YOJANA AND KURUKSHETRA

Webinar Handout

CONTENT

YOJANA (FEBRUARY 2022) AND KURUKSHETRA (JANUARY 2022)

1. Prioritizing climate-smart agriculture

Context: About 54.6 percent of India's total workforce is engaged in agriculture and allied activities. However, climate change is a real matter of concern to Indian agriculture. Thus, prioritizing climate-smart agriculture is the need of the hour.

What is Climate-Smart Agriculture?
- Climate-smart agriculture (CSA) is an approach for guiding actions to transform agri-food systems towards green and climate-resilient practices.
- It is aimed at tackling three main objectives:
  o To sustainably increase agricultural productivity and incomes;
  o To adapt and build resilience to climate change;
  o To reduce and/or remove greenhouse gas emissions, wherever possible.
- A climate-smart agriculture practice is context-specific, which depends on the local socio-economic environment as well as climate change factors.

Mains Paper

General Studies 1
Syllabus:
- Changes in critical geographical features (including water-bodies and ice-caps) and in flora and fauna and the effects of such changes

General Studies 2
Syllabus:
- Government policies and interventions for development in various sectors and issues arising out of their design and implementation

General Studies 3
Syllabus:
- Major crops cropping patterns in various parts of the country, different types of irrigation and irrigation systems storage, transport and marketing of agricultural produce and issues and related constraints; e-technology in the aid of farmers.
- Conservation, environmental pollution and degradation, environmental impact assessment

Three Pillars of CSA:
- **Productivity:**
  o CSA aims to sustainably raise agricultural productivity and incomes from agricultural and allied activities while balancing concerns relating to the environment. It aims to promote food and nutrition security.
  o A key concept related to raising productivity is sustainable intensification, described as "an approach using innovations to increase productivity on existing agricultural land with positive environmental and social impacts.
- **Adaptation:**
  o CSA aims to reduce the exposure of farmers to short-term risks, while also strengthening their resilience by building their capacity to adapt and prosper in the face of shocks and longer-term stresses.
- **Mitigation:**
  o The minimization of emissions and the maximization of carbon capture is a core concern of CSA. The prevention of deforestation, adoption of sustainable practices, and the management of soils and trees in ways that maximize their potential to act as carbon sinks and absorb carbon from the atmosphere is a part of the mitigation strategy.

Key Government Initiatives on CSA:
- **National Innovations on Climate Resilient Agriculture:** The project, launched in 2011, aims at strategic research on adaptation and mitigation, demonstration of technologies on farmers' fields and creating awareness among farmers and other stakeholders to minimise the impact of climatic change on agriculture.
- **National Mission for Sustainable Agriculture:** It derives its mandate from Sustainable Agriculture Mission which is one of the eight Missions designed under the National Action Plan on Climate Change (NAPCC). It aims at promoting sustainable agriculture by adapting through a series of

measures focusing on key dimensions such as **'Improved Crop Seeds, Livestock and Fish Cultures', and 'Water Use Efficiency'.**

- **National Adaptation Fund for Climate Change:** NAFCC is aimed at supporting concrete adaptation activities trying to mitigate the adverse effects of climate change. National Bank for Agriculture and Rural Development (NABARD) is the National Implementing Entity for NAFCC.
- **Pradhan Mantri Krishi Sinchayee Yojana:** This yojana was formulated for extending the coverage of irrigation with the motto of 'Har **Khet ko pani'** and improving water use efficiency ensuring 'More crop per drop'.
- **Zero Budget Natural Farming and Organic Agriculture:** Zero Budget Natural Farming aims at offering a commercially viable and environmentally friendly alternative to the chemical intensive farming methods.

Way Forward:
- **CSA linked credit:** There should be a provision of providing agricultural finance to farmers who are willing to adopt, or those having adopted CSA techniques. This would help in accelerating the process of adoption.
- **Extension Services:** For proper adoption of CSA, there is a need for consistent, comprehensive, and grassroots extension services for the farmers.
- **Innovation:** Indian agri-startups have been taking initiatives to provide affordable, scalable solutions in the field of soil testing, disaster early warning, and farm management, etc. Thus, holding regular contests with possible procurement tenders for such products by the government can incentivise scientific innovation in the field.

Q1. Which of the following government initiatives promote climate smart agriculture?
1. Zero Budget Natural Farming
2. Pradhan Mantri Krishi Sinchayee Yojana
3. National Adaptation Fund for Climate Change
Which of the above statements is/are correct?
(a) 1 and 2 only
(b) 2 and 3 only
(c) 1 and 3 only
(d) 1, 2 and 3

Answer: (d)

Explanation:

Climate-smart agriculture (CSA) is an approach for guiding actions to transform agri-food systems towards green and climate-resilient practices.

Statement 1 is correct: Zero Budget Natural Farming aims at offering a commercially viable and environmentally friendly alternative to the chemical-intensive farming methods.

Statement 2 is correct: Pradhan Mantri Krishi Sinchayee Yojana was formulated for extending the coverage of irrigation with the motto of 'Har Khet ko pani' and improving water use efficiency ensuring 'More crop per drop'.

Statement 3 is correct: NAFCC is aimed at supporting concrete adaptation activities trying to mitigate the adverse effects of climate change.

Q2. Discuss key aspects of climate-smart agriculture. What are the government initiatives on climate smart agriculture?

(10 Marks, 150 Words)

2. Teach them Young

Context: National education policy has put a special focus on the standardization of quality Early Childhood Care and Education (ECCE) because of its impact on the overall socio-economic landscape in India.

What is ECCE?
- **Early Childhood:** UNESCO defines early childhood as the period from birth to eight years of age, which is a time of remarkable growth with brain development at its peak.
  - During this stage, children are highly influenced by the environment and the people that surround them.
- **Early Childhood Care and Education (ECCE):** According to UNESCO, ECCE is an all-encompassing education programme that aims at the **holistic development of a child's social, emotional, cognitive and physical needs** in order to build a solid and broad foundation for lifelong learning and wellbeing.
  - ECCE is more than just preparation for primary school.

Mains Paper

General Studies 1 Syllabus:
- Population and associated issues,

General Studies 2 Syllabus:
- Government policies and interventions for development in various sectors and issues arising out of their design and implementation
- Issues relating to development and management of Social Sector/Services relating to Health, Education, Human Resources

General Studies 3 Syllabus:
- Indian Economy and issues relating to planning, mobilization of resources, growth, development and employment.

Early Child Care Education in India:
- ECE in India started with the Kothari Commission Report of 1965-66.
- It continued with the Right to Education Act of 2009, which did not recognise education as a fundamental right for children between three to six years.
- Since 1975 the Indian government has been running a massive **Anganwadi network** under its **Integrated Child development services** programme.

Need Of Teaching Them Young:
- India's child population has peaked and 23 to 24 million children are expected to be born every year this decade. This will necessitate an extensive focus on early childhood care.
- The NEP identifies that over 85 percent of a child's brain develops by the age of 6 and emphasizes providing critical importance to appropriate care and stimulation of the brain in a child's early years for healthy brain development and growth.
  - It states that it is, therefore, of utmost importance that every child has access to quality early childhood care and education (ECCE).
- Despite multiple actors and long term efforts of the government, achieving quality ECCE still remains a challenge.

Advantages Of Teaching Them Young:
- **High Return on investment:** According to Nobel laureate James Heckman, investment in early childhood care reaps the highest dividend in terms of human capital formation and ensures quality economic returns.
- **School readiness:** Children will be prepared for the school system and will have better learning outcomes in the later stage of schooling.
- **Better health:** The good health and wellbeing of children will be ensured via interventions like Mid-day meals, hand wash and hygiene education.
- **Better communication abilities:** Children will learn better communication.
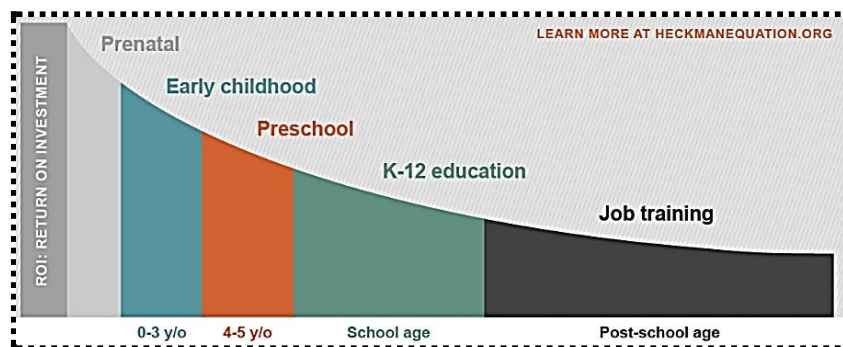
Figure: Economic impact of investment in different stages of education
Source: heckmanequation.org

- According to UNESCO, ECCE has the possibility to nurture caring, capable and responsible future citizens.

NEP 2020 and Early Child Care Education (ECCE):
- NEP 2020, has formally included the ECCE framework in the foundational stage of the National education curriculum as shown below.
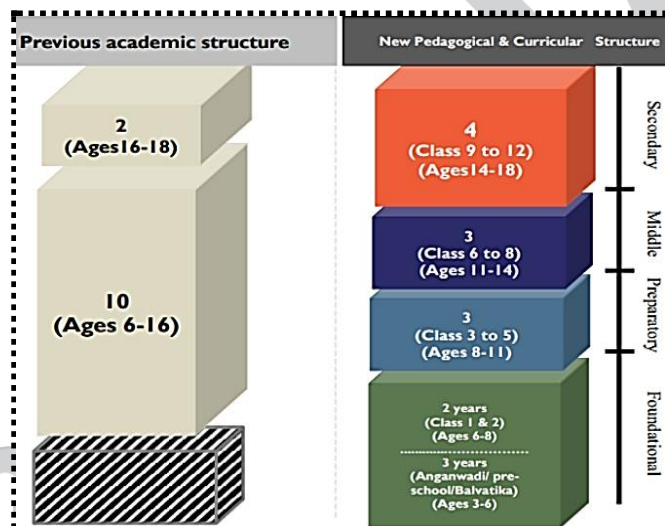

Figure: Revamped structure of education with the inclusion of ECCE in academic structure.
Source: NEP 2020 document

- Following the NEP 2020, detailed guidelines for ECCE have been formulated under a dedicated mission called **National Initiative for proficiency reading with understanding and numeracy (NIPUN) Bharat.**
- **Aim:** According to NEP 2020, the aim of the ECCE will be to attain optimal outcomes in the domains of:
  o Physical and motor development
  o Cognitive development
  o Socio-emotional-ethical development
  o Cultural/artistic development
  o Development of communication and early language, literacy, and numeracy
- NEP 2020 envisages that prior to the age of 5 every child will move to a **"Preparatory Class"** or **"Balvatika"** (that is, before Class 1), which has an ECCE-qualified teacher.

Challenges of ECCE:

- **Heavy lifting:** Large scale investment is required for creating the necessary infrastructure for 2.5 crore children every year for their holistic ECCE.
- **The dismal state of ECCE:** NEP reveals the sorry state of quality ECCE for children, especially for the disadvantaged sections of society. According to the **2019 ASER report 'Early Years',** due to the unpreparedness of children for school, only around 10.7 per cent of children aged 5 years could match pictures beginning with the same sound.
- **Mindset of parents and caregivers:** There is a general mindset among parents and caregivers that their role in early child care ends by sending them to school. This needs to be changed as every moment in early childhood life is a learning moment.
- **Reforming RTE:** No move or indication has been made to modify the RTE act and include ECCE as a fundamental right.
- **Top-down approach:** ECCE implementation framework envisaged centralizing tendencies of the policy. A national-level curricular and pedagogical framework cannot be uniformly implemented as a 'one size fits all' strict framework.
- **Lack of focus on the human resource required for ECCE:** The empowerment of Anganwadi workers/teachers is a neglected area that is in need of much attention and reform.
  o The policy does not provide a very satisfactory or hopeful roadmap for the empowerment of these workers/teachers that can play a major role in ECCE.

Way Forward to Improve ECCE:

- **Need of Flexible Learning**: It gives learners the freedom and choice to learn according to their intelligence, aptitude, talents, and interests and to learn at their own pace.
- There is a need for **institutionalized interventions to involve parents** and caregiving institutions in ECCE.
- **Imparting Multifaceted learning:** It means going beyond the traditional focus and developing 21st-century skills – the 5Cs: communication skills, critical thinking, creativity, collaboration, and character building.
- **Play-based learning**: It makes learning a fun, pleasurable and collaborative experience.
- **Need of Activity-based learning:** It ensures active engagement of learners with concepts and instructional materials.
- **Need of Discovery-based learning:** It encourages learners to inquire into new concepts by building upon their prior knowledge and experiences.

Conclusion: Teaching them young is a prerequisite for the cognitive and physical health of a child's life and socio-economic development of India and will need effective implementation of the NEP 2020 and NIPUN Bharat mission's vision.

Q1. According to National Education Policy 2020, the aim of Early Childhood Care and Education is to attain optimal outcomes in which of the following domains?
1. Physical and motor development
2. Cognitive development
3. Socio-emotional-ethical development
4. Cultural/artistic development
5. Development of communication
6. Early language learning
Select the correct answer using the codes given below:
(a) 1, 2, 4, 5 and 6 only
(b) 2, 3, and 4 only
(c) 1, 2, 3, 4, 5 and 6
(d) 3, 5 and 6 only

Answer: (c)

Explanation:

According to NEP 2020, the aim of the ECCE will be to attain optimal outcomes in the domains of:
* Physical and motor development
* Cognitive development
* Socio-emotional-ethical development
* Cultural/artistic development
* Development of communication and **early language**, literacy, and numeracy

Q2. Discuss the need and advantages of Early childhood care and education (ECCE) in India.

(10 Marks, 150 Words)

3. Reinventing Teacher's Education

Context: The National Education Policy recognises and identifies teachers and faculty as the crucial component of the learning process. Teacher education is vital for the development of multidisciplinary perspectives and knowledge among students.

Teacher Education: According to the National Council for Teacher Education, teacher education is a programme of education, research and training of persons to teach from pre-primary to higher education level.

Mains Paper

General Studies 2
Syllabus:
- Government policies and interventions for development in various sectors and issues arising out of their design and implementation
- Issues relating to development and management of Social Sector/Services relating to Health, Education, Human Resources

National Education Policy:
- The National Education Policy was submitted by the Kasturirangan Committee. The policy seeks to address the following challenges facing the existing education system:
  - Quality
  - Affordability
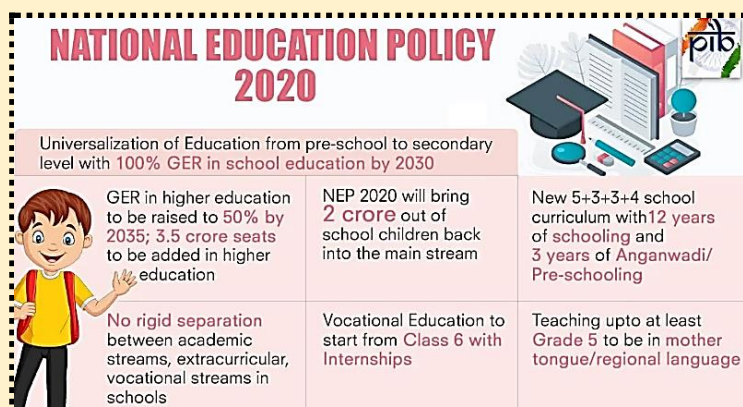 - Equity
  - Access
  - Accountability

Figure: National Education Policy 2020
Source: OpIndia

- The policy provides for reforms in the education system at all levels of education from school to higher education.
- It aims to increase the focus on strengthening teacher training, reforming the existing exam system, early childhood care and restructuring the regulatory framework of education.
- Other objectives of the NEP include:
  - Increasing public investment in education,
  - Setting up NEC (National Education Commission),
  - Increasing focus on vocational and adult education,
  - Strengthening the use of technology, etc.

Need for Reinventing Teacher Education:
- **21st Century Skills:** In order to develop 21st-century skills like critical thinking – it is important for educators to develop skills like analysis, evaluation skills.
- **Skills for Students:** There is a need to imbibe skills amongst students like communication, creativity, critical thinking and collaboration which we value as 21st-century skills.
- **Going beyond Textbook:** Students now do not rely solely on textbook information for their learning and they are far more aware. So, the educator here needs to go beyond the textbook.
- **Professionalism:** Educators need to command more respect by bringing in more professionalism in the way they deal with students and parents, control and manage the classroom environment.

Challenges in Teacher's Education:
- **Lack of usage of science and technology:** The educational programmes for teachers or teacher education have not made full use of the latest technologies for developing teaching skills among students.
- **Lack of control over Institutions:** The teacher education institutions are so drastically increasing in number that it becomes difficult to monitor all the institutions. Some of these institutions are compromising quality for the sake of money.
- **Lack of developing life skills:** The main issue is that teacher-education is memory-based i.e. there is no active involvement of students, so there is a lack in the development of life skills among the students, which are essential for all-around development of students.
- **Lack of co-curricular activities:** The co-curricular activities in teacher education are unplanned and not sufficient. Sometimes due to lack of time management these activities are ignored.
- **Problem of teaching practice:** Teaching practice is neither adequate nor properly conducted. Student-teacher does not take the task of teaching practice seriously.

Teachers Education Post National Education Policy-2020:
- The National Policy on Education was prepared to improve the quality of education in the country and was focused on providing education facilities to all the citizens of the nation.
- The new education policy must help recruit the very best and brightest to the entire teaching profession at all levels.

Way Forward:
- **Continuous Professional Development:** Teachers should develop a global context for teaching and learning, and for this NEP recommends Continuous Professional Development (CPD).
  o Continuous development in a phased manner like we recommend for students is always long term and far-reaching.
- **Unbiassed assessment of Teachers:** The General Education Council should be given a free hand to unbiasedly assess the worth of the teachers through the National Professional Standards set for the teachers both in rural areas as well as in urban areas.
- **Widening the scope:** The teachers teaching in schools situated in rural India should be given the same scope to participate in various activities when compared to their urban counterparts.
- **Respect to Teaching:** Teaching still, to many of us, is an alternative profession, so rigorous training needs to be imparted so that we can give our best to the future citizens of the country.

Conclusion: There is a need to transform the entire teaching-learning process of the Bachelor of Education course while keeping the multidisciplinary and integrated approach of the curriculum. One of the main objectives of NEP is to support and nurture teachers through all phases of their tenure.

Q1. Which of the following can be considered as challenges towards teacher's training and education in India?
   1. Lack of usage of science and technology
   2. Unplanned co curricular activities
   3. Memory based teacher's education

Select the correct answer using the codes given below:

(a) 1, 2 and 3
(b) 1 and 2 only
(c) 2 and 3 only
(d) 1 and 3 only

Answer: (a)

Explanation:

According to the National Council for Teacher Education, teacher education is a programme of education, research and training of persons to teach from pre-primary to higher education level.

Statement 1 is correct: The educational programmes for teachers or teacher education have not made full use of the latest technologies for developing teaching skills among students.

Statement 2 is correct: The co-curricular activities in teacher education are unplanned and not sufficient. Sometimes due to lack of time management these activities are ignored.

Statement 3 is correct: The main issue is that teacher-education is memory-based i.e. there is no active involvement of students, so there is a lack in the development of life skills among the students, which are essential for all-around development of students.

Q2. "Teacher's education is the heart of the learning process". In the light of the given statement, discuss the significance as well as the challenges associated with the same.

(15 Marks, 250 Words)

4. Digital Transformation of Indian Agriculture

Context: Due to the rise of technologies like the Internet of things, Data analytics, Remote sensing, Artificial Intelligence and Machine Learning etc., the global agriculture sector is experiencing a rapid transformation. It necessitates the digital transformation of Indian agriculture to reap the benefits that digital agriculture offers.

Mains Paper

General Studies 2 Syllabus:
- Government policies and interventions for development in various sectors and issues arising out of their design and implementation

General Studies 3 Syllabus:
- Indian Economy and issues relating to planning, mobilization of resources, growth, development and employment.

About Digital Agriculture:
- **Definition:** The use of digital technologies and data to drive agricultural operations and choices is referred to as digital agriculture.
  - Examples: Irrigation optimization, soil condition monitoring, yield estimate, livestock monitoring, and insect identification are all examples of digital agriculture.
- **Benefits:** It aids in the efficiency, transparency, productivity, profitability, and social responsibility of the entire agriculture sector.
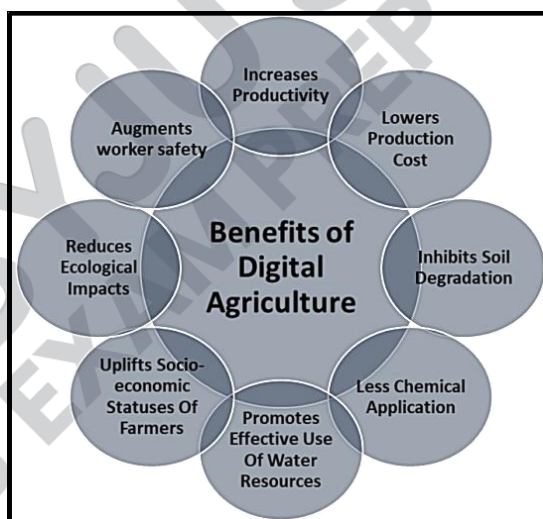

Figure: Benefits of Digital Agriculture

Current Initiatives under Digital Agriculture in India:

Scheme	Description
Digital Agriculture Mission 2021–2025:	The mission supports and accelerates projects based on new technologies, like AI, blockchain, remote sensing and GIS technology and the use of drones and robots.
National e-Governance Plan in Agriculture (NeGPA):	It aims to achieve rapid development in India through the use of Information & Communication Technology (ICT) for timely access to agriculture-related information for the farmers.
National Agriculture Market (eNAM):	This pan-India electronic trading portal aims to create a unified national market for agricultural commodities by linking the existing Agricultural Produce Market Committee (APMC) mandis,
Direct Benefit Transfer (DBT) Central Agri Portal:	It is a unified central portal for agricultural schemes across the country. The portal helps farmers adopt modern farm machineries through government subsidies.
'AgriStack'	It provides end-to-end services across the agriculture food value chain to farmers.
Agricultural Digital Infrastructure (ADI):	The Agricultural Digital Infrastructure (ADI) solution which was developed by Cisco in 2019, aims to enhance farming and knowledge sharing.

Challenges:
- **Affordability:** Only large-scale farms can afford digital farm management systems. Despite the fact that small farms suffer the same issues as large farms, they are unable to invest and may be left behind.
- **The unease of using technologies:** Farmers still have to enter in a lot of information manually because interconnectivity between apps and software isn't always available and information can't always be shared.
- **Lack of internet coverage:** A major difficulty In the field is also a poor internet connection.
- **Lack of participation from the private sector:** Technological transformation cannot succeed without the active participation of private technology partners. But due to over regulation and politicization of the agriculture sector, private participation has been low.

Way Forward:
- **Low-cost technology:** There should be an increased emphasis on low-cost technology to make such technology affordable to small farmers.
- **Use friendly tech:** Technologies should be easier to use in native languages.
- **Portable hardware:** Because most Indian farms are tiny, **plug-and-play hardware** has a better chance of succeeding in the Indian market.

- **Renting and sharing platforms for agricultural equipment and machinery:** Due to limited financial resources and small farm plots, digital platforms that offer equipment renting and sharing services rather than outright purchases are becoming more popular.

Conclusion: Indian agriculture needs rapid modernization to actualise the government's vision of doubling the farmer's income. Digital agriculture offers various benefits in this context and hence is the need of the hour to uplift the condition of Indian agriculture.

Q1. The Government has started a Digital agriculture mission for the period of 2021-2025 for projects based on which of the following new technologies?
1. Artificial intelligence
2. Blockchain
3. Remote sensing
4. Use of drones
5. Use of robots

Select the correct answer using the codes given below:
(a) 1, 2 and 3 only
(b) 3, 4 and 5 only
(c) 4 and 5 only
(d) 1, 2, 3, 4 and 5

Answer: (d)

Explanation:

A Digital agriculture mission has been initiated for 2021 -2025 by the government for projects based on new technologies like artificial intelligence, blockchain, remote sensing and GIS technology, use of drones and robots etc.

Q2. Define digital agriculture. What are the government initiatives for the digital transformation of agriculture? What are the main challenges in digital agriculture?

(15 Marks, 250 Words)

5. Renewable Energy: Transforming the Face of Rural India

Context: Deployment of renewable energy in rural areas has transformed lives of millions of rural dwellers including those living in far-flung areas. In this context, it is worth evaluating the contribution and scope of renewable energy in transforming rural India.

About Renewable Energy: It is the energy which is derived from renewable sources of energy. Renewable sources of energy are those which have the capacity to regenerate in a relatively short span of time. Some examples of renewable energy are Biogas, Bio-Ethanol, Biomass (Wood and wood waste), Solar Power, Wind energy, Geo-thermal energy, Hydro power etc.

Renewable Energy Scenario In India:
- India stands 4th globally in terms of total installed Renewable Energy capacity. India stands 5th in solar power and 4th in wind power installed capacities.
  - The core drivers for the growth and expansion of Renewable Energy in India have been energy security, energy access, increasing power demand and climate change.
- Recently India has crossed the milestone of 100 Gigawatt (GW) installed capacity in renewable energy.
  - India has an **estimated RE potential of about 900 GW** from commercially exploitable sources.
- India is aiming to achieve 40 per cent of installed electric power capacity from non-fossil sources by 2030. India has also enhanced its target to install 450 GW of RE capacity by 2030 to 500 GW under the new climate action commitments announced at the Glasgow COP26.

Mains Paper

General Studies 1
Syllabus:
- Poverty and developmental issues and Social empowerment.
- Distribution of key natural resources across the world including South Asia and the Indian sub-continent

General Studies 2
Syllabus:
- Government policies and interventions for development in various sectors and issues arising out of their design and implementation

General Studies 3
Syllabus:
- Indian Economy and issues relating to planning, mobilization of resources, growth, development and employment.
- Infrastructure: Energy, Ports, Roads, Airports, Railways etc

Renewable Energy in Rural India: Villages in rural India have been using renewable energy for centuries in traditional ways for different purposes e.g. using wind for winnowing, Sun for drying, Biomass for cooking. However in recent times due to government initiatives, modern ways of harnessing renewable energy, in more effective ways, have been deployed in rural India.

- **Biogas and Biomass:**
  - Biogas is the first clean and renewable source of energy that was developed specifically for rural areas.
    - Biogas plants are a reliable source of clean, low-cost and green (environment friendly) fuel for cooking, lighting and fulfilling small power needs of farmers, cattle owners and individual households.
  - **Manure:** Additionally, the digested slurry obtained from the biogas systems is an enriched organic fertiliser with huge potential in Indian agricultural sector.
  - **Income generation:** Notably, apart from reducing the electricity needs and associated costs, the biogas systems can also help increase the income of farmers. The farmers can also **sell out surplus biogas/electricity** to other households in off-grid mode.
  - The Ministry of new and Renewable energy (MNRE) is running a comprehensive **'New National Biogas and Organic Manure Programme' (NNBOMP) for dissemination and deployment of biogas plants in remote, rural, and semi-urban areas of the country**.
  - **Biomass** is another abundant source of clean power in rural areas which is being promoted by MNRE for large scale adoption. **Example**- bagasse cogeneration in sugar mills.

- **Solar Power:**
  - Solar energy/power is the chief renewable energy source driving transformation in rural areas. Solar energy based decentralised and distributed applications have benefitted millions of people in villages by meeting their cooking, lighting and other energy needs in an environment friendly way.
  - **Socio-Economic benefits:** The solar projects also have many social and economic benefits like enhanced employment generation and livelihood opportunities at village level. This has ultimately led to **improvement in standard of living and creation of opportunities** for various economic activities in villages.
  - MNRE runs a comprehensive **Off-grid and Decentralised Solar Photovoltaic (PV) Applications Programme** for deployment of solar street lights, solar study lamps and solar power packs to meet the electricity and lighting needs in rural areas.
  - Government of India has started the **'Pradhan Mantri Kisan Urja Suraksha Evam Utthaan Mahabhiyan (PM-KUSUM)' in 2019** with the objective to provide energy and water security to farmers, enhance farmer's income, reduce use of diesel in the farm sector and reduce environmental pollution.
    - This innovative scheme is one of the largest initiatives of the world to provide clean energy to more than 35 lakh farmers by solarising their agriculture pumps.
- **Small Hydro Power:**
  - MNRE runs a special Small Hydro Power (capacity up to 25 MW) Programme to meet the power requirements of remote and isolated areas in a decentralized manner.

Significance of Renewable Energy in Rural Areas:
- **Improved access to energy:** Deployment of renewable energy in rural areas has impacted and energized the lives of millions of rural dwellers including those living in remote and difficult areas.
- **Support to development:** Renewable Energy can help provide clean energy to various development programmes and it can help improve the quality of life of millions of rural dwellers. Decentralized renewable energy can help India achieve its **Rurbanisation** Vision with low spending.
- **Crisis support:** Amid the current COVID-19 crisis, local renewable energy solutions in villages can generate new livelihoods for internal migrants.
- **Panacea for many problems:** Apart from supporting jobs and entrepreneurship with better power supply, renewable energy has ample potential to address critical issues such as energy poverty, agri-productivity, food security, health and climate variability.
- **Social Empowerment:** The renewable energy projects can also help in enhancing participation of women in education, social and livelihood activities.

Conclusion: Renewable energy has huge potential to transform rural India and bring it to par with urban India. It will help India achieve various sustainable development goals since the majority of Indians live in rural India.

Q1. With reference to renewable energy in India, consider the following statements:
1. Recently India has crossed the milestone of 1000 Gigawatt (GW) installed capacity in renewable energy.
2. India has been aiming to achieve 100 percent of installed electric power capacity from non-fossil sources by 2030.

Which of the above statements is/are correct?
(a) 1 only
(b) 2 only
(c) Both 1 and 2
(d) Neither 1 nor 2

Answer: (d)

Explanation:

India stands 4th globally in terms of total installed Renewable Energy capacity. India stands 5th in solar power and 4th in wind power installed capacities.

Statement 1 is incorrect: Recently India has crossed the milestone of **100 Gigawatt (GW)** installed capacity in renewable energy.

Statement 2 is incorrect: India is aiming to achieve 40 percent of installed electric power capacity from non-fossil sources by 2030.

Q2. Discuss the contribution of renewable energy in transforming the rural India. Also mention the government initiatives for promoting different forms of renewable energy in rural India.

(15 Marks, 250 Words)

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Deloitte Technology Fast 50 India and Fast 500 Asia Award Year 2012, 2013, 2014, 2015, 2016, 2017

EXPRESS IT AWARDS
Express IT Awards for IT newsmaker of the year 2017

DESIGN4INDIA A NASSCOM INITIATIVE
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