.

Nationwide lockdowns, extreme weather conditions, altered environment conditions, crop-damaging locust attacks have disturbed food systems. A more significant number of families will be forced to opt for nutrient-low substitutes, resulting in malnourished children and affecting pregnant women and nursing mothers. There is an urgent need for governments and society to address the coming crisis.

- An additional 135 million people could face acute food insecurity in the coming months, and millions more could lose their jobs.
- To recover and build resiliency, we must create new innovative food partnerships.

How did India's food system work during Pandemic?

- During the COVID-19-precipitated lockdown, the FAO, IFAD and the WFP worked in close coordination to support the Government of India's Empowered Group 5 on facilitating supply chain and logistics management, so necessary items such as food and medicines were available.
- Over the past few decades, India has gone from being a net importer to a net exporter of food grains. This strength has been evident through the pandemic.
- During April to June 2020, Central and State governments were able to distribute around 23 million tonnes from India's large domestic food grain reserves through Public Distribution System
- The government also successfully mobilised food rations for 820 million people from April to November 2020, including finding alternate solutions to provide food rations to 90 million schoolchildren.
- During Pandemic's initial days of lockdown, there were efforts to remove bottlenecks in the food supply chain to ensure that agricultural activities weren't disrupted.
- As a result, agriculture grew at 3.4% during the first quarter this financial year and the area cultivated this kharif exceeded 110 million hectares.

Challenges Ahead

- **Labour shortages** may impact the harvest of upcoming produce leading to shortages
- **Shortage of fertilizers**, veterinary medicines and other input could also affect agricultural production.
- **Closures of restaurants** diminishes the demand for fresh produce and fisheries products, impacting small & marginal farmers that has long term consequences on Urban areas
- **Food processing sector** will face difficulties due to shortage of working capital and workers
- Countries adopt **restrictive trade measures** to safeguard their own national food security
- Restricted trade practices will lead serious **disruptions in the world food market** resulting in increased price volatility & price hikes.
- **Low-income food-deficit countries** will be the worst hit in case of restrictive global food markets, thus precipitating humanitarian crisis (hunger deaths)

Initiatives by India

POSHAN Abhiyaan

- **Ministry:** Ministry of Women & Child Development

- **Objective:** To improve nutritional outcomes for children, pregnant women and lactating mothers. **FSSAI's Eat Right India movement** targets to promote safe and healthy food for everyone in an environmentally sustainable way. It is a part of its mandate to provide safe and wholesome food for all citizens. This will improve the food safety ecosystems and lift the hygiene and health of our citizens

Promotion of the production and consumption of nutri-cereals (millets):

- High in dietary fibre, nutri-cereals are a powerhouse of nutrients including iron, folate, calcium, zinc, magnesium, phosphorous, copper, vitamins and antioxidants. They are not only important for the healthy growth and development of children but have also been shown to reduce the risk of heart disease and diabetes in adults.
- Usually grown by small and poor farmers on dry, low-fertile, mountainous, tribal and rain-fed areas, millets are good for the soil, have shorter cultivation cycles and require less cost-intensive cultivation. These unique features make millets suited for and resilient to India's varied agro-climatic conditions. Moreover, unlike rice and wheat, millets are not water or input-intensive, making them a sustainable strategy for addressing climate change and building resilient agri-food systems.
- The three major millet crops currently growing in India are jowar (sorghum), bajra (pearl millet) and ragi (finger millet). Along with that, India grows a rich array of bio-genetically diverse and indigenous varieties of "small millets" like kodo, kutki, chenna and sanwa. Major producers include Rajasthan, Andhra Pradesh, Telangana, Karnataka, Tamil Nadu, Maharashtra, Gujarat and Haryana.

Steps taken by Govt.:

- The government hiked the MSP of nutri-cereals, which came as a big price incentive for farmers.
- Included millets in the public distribution system to provide a steady market
- Running a Rs 600-crore scheme to increase the area, production and yield of nutri-cereals. With a goal to match the cultivation of nutri-cereals with local topography and natural resources, the government is encouraging farmers to align their local cropping patterns to India's diverse 127 agro-climatic zones.
- Setting up nutri-gardens, promoting research on the interlinkages between crop diversity and dietary diversity and running a behaviour change campaign to generate consumer demand for nutri-cereals.

Elimination of trans-fat from the food supply chain

- Aim is to make India free of trans-fat by 2022, a year ahead of WHO's target.
- Present in partially hydrogenated vegetable oils such as vanaspati, shortening and margarine, trans-fat is a major contributor to the rise in non-communicable diseases in India

Investing in nutrition is a fast and smart strategy to drive development, address poverty and protect human rights. The World Bank says that the return of nutritional investments can be as high as 1: 35 – that's a Rs 35 return on every rupee invested in a quality diet. Successful and sustained nutrition initiatives need the collaboration of government agencies, non-governmental organisations, policymakers, schools, civil society, food industry, and media. These partnerships will ensure attain the long-standing goal of zero malnutrition.

D. Multi-Dimensional Poverty Index (MPI)

The Multidimensional Poverty Index was launched by the UNDP and the Oxford Poverty & Human Development Initiative (OPHI) in 2010.

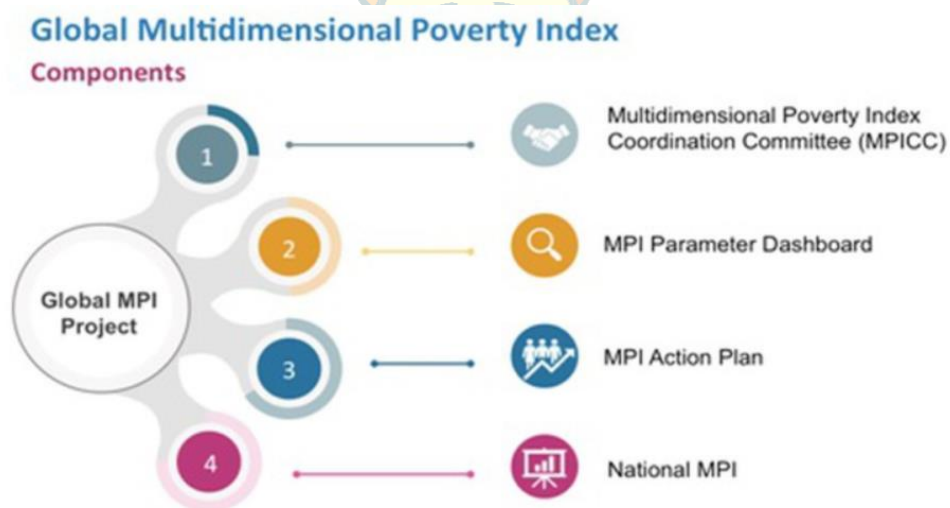
Basic philosophy and significance of MPI: Based on the idea that poverty is not unidimensional (not just depends on income and one individual may lack several basic needs like education, health etc.), rather it is multidimensional.

The MPI measures overlapping deprivations at the household level across the same three dimensions as the Human Development Index (health, education and living standards). The index shows the proportion of poor people and the average number of deprivations each poor person experiences at the same time.

For the estimation of deprivation or poverty from different dimensions, the MPI uses three dimensions and ten indicators. The dimensions and the respective indicators used are:

- **Education:** Years of schooling and child enrollment (1/6 weightage each, total 2/6);
- **Health:** Child mortality and nutrition (1/6 weightage each, total 2/6);
- **Standard of living:** Electricity, flooring, drinking water, sanitation, cooking fuel and assets (1/18 weightage each, total 2/6)

The Global MPI: The Global MPI is part of the government's decision to monitor the performance of the country on 29 select global indices. It is computed by scoring each surveyed household on 10 parameters based on -nutrition, child mortality, years of schooling, school attendance, cooking fuel, sanitation, drinking water, electricity, housing and household assets.



Criticism over MPI

- Multidimensional indicators/measures raise several issues regarding their measurability, aggregation across indicators, and of databases that provide the requisite information at reasonably short intervals.
- In principle, indicators should be independent. Access to safe drinking water, for example, cannot be aggregated with indicators like child mortality.
- One can analyse the progress of non-income indicators like education, health, sanitation, drinking water, child mortality etc. over time with income or consumption poverty.
- But, converting all of them into an index poses several problems.

- Deaton and Dreze (2014) also indicate that “it is important to supplement expenditure-based poverty estimates with other indicators of living standards, relating for instance to nutrition, health, education and the quality of the environment”.
- In the minds of most people, being rich or poor is associated with levels of income. The various non-income indicators of poverty are, in fact, reflections of inadequate income.
- Defining poverty in terms of income or — in the absence of such data — in terms of expenditure, seems more appropriate and it is this method which is followed in most countries.
- Of course, it can be supplemented with non-income indicators but without aggregating them into index.

Impact on human development:

- **Reduced access**– It reduces access to education, healthcare facilities etc.
- **Takes away choice**– Poor cannot live life or get employed as per their choice as must work even in life threatening conditions to sustain their family e.g. death of miners in Talcher coal mine, who were working because of no alternative.
- **Increased mortality**– Lack of nutrition and healthcare results in high mortality among poor.
- **Low awareness**– Poverty reduces the time to gain knowledge and thus impacts the awareness and decision making like voting on rational basis.
- **Social life**– Poverty serves as a modern-day factor for social exclusion because of class based groupings.

Various poverty alleviation measures in India are MGNREGA, National Rural Livelihood Mission, Food Security, Pradhan Mantri Kaushal Vikas Yojana, Ayushman Bharat Programme, PM KISAN, educational scholarships etc.

Two-fold Approach

A two-fold approach is needed to ameliorate poverty.

First, growth is important: Growth can help to reduce poverty in two ways. As growth occurs, it does affect all sections of the society. However, the extent to which the bottom deciles of the population will benefit will depend upon how fast and inclusive the growth is, and thus, composition of growth also matters.

Second, composition of growth: A strong growth also increases the resources available to the public authorities and this will enable them to increase the social sector expenditures. Due to the very fact that the poverty ratio is still high means that growth by itself will not be adequate to reduce poverty. It is necessary to launch specific programmes which work towards directly helping poorer groups and vulnerable sections.

A comprehensive Social Protection System

When social protection schemes were created in India after Independence, most of the country was reeling from famine, de-industrialisation and multiple deprivations. Half the population was chronically poor, the country had an aggregate food deficit, financial and banking networks were underdeveloped, growth rates were weak, and technology available for program administration was rudimentary. Therefore, India’s policymakers focussed almost exclusively on anti-poverty, protective instruments. But that India no longer exists, and the country’s social protection system needs to evolve and catch up with the needs of its new demography and risk profile.

A comprehensive social protection system requires three types of instruments to work together.

1. First, promotional instruments invest in the ability of families to survive shocks on their own — by enhancing productivity, access to job opportunities and incomes through human capital infrastructure, wage legislation, labour policies, skills training and livelihood interventions.

2. Second, preventive instruments aim to reduce the impacts of shocks before they occur by enabling households to use their savings from good times to tackle losses in tough times. This is mainly done through social insurance programs.
3. Third, protective instruments mitigate the impacts of shocks after they have occurred through tax-financed redistribution from the non-poor to the poor. These programs would classically be called anti-poverty measures as they target social assistance or safety net programs to the poor or destitute, whether in kind or cash.

It's critical that programs help those vulnerable to poverty to anticipate and manage risks and shocks better, not only attempt to provide aid to relieve deprivations experienced by the poor. Three types of portable tools are needed to prevent the new vulnerable class from falling back into poverty and debt traps — health insurance, social insurance (in case of death, accident and other calamities) and pensions.

- Recent policies have taken steps in the right direction. The boost in crop insurance, new pension plans for the elderly, the rise in contributory pensions for those who have the wherewithal to save, and larger coverage of health insurance programs will help India re-balance its social protection architecture to match the needs of the rising numbers of its vulnerable people.
- However, the need to re-balance the mix of programs between protection and prevention may not require a dramatic change in the current umbrella social protection budget. Given the huge diversity in the economic profile of India's states, a variety of approaches will be called for.
- Effective safety nets can dramatically reduce the number of poor and the likelihood that poverty will be transmitted from one generation to the next. Strengthening their delivery systems is key, while allowing state governments to choose the optimal mix of preventive and protective programs to suit their state's needs within an umbrella social protection budget.
- If insurance coverage is adequate and expands, many families would not need to rely on safety net transfers in the face of old age or health crises which would otherwise push households into long-term poverty and debt traps. Thus, an increased emphasis on interventions that help anticipate risks should be expected, particularly in medium- and high-growth states.

India is no longer a largely chronically poor country but a more unequal and vulnerable country with pockets of deep poverty. India's future shared prosperity will depend to a large extent on how its social protection system evolves and catches up with its diversity and demography.

In News: NITI Aayog at an advanced stage for preparation of a Multidimensional Poverty Index (MPI)

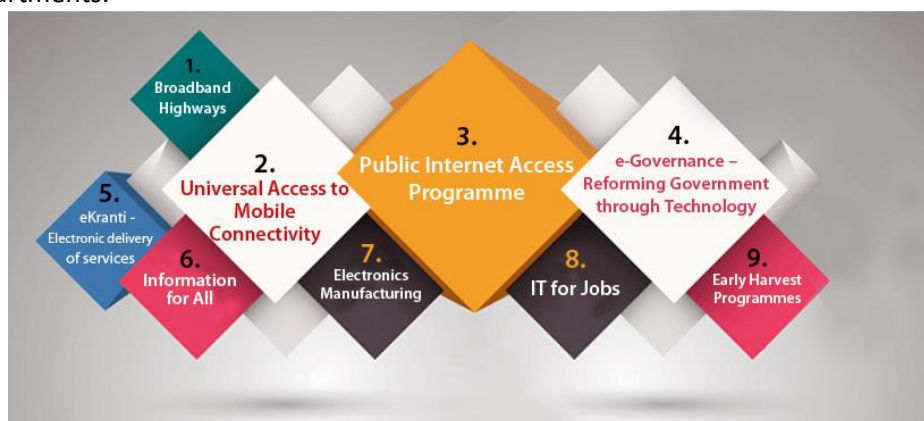
NITI Aayog is at an advanced stage for preparation of a Multidimensional Poverty Index (MPI) parameter dashboard to rank states and Union Territories, along with a State Reform Action Plan (SRAP).

- As the Nodal agency for the MPI, NITI Aayog has constituted a Multidimensional Poverty Index Coordination Committee (MPICC).
- The MPICC, chaired by Ms Sanyukta Samaddar, Adviser (SDG) has members from relevant Line Ministries and Departments.

A. Realising Digital India through its Different Pillars

Digital India is an umbrella programme that covers multiple Government Ministries and Departments. It weaves together a large number of ideas and thoughts into a single, comprehensive vision so that each of them can be implemented as part of a larger goal. Each individual element stands on its own, but is also part of the larger picture.

- Digital India is to be implemented by the entire Government with overall coordination being done by the Department of Electronics and Information Technology (DeitY).
- Digital India aims to provide the much-needed thrust to the nine pillars of growth areas, wherein each of these areas is a complex programme in itself and cuts across multiple Ministries and Departments.



<p>Broadband Highways</p>	<p>This covers three sub components, namely Broadband for All - Rural, Broadband for All - Urban and National Information Infrastructure (NII). Broadband for All – Rural: 2,50,000 village Panchayats would be covered under the National Optical Fibre Network (NOFN) by December 2016. Department of Telecommunications (DoT) is the nodal Department for this project. Broadband for All – Urban: Virtual Network Operators would be leveraged for service delivery and communication infrastructure in new urban developments and buildings would be mandated. National Information Infrastructure (NII): NII would integrate the network and cloud infrastructure in the country to provide high speed connectivity and cloud platform to various government departments up to the panchayat level. These infrastructure components include networks such as State Wide Area Network (SWAN), National Knowledge Network (NKN), National Optical Fibre Network (NOFN), Government User Network (GUN) and the MeghRaj Cloud. NII aims at integrating all ICT infrastructure components such as SWANs, NKN, NOFN, GUN and GI Cloud. It will have provision for horizontal connectivity to 100, 50, 20 and 5 government offices/ service outlets at state, district, block and Panchayat levels respectively. DeitY will be the nodal Department for this project.</p>
<p>Universal Access to Mobile Connectivity</p>	<ul style="list-style-type: none"> • The initiative is to focus on network penetration and fill the gaps in connectivity in the country.

	<ul style="list-style-type: none"> All together 42,300 uncovered villages will be covered for providing universal mobile connectivity in the country. DoT will be the nodal department and project cost will be around Rs 16,000 Cr during FY 2014-18.
<p>Public Internet Access Programme</p>	<ul style="list-style-type: none"> The two sub components of Public Internet Access Programme are Common Service Centres and Post Offices as multi-service centres. Common Service Centres would be strengthened and its number would be increased from approximately 135,000 operational at present to 250,000 i.e. one CSC in each Gram Panchayat. CSCs would be made viable, multi-functional end-points for delivery of government and business services. DeitY would be the nodal department to implement the scheme. A total of 150,000 Post Offices are proposed to be converted into multi service centres. Department of Posts would be the nodal department to implement this scheme.
<p>e-Governance: Reforming Government through Technology</p>	<p>Government Business Process Re-engineering using IT to improve transactions is the most critical for transformation across government and therefore needs to be implemented by all ministries/ departments.</p> <p>The guiding principles for reforming government through technology are:</p> <ul style="list-style-type: none"> Form simplification and field reduction – Forms should be made simple and user friendly and only minimum and necessary information should be collected. Online applications, tracking of their status and interface between departments should be provided. Use of online repositories e.g. school certificates, voter ID cards, etc. should be mandated so that citizens are not required to submit these documents in physical form. Integration of services and platforms, e.g. UIDAI, Payment Gateway, Mobile Platform, Electronic Data Interchange (EDI) etc. should be mandated to facilitate integrated and interoperable service delivery to citizens and businesses. <p>Electronic Databases – all databases and information should be electronic and not manual.</p> <p>Workflow Automation Inside Government – The workflow inside government departments and agencies should be automated to enable efficient government processes and also to allow visibility of these processes to the citizens.</p> <p>Public Grievance Redressal - IT should be used to automate, respond and analyze data to identify and resolve persistent problems. These would be largely process improvements.</p>
<p>e-Kranti - Electronic Delivery of Services</p>	<p>There are 31 Mission Mode Projects under different stages of e-governance project lifecycle. Further, 10 new MMPs have been added to e-Kranti by the Apex Committee on National e-Governance Plan (NeGP) headed by the Cabinet Secretary in its meeting held on 18th March 2014.</p> <p>Technology for Education – e-Education: All Schools will be connected with broadband. Free wifi will be provided in all secondary and higher secondary schools (coverage would be around 250,000 schools). A programme on digital literacy would be taken up at the national level.</p>

	<p>MOOCs –Massive Online Open Courses shall be developed and leveraged for e-Education.</p> <p>Technology for Health – e-Healthcare: E-Healthcare would cover online medical consultation, online medical records, online medicine supply, pan-India exchange for patient information. Pilots shall be undertaken in 2015 and full coverage would be provided in 3 years.</p> <p>Technology for Farmers: This would facilitate farmers to get real time price information, online ordering of inputs and online cash, loan and relief payment with mobile banking.</p> <p>Technology for Security: Mobile based emergency services and disaster related services would be provided to citizens on real time basis so as to take precautionary measures well in time and minimize loss of lives and properties.</p> <p>Technology for Financial Inclusion: Financial Inclusion shall be strengthened using Mobile Banking, Micro-ATM program and CSCs/ Post Offices.</p> <p>Technology for Justice: Interoperable Criminal Justice System shall be strengthened by leveraging e-Courts, e-Police, e-Jails and e-Prosecution.</p> <p>Technology for Planning: National GIS Mission Mode Project would be implemented to facilitate GIS based decision making for project planning, conceptualization, design and development.</p> <p>Technology for Cyber Security: National Cyber Security Co-ordination Center would be set up to ensure safe and secure cyber-space within the country.</p>
<p>Information for All</p>	<ul style="list-style-type: none"> • Open Data platform and online hosting of information & documents would facilitate open and easy access to information for citizens. • Government shall pro-actively engage through social media and web based platforms to inform citizens. MyGov.in has already been launched as a medium to exchange ideas/ suggestions with Government. It will facilitate 2-way communication between citizens and government. • Online messaging to citizens on special occasions/programs would be facilitated through emails and SMSes. • The above would largely utilise existing infrastructure and would need limited additional resources.
<p>Electronics Manufacturing</p>	<p>Target NET ZERO Imports is a striking demonstration of intent. This ambitious goal requires coordinated action on many fronts</p> <ul style="list-style-type: none"> • Taxation, incentives • Economies of scale, eliminate cost disadvantages • Focus areas – Big Ticket Items FABS, Fab-less design, Set top boxes, VSATs, Mobiles, Consumer & Medical Electronics, Smart Energy meters, Smart cards, micro-ATMs • Incubators, clusters • Skill development • Government procurement <p>There are many ongoing programs which will be fine-tuned.</p>

	Existing structures are inadequate to handle this goal and need strengthening.
IT for Jobs	<ul style="list-style-type: none"> • 1 Cr students from smaller towns & villages will be trained for IT sector jobs over 5 years. DeitY would be the nodal department for this scheme. • BPOs would be set up in every north-eastern state to facilitate ICT enabled growth in these states. DeitY would be the nodal department for this scheme. • 3 lakh service delivery agents would be trained as part of skill development to run viable businesses delivering IT services. DeitY would be the nodal department for this scheme. • 5 lakh rural workforce would be trained by the Telecom Service Providers (TSPs) to cater to their own needs. Department of Telecom (DoT) would be the nodal department for this scheme.
Early Harvest Programmes	<p>IT Platform for Messages: A Mass Messaging Application has been developed by DeitY that will cover elected representatives and all Government employees. 1.36 Cr mobiles and 22 Lakh emails are part of the database.</p> <p>Government Greetings to be e-Greetings: Basket of e-Greetings templates have been made available. Crowd sourcing of e-Greetings through MyGov platform has been ensured. E-Greetings portal has been made live on 14th August 2014.</p> <p>Biometric attendance: It will cover all Central Govt. Offices in Delhi and is already operational in DeitY and has been initiated in the Department of Urban Development. On-boarding has also started in other departments.</p> <p>Wi-Fi in All Universities: All universities on the National Knowledge Network (NKN) shall be covered under this scheme. Ministry of HRD is the nodal ministry for implementing this scheme.</p> <p>Secure Email within Government</p> <ul style="list-style-type: none"> • Email would be the primary mode of communication. • Phase-I upgradation for 10 lakh employees has been completed. In Phase II, infrastructure would be further upgraded to cover 50 lakh employees by March 2015 at a cost of Rs 98 Cr. DeitY is the nodal department for this scheme. <p>Standardize Government Email Design: Standardised templates for Government email are under preparation and would be ready by October 2014. This would be implemented by DeitY.</p> <p>Public Wi-fi hotspots: Cities with population of over 1 million and tourist centres would be provided with public wi-fi hotspots to promote digital cities. The scheme would be implemented by DoT and MoUD.</p> <p>School Books to be eBooks: All books shall be converted into eBooks. Min. of HRD/ DeitY would be the nodal agencies for this scheme.</p> <p>SMS based weather information, disaster alerts: SMS based weather information and disaster alerts would be provided. DeitY's Mobile Seva Platform is already ready and available for this purpose. MoES (IMD) / MHA (NDMA) would be the nodal organizations for implementing this scheme.</p> <p>National Portal for Lost & Found children</p>

	<ul style="list-style-type: none"> • This would facilitate real time information gathering and sharing on the lost and found children and would go a long way to check crime and improve timely response. • DeitY/ DoWCD would be the nodal departments for this project
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Technology is key to the vision of a Digital India. Social Media, Mobility, Analytics and Cloud are the foundations that will enable the Digital India visions of providing “governance and services on demand” and “digitally empowering citizens” and support the social inclusion schemes being launched by the government.

To ensure the success of its initiatives in the digital space, the government will have to take steps across multiple functional areas, some of which are outlined below:

- Regulatory framework
- Effective implementation
- Budget constraint
- Bridge the digital divide
- Security and privacy

The limitations involved in the exponential growth of Digital India can be classified into two categories namely Technical and non-technical –

- **Technical Problems:** These are the following some technical problems in reaping the full benefits of service provision under Digital India
 - Technical illiteracy
 - Infrastructure
 - Recognition of applications
 - Security and privacy
 - Authentication
- **Non-technical Problems:** India is a large country which has rural areas population approximately 70% of their total population. These are the following some non-technical problems –
 - Population
 - Services are not accessible easily
 - Lack of awareness in people
 - Implementation Cost
 - Language Dominance

Consequently, Digital India cannot be the only way for citizen empowerment, which can bring government transparency and accountability to citizens, some other ways include:

- **EMPOWER CITIZENS** – Give some authority and power in the decision-making process to citizens closest to the issues, as they can provide insights on funding allocations and cultural issues, and help develop community partnerships.
- **DEVELOP A COMPREHENSIVE COMMUNICATIONS STRATEGY** – For citizen engagement to truly work, government must create a comprehensive communications strategy.
- **PROVIDE INCENTIVES** – For citizen engagement to really work, there needs to be incentives for both citizens and government employees.
- **PROVIDE SUFFICIENT STAFFING, RESOURCES AND SUCCESS METRICS** – Clear goals, objectives and measurements must be identified to track citizen engagement initiatives, and proper staffing and resources must be allocated to the initiative.

- **Multiple citizen** – based approaches to accountability which can interact with and strengthen state-based approaches, going beyond technical, ‘accountancy’ approaches, Involving empowered citizens as monitors and watchdogs of public services.

B. Towards “Sarve Santu Niramaya” – India’s e-Health Revolution

During the Independence Day Speech, PM Modi launched the National Digital Health Mission and said that the initiative which is completely technology based will revolutionise the health sector in India

What is the basic idea of NDHM?

- By Digital Health Infrastructure created by NDHM, instead of ferrying medical records in polythene bags from doctor to doctor, Indians will be able to access their lab reports, x-rays and prescriptions irrespective of where they were generated, and share them with doctors or family members — with consent.

What are the key features of NDHM?

- Six key building blocks or digital systems namely, HealthID, DigiDoctor, Health Facility Registry, Personal Health Records, e-Pharmacy & Telemedicine
- Unique Health ID: Every Indian under the mission would get an ID card containing all relevant information about his/her medical conditions and treatments, tests etc.
- Comprehensive Health Profile: Ranging from doctor appointment to the medication prescribed, medical tests, every bit of detail will be available in the health profile of an individual across public and private healthcare.
- National Health Authority (NHA), the attached office of the Ministry of Health & Family Welfare has been given the mandate to design, build, roll-out and implement the NDHM in the country.
- Encouraging Private Players for promotion of Health Data Analytics & Medical Research
- Private stakeholders will have an equal opportunity to integrate with these building blocks and create their own products for the market.
- However, core activities and verifications, for example, generation of Health ID or approval of a doctor/facility shall remain with the government.
 - Additional components, like Personal Health Record (PHR) and Electronic Medical Record (EMR) solutions can be developed by private players in line with the guidelines that will be issued.

Merits of NDHM

- **Creates Digital Health Ecosystem:** It will reduce the existing gap between various stakeholders such as doctors, hospitals and other healthcare providers by bringing them together and connecting them in an integrated digital health infrastructure.
- **Voluntary Scheme:** The NDHM is a holistic, voluntary healthcare programme. While option of digital Health ID will be there, in case a person does not want Health ID, then also treatment needs to be provided.
- **Data Safeguards:** All products by private participants shall be as per official guidelines taking care of security, privacy and standards of the NDHM ecosystem

- **Improves Healthcare Service Efficiency:** The created Digital Health infrastructure enables users to obtain a longitudinal view of their healthcare records. Electronic Medical Records will increase accountability, improve patient outcomes, and advance evidence-based policymaking.
- **Addresses Healthcare Challenges:** The Digital Health infrastructure greatly reduces the risk of preventable medical errors and significantly increases quality of care.
- **Reduces Information Asymmetry:** The Digital data will empower all Indians with the correct information and sources enabling them to take an informed decision to avail the best possible healthcare.
- **Aligned with International Goals:** NDHM will be a major stride towards achievement of the United Nations Sustainable Development Goal 3.8 of Universal Health Coverage, including financial risk protection
- **Last Mile Connectivity Issue:** The provision of promoting e-pharmacy & Telemedicine will enable people in rural areas access quality healthcare providers.
- **Data Ownership issues addressed:**
 - The health data will reside at individual hospital servers in a federated architecture.
 - Citizen will own his/ her health data and would require consent to share data.
 - All the basic registries of patients/hospital/medical professionals that enable data sharing will be owned by a government entity.

Challenges Ahead

- **Cannot be a Substitution:** Digitalisation is welcome but is no substitute for inadequate human resources and infrastructure in the health sector.
- **Doesn't address core concern of Health care sector:** The real issue in India's health sector is the abject lack of primary health facilities in much of India.
- **Digital awareness** about the utility of the scheme is needed for its successful adoption by beneficiaries so that it eases the process and not
- **To enable seamless data exchange,** all users (pharmacists, laboratories, radiology clinics, insurers and hospitals) must be incentivised to adopt a standard language of communication
- **Prone to digital theft:** Considering that the mission involves government collaboration between hospitals in both public as well as private sectors, laboratories, insurance firms, pharmacies and telemedicine, there is a risk of exposing individual healthcare data to hacking and commercial misuse.
- **Voluntary or involuntary:** Although the NDHM is now a voluntary exercise, like the Aadhaar was at the outset, it could become mandatory for availing government health services. In such a context, ensuring the safety of individual health data becomes paramount. The government must gain the confidence of all stakeholders, including rights groups, before going ahead.
- **Clarity required:** There should be more clarity on questions such as: who will maintain and manage the centralised repository of citizen's health data; who will own the data — the individual or the state; whether individuals can transfer the data between service providers (which is an opaque and cumbersome exercise in the offline world today) and whether the individual has the right to erase irrelevant healthcare data and maintain 'his or her right to be forgotten' — an issue that has raked up a controversy in the European Union.
- Insurance companies should not be allowed to misuse personal data.
- The NDHM must also be in compliance with the global best practices on data privacy, such as the EU's General Data Protection Regulation.

Such centralised data, combined with real-time Big Data analytics, can become a surveillance tool. Considering the way healthcare data from wearable devices are getting mainstreamed, with healthcare

providers, doctors and patients using them for diagnosis, if not for treatment, the NDHM should spell out its stand on collecting such data from individuals and integrating it with the unique health ID.

The country's data protection law — in the works for almost three years — will have to factor in such concerns, arm patients with safeguards. In the coming months and years, the government and the country's legal, IT and medical systems will have to come together to translate the NDHM's patient-centric vision into reality.

Other Initiatives

'Kilkari'—

- Kilkari (Major IT initiative) an **audio-based mobile service**
- Delivers weekly audio messages to families about pregnancy, child birth and child care
- Each pregnant woman and infant's mother need to be registered on Mother and Child Tracking System (MCTS),
- Web-enabled name-based system to monitor and ensure delivery of full spectrum of services to all pregnant women and children,
- Receive weekly voice messages relevant to the stage of pregnancy or age of the infant

First phase of implementation: Messages would be sent to the pregnant women and infants' mothers in **six States** in Jharkhand, Odisha, Uttar Pradesh, Uttarakhand, and HPDs of Madhya Pradesh and Rajasthan.

Languages in the first phase: Hindi, English and Odiya languages in the first phase, later expanded to other languages to cover the entire country

Usefulness-

- Messages will empower and educate women and parents to help create a better environment for maternal and child health
- Services will be provided for free to the beneficiaries
- Benefit over 2 crore pregnant women and 2 crore infants, annually

Mobile Academy-

- About 9000,000 ASHAs will be trained using mobile services
- Once registered, ASHAs can access the 240-minute course via their mobile phones
- The course is divided into eleven chapters each containing four lessons and has a quiz at the end of each chapter
- ASHAs successfully completing the course by securing more than minimum prescribed marks will receive a **Certificate** of completion from the Government

Usefulness –

- Enhance their inter-personal skills
- Complete the standardized course at their convenience via Digital bookmarking technology

Revised National TB Control Programme (RNTCP)—

- Toll free number, with a call centre is being started to provide round the clock support for patient counselling and treatment support services
- Call centre will have trained personnel to provide feedback to patients and also link or refer chest symptomatic persons to RNTCP services.
- Initiative being started in the States of **Punjab, Haryana, Chandigarh and Delhi**

Usefulness-

- Callers can give a missed call or call to get complete support for diagnosis, treatment

- Support for the completion of treatment on the national toll free number

M-Cessation–

- IT-enabled tool to help tobacco users quit tobacco
- Built on a helpline concept -register beneficiaries on the basis of a missed call
- The counselling would be done through a two-way SMS process

Hospital Management Information System (HMIS)

- **Developed by:** Indian Railways in coordination with RailTel Corporation Limited.
- **Objective:** To provide a single window of clearance of hospital administration activity such as clinical, diagnostics, pharmacy, examinations, industrial health etc.
- **Other objectives:** (1) Effectively manage all the health facilities & its resources; (2) Monitor performance of hospitals across the administrative channel; (3) Impart quality health care services to its beneficiaries; (4) Improve the patient turn-around time; (5) Generate and maintain EMR (electronic medical records) of all patients
- Presently, 3 Modules of HMIS – Registration, OPD Doctor Desk & Pharmacy – shall be implemented.
- These shall be implemented on trial basis at Central Hospital, Lallaguda and will progressively be implemented across all Health Units over SCR.

Web-based Application – Nikshay: To enable health functionaries at various levels across the country to monitor TB cases in their areas

- Patients receive daily SMSes to ensure they continue their medication.
- The medicines come with a toll free number that is visible only after the medicine has been taken out of the foil pack; patients are required to give the number a missed call.
- Every missed call is tracked, and when there are too many gaps, the patient is traced, often by treatment supervisors who travel to remote areas on bikes that the programme pays for.

eSanjeevani Platform

- It is a national telemedicine service that offers tele-consultations enabling patient to doctor consultations from the confines of their home, as well as doctor to doctor consultations.
- This eSanjeevani platform has enabled two types of telemedicine services viz. Doctor-to-Doctor (eSanjeevani) and Patient-to-Doctor (eSanjeevani OPD) Tele-consultations
- The former is being implemented under the Ayushman Bharat Health and Wellness Centre (AB-HWCs) programme.
- The telemedicine platform is hosting over 40 online OPDs, more than half of these are speciality OPDs which include Gynaecology, Psychiatry, Dermatology, ENT, Ophthalmology, antiretroviral therapy (ART) for the AIDS/HIV patients, Non-Communicable Disease (NCD) etc.

e-AUSHADHI portal for Online Licensing System of AYUSH Medicine

Ministry of State (IC) for AYUSH launched the e-AUSHADHI portal, for online licensing of Ayurveda, Siddha, Unani and Homoeopathy drugs and related matters. Portal is intended for increased transparency, improved information management facility, improved data usability and increased accountability.

- Timelines will be fixed for processing of application through this portal with SMS and e-mail status updates at each step of the process
- This portal will not only aid the licensing authority, manufactures and consumers, as it will provide real time information of the licensed manufactures and their products, cancelled and spurious drugs, contact details of the concerned authority for specific grievances.

Electronic Vaccine Intelligence Network

- The Indian government is using eVIN (Electronic Vaccine Intelligence Network) in association with the United Nations Development Program (UNDP) to identify primary beneficiaries and vaccine distribution networks.
- eVIN is an indigenously developed technology.
- It digitises vaccine stocks and monitors the temperature of the cold chain through a smartphone application.
- The innovative eVIN was first launched across 12 states in 2015 to support better vaccine logistics management at cold chain points.
- eVIN supports the central government's Universal Immunization Programme by providing real-time information on vaccine stocks and flows, and storage temperatures across all cold chain points across states and UTs.

C. Rural e-Governance

E-Governance is the use of IT to improve the ability of the government to address the needs of society. It includes the publishing of policy and program-related information to transact with citizens. It extends beyond the provision of online services and covers the use of IT for strategic planning and reaching the development goals of the government.

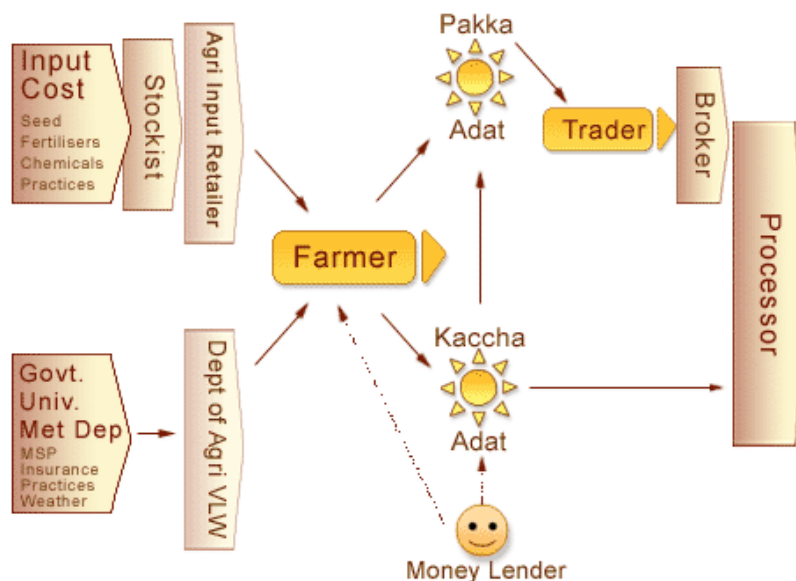
Panchayati Raj Institution (PRI) is a system of rural local self-government in India. Local Self Government is the management of local affairs by such local bodies who have been elected by the local people.

E-governance initiatives changing the face of PRIs in India

E-Governances play a major role in supporting the culture of democracy, democratic processes and civic values that uphold a democratic system. The aim is to: provide for citizens access to information and knowledge about political process, services and available choices, and facilitate transformation of passive information access to active citizen participation by informing, representing, encouraging to vote, consulting and involving citizens.

- **E-Panchayat** – This is a Mission Mode Projects which intends to improve quality of governance in PRIs which includes 0.235 million Gram Panchayats, 6094 Block Panchayats and 633 Zila Panchayats. Further, it also enhances the coordination between Ministry of Panchayati Raj, Government of India and PRIs. The central objective of this project is to ensure local area development and strengthen local self-governance by providing variety of services to its stakeholders.
- **PFMS, e-FMS & Geotagging** – has been stated for bringing transparency & accountability in management of finances available to Panchayat under Fourteenth Finance Commission award.
- **Digital Inclusiveness in Auditing A Success Story** – Good governance practices of e-initiative in the field of audit has revealed effectively the responsiveness and accountability to public money and its usage issues. This has aired the spirit of transparency and inclusiveness with the financial governance agenda. There has been success in e-auditing application by the state of Madhya Pradesh in MGNREGS fund monitoring.
- **KHETI** – The Knowledge Help Extension Technology Initiative – an Information Communication and Technology (ICT) design solution, has been developed under Rural e-Services Project in India (ReSPI). It was an action research project to bridge socio-economic divide digitally with uses of participatory interactive designing methodologies that resulted in a customised solution for so called 'less privileged groups' such as poor farmers.

- **Sevana** is a major software solution developed by Information Kerala Mission (IKM). The Sevana civil registration is utilized to register deaths and births in Panchayats and municipalities. Through these kiosks, deaths and births are registered instantly. Citizen can download birth/death certificates within 24 hours of registration at the kiosk.
- **Sulekha software** was developed to monitor the annual plans of local government institutions in the State. Annual plans are prepared, evaluated and approved in a time bound manner through this software. Sulekha is installed in all local government institutions in the state. In the year 2009-10 Sulekha won the Gold Medal in National Awards for e-Governance by Government of India under the Category “Excellence in Government Process ReEngineering”.
- Bellandur is a small Gram Panchayat of over 10000 inhabitants just outside Bangalore and four surrounding villages. The project exists in an organized way since 1999 and has speeded up processes, reduced the workload, and has set off other developments. Following the computerization of tax collection, the Panchayat has recovered huge outstanding by limiting corruption.
- **Bhoomi (Karnataka government’s initiative):** Online Delivery of Land Records, Bhoomi is a self-sustainable e-Governance project for the computerized delivery of 20 million rural land records to 6.7 million farmers of Karnataka. It helps farmers to **access instant information about the land.**
- **Gyandoot:** of Madhya Pradesh with the twin objective of providing relevant information to the rural population and acting as an interface between the district administration and the people.
- **E-Choupal:** Is a more efficient supply chain aimed at delivering value to its customers around the world on a sustainable basis.
 - The e-Choupal model has been specifically designed to tackle the challenges posed by the unique features of Indian agriculture, characterised by fragmented farms, weak infrastructure and the involvement of numerous intermediaries, among others.
 - 'e-Choupal' also unshackles the potential of Indian farmer who has been trapped in a vicious cycle of low risk-taking ability > low investment > low productivity > weak market orientation > low value addition > low margin > low risk-taking ability.
 - Such a market-led business model can enhance the competitiveness of Indian agriculture and trigger a virtuous cycle of higher productivity, higher incomes, enlarged capacity for farmer risk management, larger investments and higher quality and productivity.
 - Further, a growth in rural incomes will also unleash the latent demand for industrial goods so necessary for the continued growth of the Indian economy. This will create another virtuous cycle propelling the economy into a higher growth trajectory.



Digital divide as an impediment to e-governance initiatives

The Digital Divide, or the digital split, is a social issue referring to the differing amount of information between those who have access to the Internet (especially broadband access) and those who do not have access.

- According to a 2017 global survey by the Pew Research Centre, only one in four Indian adults report using Internet or owning a smartphone.
- About 70 per cent of over one billion Indians lives in rural areas, and only about 400 million have Internet access.

Digital divide as an impediment to e-governance initiatives:

- **Infrastructure accessibility:** without the infrastructure like internet connectivity, broadband connections, the e-governance projects wouldn't reach the entire population. E.g. CSC, DBT schemes would be successful only with internet penetration to every parts of the country.
- **Digital literacy:** low digital literacy would hamper the effective use of e-governance initiatives. E.g. Inability to use the banking applications, Jan Dhan initiative suffer due to subsequent zero balance in opened accounts.
- **Perception level:** Without proper knowledge about technology, there is a scepticism shown by the users making the e-governance initiatives less efficient. E.g. the perception of risk in using internet banking/ATM make many people still preferring withdraw or transfer of funds by visiting a bank branch.
- **Unequal utilisation:** The use of e-governance initiatives is more in Urban areas and hence it further creates a divide in utility of government schemes.
- **Digital divide** results in high dependency of beneficiaries on middlemen and thereby vulnerable to misuse. E.g. theft of login credentials, proxy booking in schemes like PM Ujwala yojana and so on.
- **Misuse:** Digital divide would further the malicious use of technology tarnishing the e-governance initiatives. E.g. Without digital literacy, fake news being circulated in social media platforms couldn't be curbed. The genuine information dissemination through e-governance initiatives suffers.

- **Digital divide** would take away any incentive for improvisation of e-governance initiatives which can happen only when the citizens are aware of the technology and suggest for reforms through feedback. E.g. In spite of citizen charter being introduced 2 decades back, there is hardly any improvement in service delivery as per 2nd ARC report.
- **Lack of digital literacy** will lead to corruption, conning of the vulnerable and without proper knowledge, the grievance redressal suffers thereby further eroding the trust of public in e-governance initiatives.
- Digital divide is detrimental to trade, people to people contact E.g. the benefit of e commerce cannot be realised without internet penetration

To give some examples, cVigil app of election commission would be successful only if there is active participation of public; Soil health card scheme or PM Fasal Bhima Yojana etc., would be more effective only if the farmers are more aware of the technology involved; Citizen charter would be successful only if the clients are aware of how to effectively use it. Thus, without bridging digital divide, e-governance initiatives will only be handicapped.

Measure to address Digital divide:

- **Accessibility:** Digital Infrastructure penetration through initiatives like NOFN, Bharatnet, affordable internet plans, smartphone penetration initiatives etc.,
- **Affordability:** by building comprehensive communication infrastructure, promoting greater market competition in Internet provision and encouraging public-private partnerships in building ICT infrastructure.
- **Digital literacy programmes** like PMGDISHA, Vittiya saksharata yojana and so on making the beneficiaries effective recipients of e-governance initiatives.
- **Library and information centres:** designed and delivered in a way that is understandable to the underprivileged users at different phases.
- **Training** – Making rural population familiar with the use of computer and basic functions. Example – National Science Digital Library: provides cheaper access to science and technology books.
- **Behavioral economics:** Nudge and motivate citizenry to make use of the information and communication technology (ICT) mechanisms. Awareness campaigns, workshops regarding the advantages, benefits of e-governance to overturn the negative perception. E.g. offering discounts on cashless transactions.
- **Cooperative federalism:** working with state governments to bridge the digital divide. E.g. states like UP, Bihar has low digital literacy, states like Odisha, Jharkhand, Chattisgarh has low digital infrastructure. Thus, an area-specific approach is needed.
- **Private sector collaboration:** ppp projects and so on. E.g. community technology skills programme, Youth spark programme of Microsoft; Unnati project of HPCL etc.,
- **Overcoming language barrier:** by integrating multilingual knowledge resources through schemes like Technology Development for Indian Languages.

ICT can benefit only to the extent that people having access to the technology also have the requisite skills and incentive for making optimal use of it. Thus, there is an urgent need to address the issue holistically from digital literacy to the availability of infrastructure which would help in efficient, effective governance and development as well as achieve sustainable development goals.

D. Digitising Indian Agriculture

The relevance of ICT for Agricultural Development in general and for Agricultural empowerment and enablement in particular is extremely high for a country like India. E-agriculture involves the

conceptualization, design, development, evaluation and application of innovative ways to use information and communication technologies in the rural domain, with a primary focus on agriculture.

Empowerment:

- Strengthen and empower farming community: ICT technologies can help for strengthening farming communities through wide networking and collaborations with various institutes, NGO's and private sectors. Further, farmers may enhance their own capacities through updated information and wide exposure to scientific, farming and trade community.
- Empowerment of women: In rural India, the percentage of women who depend on agriculture for their livelihood is as high as 84%. Women make up about 33% of cultivators and about 47% of agricultural labourers, making them an important client for ICT. It is recommended that appropriate digital strategies designed where Women Self Help Groups (like Jeevika in Bihar) can take advantage to enhance their competencies for its utilization.
- Rural development: Safe rural life with equivalent services to those within the urban areas, like provision of distance education, telemedicine, remote public services etc.
- Digitization of Land Records: Maintenance of land records and the availability of easily accessible land information. Some of the initiatives in various states include, Rajasthan: Apna Khata; Chhattisgarh: Bhuiyan; Haryana: Jamabandi; Himachal Pradesh: HimBhoomi; Karnataka: Bhoomi; Kerala; Madhya Pradesh; Odisha: Bhulekh; Uttar Pradesh; Uttarakhand: Dev Bhoomi and West Bengal: Banglar Bhumi

Enablement:

- The timely availability of right information: The timely information and practical solutions of the agricultural problems allows the farmers to adopt good agricultural practices, make better choices of inputs and to plan the cultivation properly. Its proper utilisation is indispensable for agriculture. Ex: Kisan Call Centres, M-Kisan etc.
- Improve farm management and farming technologies: Help farmers carry out economical farm management, risk management considering off-farm factors like environmental impacts, market access, and trade standards with IT based call web support analysis on optimum farm production, disaster management, agro environmental resource management etc., through tools like geographic Information systems (GIS), remote sensing for soil quality assessment.
- Allows detection of animal disease: Management and recovery choices of animal diseases enables the farmers to make quick decisions and safeguard their livestock from further health problems. Ex: National Animal Disease Referral Expert System (NADRES) which is a forewarning animal disease system.

Expansion:

- Facilitate the outreach of agricultural extension system in the country: ICT based initiatives can be taken for propagation of information, transfer of technology, procurement of inputs and selling of outputs in a way so that farmers can be benefitted.
- Widen Market Access: One of the major drawbacks in Indian agriculture is complex distribution channels for marketing of agricultural produce. Farmers do not get acquainted with the updated prices of commodities, proper place for selling their inputs and consumer trends also. ICT has the great potential to widen marketing horizon of farmers directly to the customers or other appropriate users for maximum benefit. This can improve a farmer's source of revenue; empower farmers for making good decisions about appropriate future crops and commodities and marketing channels to sell their produce as well as to get inputs
- Initiate new agricultural and rural business: like e-commerce (Ex: E-choupal, AGMARKNET) realty business for satellite offices, rural business, and virtual corporation of small-scale farms, Agricultural Commodity Trading through NCDEX, NMCE etc.

- NIC, apex body for digital India has a dedicated department for agriculture, which can be used to promote ICT in agriculture by providing cloud services and etc. Further, channelizing things through one gateway will also avoid duplicity of efforts.

Technological empowerment is essential for evergreen revolution and E-agriculture has the potential to put India on the higher pedestal of 'Second Green Revolution' by making Indian agricultural sector self-sufficient. However, digital agricultural interventions need to be pro-poor i.e. technology should be economical and affordable in adoption and implementation.

Precision Agriculture

It is an approach to farm management that uses information technology (IT) to ensure that the crops and soil receive exactly what they need for optimum health and productivity. The inputs are utilised in precise amounts to get increased average yields, compared to traditional cultivation techniques.

- The goal of PA is to ensure profitability, sustainability and protection of the environment.
- PA is also known as satellite agriculture, as-needed farming and site-specific crop management (SSCM).
- Precision agriculture relies upon specialized equipment, software and IT services.
- The approach includes accessing real-time data about the conditions of the crops, soil and ambient air, along with other relevant information such as hyper-local weather predictions, labor costs and equipment availability.

Advantages precision farming

- Helps increase agriculture productivity in sustainable manner
- Prevents soil degradation
- Reduction of chemical application in crop production
- Efficient use of water resources
- Dissemination of modern farm practices to improve quality, quantity and reduced cost of production
- Developing favourable attitudes
- Precision farming changing the socio-economic status of farmers

Precision farming in India

- Some of the schemes like PMKSY's (Per Drop More Crop) involve Precision Agriculture practices.
- The Indian Council of Agricultural Research (ICAR) and the Indian Agricultural Research Institute (IARI) has formulated a project entitled "SENSAGRI: SENSOR based Smart AGRiculture".
- The major objective is to develop indigenous prototype for drone based crop and soil health monitoring system using hyperspectral remote sensing (HRS) sensors.
- Drone technology is also being used. It has ability for smooth scouting over farm fields, gathering precise information and transmitting the data on real time basis.
- Mobile apps are being used to provide farmers with weather information and provide early warning.

Drawbacks of precision farming

- High cost
- Lack of technical expertise knowledge and technology
- Not applicable or difficult/costly for small land holdings
- Heterogeneity of cropping systems and market imperfections

e-NAM

E-NAM is an online inter-connectivity of e-mandis, aimed at ushering in much needed agriculture marketing reforms to enable farmers to get better price of their produce.

Features:

- A national e-market platform for transparent sale transactions and price discovery initially in regulated markets. Willing States to accordingly enact suitable provisions in their APMC Act for promotion of e-trading by their State Agricultural Marketing Board/APMC.
- Liberal licensing of traders / buyers and commission agents by State authorities without any pre-condition of physical presence or possession of shop /premises in the market yard.
- One license for a trader valid across all markets in the State.
- Harmonisation of quality standards of agricultural produce and provision for assaying (quality testing) infrastructure in every market to enable informed bidding by buyers. Common tradable parameters have so far been developed for 69 commodities.
- Single point levy of market fees, i.e on the first wholesale purchase from the farmer.
- Provision of Soil Testing Laboratories in/ or near the selected mandi to facilitate visiting farmers to access this facility in the mandi itself. M/s. Nagarjuna Fertilizers and Chemicals Ltd. is the Strategic Partner (SP) who is responsible for development, operation and maintenance of the platform. The broad role of the Strategic Partner is comprehensive and includes writing of the software, customizing it to meet the specific requirements of the mandis in the States willing to integrate with NAM and running the platform

NAM addresses these challenges by creating a unified market through online trading platform, both, at State and National level and promotes uniformity, streamlining of procedures across the integrated markets, removes information asymmetry between buyers and sellers and promotes real time price discovery, based on actual demand and supply, promotes transparency in auction process, and access to a nationwide market for the farmer, with prices commensurate with quality of his produce and online payment and availability of better quality produce and at more reasonable prices to the consumer.

Two new features introduced during the pandemic– Warehouse based trading module and FPO Trading module- added on e-NAM platform to reduce the farmer’s need to come to wholesale mandis.

The potential of e-technology in realising the goal of doubling farmers’ income

Agriculture’s importance in India is difficult to overemphasize. It accounts for about 13 percent of the country’s GDP and employs about 45 percent of its workforce. On average, however, the yield in Indian agriculture is 10 to 50 percent lower than in other Asian countries. Digital applications can play a critical role in improving yields — as well as reducing costs and increasing the market value of crops — by making it easier for farmers to obtain finance, optimize agricultural inputs, and increase direct access to markets. Digital applications promise to play a significant role in government’s quest to double farmers’ incomes by 2022.

Potential of e-technology in realizing the goal of doubling farmer’s income: Doubling farmers’ incomes, which include three themes:

A. Enabling digital financing and insurance payouts by facilitating consolidated information, credit scoring models, and yield forecasting models using satellite and weather data.

- **Example:** Digital applications are making crop insurance system faster and more accurate
- **Ministry of Agriculture**
 - Central government launched a Kisan pilot programme in 2015 to see if satellite and drone-based imaging and other geospatial technology could produce timely and accurate crop-yield data. Study is also being conducted to evaluate a remote sensing based index for index-based insurance
 - Pilot study carried out in rice and cotton fields in four districts during the kharif season in Karnataka, Maharashtra, Haryana and Madhya Pradesh. It was also conducted during the

2015–16 rabi season in eight districts in the same states to assess crop yields of rice, wheat, and sorghum

- **Karnataka:** SAMRAKSHANE is an end-to-end e-governance solution to handle crop insurance under Pradhan Mantri Fasal Bima Yojana (PMFBY) programme and the Modified Weather Based Crop Insurance Scheme (MWBCIS)

B. Introducing precision agriculture using data analytics, with an integrated agricultural data platform across all existing and new data sources (such as the 158.7 million Soil Health Cards dispatched). Based on pilots, this initiative could raise farm productivity by 15 to 20 percent.

- **Example:** Real-time agricultural data can help to increase yields and decrease costs
- **Soil Health Card**
 - Ministry of Agriculture launched soil health card in 2015
 - Scheme tests soil samples to encourage judicious use of inputs such as fertilizer
- **mKisan:** Ministry of Agriculture launched mKisan in 2013 to increase the information available to farmers on crucial aspects of farming such as weather & soil health
- **mKRISHI**
 - mKRISHI is a technology platform for Indian farmers
 - Tata Consultancy Services designed it to enable farmers in remote areas to access real-time agricultural information, best practices, and market and weather information
 - The service, started in 2013, plans to reach 2.5 million farmers and generate ~\$150 million in revenue by 2023
- **MyAgriGuru (Mahindra)**
 - Mahindra launched a web/mobile-based digital platform called MyAgriGuru in February 2017 to create an integrated agri-community
 - The app connects experts and farmers and enables exchange of ideas and information to create an empowering agriculture ecosystem in the country
- **Microsoft**
 - Microsoft started a pilot with Hyderabad-based International Crop Research Institute for Semi-Arid Tropics (a UN agency) in 2016 to build a sowing solution to help farmers to predict the right time for sowing crops
 - Microsoft developed a sowing app to conveniently provide sowing information to farmers

C. Implementing online agricultural marketplaces linked to a unified, nationwide market with a set of institutional market facilitators and common assaying and grading standards. Such e-marketplaces could cover 40 to 60 percent of agricultural produce sold in India, leading to 15 percent farmers' price gains, as demonstrated by pilots. Together, these changes could add \$50 billion to \$70 billion of economic value in 2025.

Example: Technology is bringing transparency to India's agricultural markets

- **Karnataka Government and NCDEX Spot Exchange:** The Karnataka state government and the National Commodity and Derivatives Exchange (NCDEX) started Rashtriya e-Market Services to encourage competition in agricultural markets and help farmers receive better prices for their crops
- **E-NAM:** Ministry of Agriculture in 2015 launched eNam, the electronic National Agriculture Market, to connect the 7,000 APMC mandis across India to promote transparency in agricultural markets
- **Buyer Seller Platform**
 - Ministry of Agriculture launched Buyer Seller platform / mKisan for farmers to receive local buyer prices over SMS

- Connect farmers with buyers (farmer producer organisations, exporters, traders, and processors)

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