WEBINAR HANDOUT

Yojana

GIST OF YOJANA-JANUARY 2020

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GIST OF YOJANA-JANUARY 2020

INDIA AT UNFCCC COP 25

Steps highlighted by India at the summit

- India has **reduced emissions intensity of GDP by 21 percent** and is on track **to achieve the goal of 35% emissions reduction as promised in Paris.**
- India has **leapfrogged from BS IV to BS VI for vehicle emission norms** and from 1 April, 2020, vehicles will be BS VI compliant.
- India has put **carbon tax on coal production at the rate of Dollars 6 per tonne**.
- India is targeting **blending of 20% ethanol in petrol by 2030.**
- India will be **investing about 50 million dollars in water conservation.** India has taken up a target for **restoration of 26 million of degraded land by 2030** during the 14th COP of UN Convention to Combat Desertification in Delhi.
- **100% neem coating of urea fertilizer** is appreciated by the world and 170 million soil health cards are taking care of the soil health, thus creating more carbon sinks.
- India has launched the **Coalition for Disaster Resilient Infrastructure,** which is a partnership to support countries **through knowledge exchange and provide technical support on developing disaster and climate resilient infrastructure.**

Challenges ahead

- Developed world promised 1 trillion dollars in the last 10 years, and **not even 2 percent has materialised.**
- The world that benefited from carbon emissions that made them developed, **must repay.**
- COP 25 is an important step in our collective journey **towards a clean, green and healthy planet**
- India's proposes **to have more joint research and collaboration, grant finance made available** for meeting the targets.

- India along with other developing countries expect that guidelines for **Article 6** will ensure transition of **Clean Development Mechanism under Kyoto Protocol** and **provide the incentives and positive signals to private sector, which had invested in it.**
- India also urged support for the vulnerable communities worldwide with a strong **Warsaw International Mechanism for Loss and Damage with provision for financial support.**

Background of Clean Development Mechanism

- The CDM was **set up as a carbon finance mechanism that developed countries** (referred to as Annex I countries) use to offset their emissions by buying credits, otherwise known as **Certified Emission Reductions (CERs)**, generated from UNFCCC certified green projects in developing countries (referred to as Annex II countries).
- This benefits developed countries as the **cost of abatement is cheaper than it would be if credits were bought from domestic projects.** This also provides developing countries **impetus to set up sustainable projects whilst increasing the number of certified green projects.**

Conclusion

This is the time for ownership and this is the time for responsible action. India has and will continue to do its bit – expecting commensurate multilateral action with developed countries taking the lead.

MITIGATION OF CARBON FOOTPRINT

Context

- Global warming with the burgeoning **anthropogenic greenhouse gas** (GHG) emissions (400 parts per million from 280 ppm CO_2, emissions of pre-industrial era) has been altering the climate, **eroding the ecosystem productivity and sustenance of water**, thus affecting the livelihood of people.

- GHG footprint needs **to be in balance with sequestration of carbon to sustain ecosystem functions.** Forests are the major carbon sink (about 45%) that aid in mitigation global warming.
- The **land use land cover (LULC) dynamics leading to deforestation and land degradation** is the prime driver of global warming due to the **loss of carbon sequestration potential as well as emission.**

ANTHROPOGENIC GREENHOUSE GAS

Emissions of greenhouse gases, greenhouse gas precursors, and aerosols caused by human activities. These activities include the burning of fossil fuels, deforestation, land use changes, livestock production, fertilization, waste management, and industrial processes.

What is the impact of Carbon Footprint?

- Carbon footprint is **contributed by emissions from the energy sector (68%), agriculture (19.6%), industrial processes (6%), LU change (3.8%) and forestry (1.9%)**, respectively in India with CO_2, emission of about 3.1 MGg (2017) and the per capita CO_2 emission of 2.56 metric tonnes.

What is Carbon FootPrint

- A carbon footprint is the **amount of greenhouse gases—primarily carbon dioxide—released into the atmosphere by a particular human activity.**
- A carbon footprint **can be a broad measure or be applied to the actions of an individual, a family, an event, an organization, or even an entire nation.**
- It is **usually measured as tons of CO_2 emitted per year,** a number that can be supplemented by tons of CO_2-equivalent gases, **including methane, nitrous oxide, and other greenhouse gases.**

- India has **committed at the Paris Climate Change Agreement to reduce its emissions by 33-35% by 2030**, which necessitates **immediate implementation of carbon capture** (with afforestation of degraded landscapes with native

species, regulations of LULC change) and **de-carbonisation (**through large-scale implementation of renewable and sustainable energy alternatives).

- To achieve this, stringent norms must be developed towards
  - ❏ **Potential of ecologically fragile regions.**
  - ❏ **Dis-incentives for continued higher emission based on 'polluter pays' principle.**
  - ❏ **Adoption of cluster-based decentralized development approaches.**
  - ❏ **Incentives for reduced emission.**

How is Carbon FootPrint calculated?

- A carbon footprint is calculated **by estimating not just the CO2 emissions that the activity in question causes, but also any emissions of other greenhouse gases** (such as methane and nitrous oxide) and in some cases other types of climate impacts as well, such as vapour trails from aeroplanes.
- For simplicity, all these impacts are added together and expressed as a **single number in terms of carbon dioxide equivalent (CO2e):** the amount of CO2 that would create the same amount of warming.

How water and food security can lead towards sustainable and healthy living?

- **Alternations of landscape structure in the catchment areas influence the hydrological regime** leading to variations in the hydrological status.
- The streams are perennial when its catchment is dominated by vegetation (>60%) of native species. This is mainly **due to infiltration or percolation in the catchment as soil is porous with the presence of native species.**
- Diverse microorganisms interact with plant roots and soil **helps in the transfer of nutrients from the soil to plants and the soil is porous.**
- **Fragmented governance and the deteriorating ecological ethics with the lack of vision among the decision makers** are the principal reasons of deforestation and land degradation.
- **Streams with its catchment dominated native species vegetation (>60%)** have higher soil moisture and groundwater in comparison to the catchment (of seasonal streams) during the dry spell of the year.
- It **facilitates farming of commercial crops with higher economic returns to the farmers**.

- **Sustenance of water in a river ensures the food security in the region** which is dependent on the land use dynamics (forest vegetation cover) in its catchment.

Conclusion

- Catchment integrity **plays a decisive role in sustaining water for societal and ecological need**.It is evident from the occurrence of potential streams in the catchment dominated by native flora, highlighting the riverscape dynamics with the hydrological, ecological, social, and environmental dimensions linkage and water sustainability.
- Recent unfortunate instances of floods and subsequent drought (drying up of water bodies) in Karnataka, Maharashtra, and Kerala **is a pointer towards the mismanagement of forests in the Western Ghat region.**
- Hence, ecologically fragile regions such as Western Ghats **need to be conserved on priority to sustain the agriculture and horticulture in peninsular India.**

KAYAKALP: TRANSFORMING PUBLIC HEALTH FACILITIES

Context

- Kayakalp initiative of the Ministry of Health & Family Welfare began in 2015 with the aim of improving infrastructure upkeep, hygiene and sanitation, and infection control practices in Central Government institutions and public health facilities in all the States and UTs.
- The government's Swachhta Abhiyaan **is bearing fruit across sectors and the impact is visible even in the healthcare sector.**
- Central government-run hospitals of today are **much cleaner, strictly following standard hygiene practices as well as waste management and infection control guidelines,** due to 'Kayakalp' initiative, which has transformed the way public hospitals function in the country.

Major highlights of the scheme

- Health facilities are **assessed and scored on a number of parameters, and every year** the highest-scoring facilities at each level receive recognition though Kayakalp Awards that carry cash, apart from the citation.

- The scheme has **resulted in significant improvement in the level of cleanliness, hygiene, and infection control practices at public healthcare facilities.**
- It has also **inculcated a culture of ongoing assessment and peer review to promote hygiene and sanitation.**
- Kayakalp has not only been able to facelift the public health facilities but has **made significant contributions towards moulding the behavioural practices of the public.**
- The Ministry of Health and Family Welfare has also **used the platforms of Village Health Sanitation and Nutrition Committees under the National Health Mission and Mahila Arogya Samitis** under the NUHM to promote sanitation in vulnerable urban communities.
- MoHFW and Ministry of Jal Shakti started an integrated scheme, the **"Swachh Swasth Sarvatra"** in December 2016. Under the initiatives, **resources have been provided to CHCs located in Open Defecation Free blocks, which are yet to meet Kayakalp criteria.**

- Many States have **adopted innovative practices in making VHSNCs and MAS effective**. Accredited Social Health Activists (ASHs) also work with VHSNCs to mobilise the community for construction and use of toilets
- In 2019, the **country's three best PHCs Under Kayakalp from Andhra Pradesh, Gujarat and Karnataka** were also felicitated by the Ministry of Jal Shakti.
- **Swachh Bharat Mission** has definitely **made an impact in motivating people towards sanitation and housekeeping**. It has fuelled energy in this very important initiative. **AIIMS New Delhi** has taken a lot of innovative **measures towards further improving sanitation and housekeeping.**

Conclusion

- The initiative has been able **to create a ripple of improvement in the public health sector and has been possible because of the collaborative efforts of all States**.
- The overall activities to maintain hygiene have now developed into a habit, sustaining a Kayakalp certification or an **ODF certification has led to people practicing hygiene practices in their daily lives.**

SUSTAINABLE SANITATION IN THE CITIES

Urban Sanitation in India-Stats

- The Census (2011) revealed that **12.6% of households in Urban India were practising Open Defecation.**
- **Only 38% coverage of septic tanks and less than 33% coverage of sewerage network in the country**, more than 70% of the discharge from the toilets, be it from households or from community/public toilets, **were being disposed off in an unsafe manner.**
- A bigger cause of worry was that **75% of fresh water resource used for drinking purposes was contaminated with sewage contributing to 60% of total pollution load.**

The Cost of Poor Sanitation

The Sustainable Development Goals (SDGs) place **significant emphasis on sanitation, cleanliness, and hygiene.**

In addition to the **impact on the communicable diseases**, better sanitation **leads to reduction in occurrence of low birth weight in babies, spontaneous abortions and occurrences of birth defects.**

It has significant impact on social and economic development, particularly in developing countries. For example, an independent study conducted by UNICEF in India in August 2017 established that **every Indian family will save about Rs. 50,000 annually if open defecation is eliminated.**

Road to Sustainable Urban Sanitation

On 2 October, 2019, **Urban India became Open defecation Free** and this feat was achieved in only a short span of five years. MoHUA has been **implementing various missions such as Swachh Bharat Mission (Urban), AMRUT, Smart Cities Mission, NERUDP** – all of which address the issue of urban sanitation.

MoHUA has also **partnered with Google to upload and make available on Google maps all the public and community toilets in cities** so that citizens and visitors are able to easily locate these facilities in their vicinity.

Approach to Scaling Up and Sustaining Urban Sanitation

ODF protocol was launched , a first-of-its-kind initiative in the country where **an independent third party would certify a city as ODF on satisfactorily complying with the protocol requirements**

Despite these efforts, cities faced different challenges in the form of households with space constraints, residents of slum colonies or any floating population respond to nature's call. For this, **ODF+ Protocol was launched with the requirement for third party certification as the ODF protocol.**

The next level of challenges faced was the **faecal sludge being discharged from these toilets,** as most of the faecal sludge was **ending up as open discharge in fields and water bodies**

In order to sustain the sanitation impacts,**ODF++ protocols** were launched **to address the issue of complete faecal sludge management,** which **involved scheduled emptying of septic tanks, safe containment and transportation, and finally safe processing of faecal sludge and septage**

As on date, we have **739 cities already under certified ODF+ and 292 cities certified ODF++.**

Under AMRUT mission, significant progress has been made in **Faecal Sludge management coverage with 637 projects already completed in Sewerage and Septage Management.**

Water Plus protocol has been launched **to ensure that no untreated wastewater is released into the environment or water bodies.**

What needs to be done, in order to have sustainable sanitation in Cities?

- The **issue of maintenance of the community/public toilets needs to be strengthened** further to ensure that the toilets do not fall into disuse.
- Similarly, the **issue of safe containment, transportation and disposal of faecal sludge and septage from toilets**, as also the grey and black water from households and establishment**s need to be strengthened further.**
- There is a **need to institutionalize the concept of Swachhta,** so that the holistic impacts from safe sanitation are achieved in line with our SDG commitments.
- We will now **need to focus on Sustainable Sanitation and Waste Water Treatment.** All these **need to be planned and implemented under the overarching principle of 'Swachhata se Sampannata'.**
- Additionally, an **enabling environment would need to be created through conducive policy support and reforms**, leveraging technology for Mission implementation, robust and real-time, data-driven monitoring supported by 3rd party verifications, capacity building of municipal staff and private sector participation.

Water Management: Building a Resilient Nation-Success Story from Maharashtra

How Maharashtra is Investing in Women's Leadership for Sustainable Development in Water – Stressed Areas

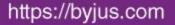**State of Maharashtra prior to this initiative**

Almost 70 per cent of the State's geographical area lies in the semi-arid region, rendering it vulnerable to water scarcity. The plight of people living in these areas has been exacerbated, considering that three of the past five years have been declared as drought years by the government of Maharashtra. As a result of this, the fluctuating agricultural productivity and corresponding fluctuation in incomes have led to an increase in poverty in the area.

UNICEF Maharashtra, in collaboration with the State's Disaster Management, Relief and Rehabilitation Department, carried out a rapid assessment to measure the impact of drought and related consequences and coping mechanisms for communities, especially children and women in the Marathwada region in 2015-16.

It was found that **almost 50 per cent of villages had only one source of water for drinking and other domestic purposes.** 27 per cent of the farmers did not have any water management techniques and during water scarcity, **about 84 percent of families faced irrigation challenges.**

Women were disproportionately affected by scarcity. This increased their burden in terms of household tasks as they need to travel further in order to search for water, fuel and fodder. This has a direct impact on their sanitation, hygiene and nutritional outcomes, which also affect their next generations.

In order to address the problem, **UNICEF along with the government of Maharashtra implemented 'Women-led Water, Sanitation, Hygiene and Resilient Practices Project' or W-SHARP**.

'Women-led Water, Sanitation, Hygiene and Resilient Practices Project' or W-SHARP was implemented in 2018 to test the effectiveness of risk-informed planning driven by local contexts and communities such as those of Marathwada, especially during lean periods, March to June.

W-SHARP targeted women's and vulnerable families' participation as a core aspect of the project.
- The project took an innovative approach by positioning women as key change agents who charged forward in mobilizing their communities, local bodies, and government institutions for shared causes.
- One key outcome of this project was to encourage community participation in local governance and foster partnership with relevant government and civil society institutions.
- This allowed W-SHARP to provide spaces for peer learning exchanges and dialogue fora.

Working of W-SHARP

Women community leaders or 'Arogya Sakhis' were selected and trained by UNICEF and other implementing partners to promote hygiene, water security and climate-resilient agricultural practices in every village.

These community leaders were responsible for engaging with the village people and raising awareness and knowledge on important issues.

The model proved to be effective in terms that it encouraged community participation in local governance and foster partnership with relevant government and civil society institutions. It was also effective in enabling the emergence of women leaders in these villages.

The innovative approach by the Government of Maharashtra has opened up avenues for women empowerment while addressing water scarcity and disaster resilience.

It has ensured that women who suffer the most because of climate change and disasters caused by it, emerge stronger and provide solutions to rescue their community from its catastrophic impacts.

SUBJECTIVE TYPE QUESTION

1. What is Carbon Footprint? How are carbon footprints calculated? What causes carbon footprints?
2. Discuss the various steps highlighted by India at the UNFCCC COP-25 summit?
3. Examine the reasons for failure of the COP25 meeting and the implications of failures of the talks on the planet Earth as well as the developing and small nations?
4. Define Climate Change? Discuss in brief the challenges faced due to climate change effects?
5. 'Why India must have water budgets' Examine
6. What is the difference between Open Defecation + and Open Defecation ++? Why is there a need to have Open Defecation + and Open Defecation ++? What needs to be done, in order to have sustainable sanitation in Cities
7. What is Open Defecation? Discuss UNICEF Initiatives against open defecation in India?