Chhattisgarh State Centre For Climate Change

Quarterly Newsletter

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Message from Editor's Desk.....

Dear Readers,

I am pleased to share the 26th edition of our quarterly newsletter. This issue highlights our recent activities and efforts in tackling climate change. In this quarter, we successfully conducted the Consultative Workshop on the Chhattisgarh Ecorestoration Policy, bringing together experts and stakeholders from various sectors to shape an actionable policy for the sustainable restoration of our ecosystems.

Our team recently visited Kerala and Meghalaya to learn from their impressive work in managing water resources, community conservation, building climate resilience and awareness creation by Climate Learning Lab. The insights we gained will help improve our state's environmental efforts, especially in climate adaptation and protecting biodiversity and spread awareness.

We are also sharing successful initiatives from Chhattisgarh. The Hydro Mechanical Pump Based Lift Irrigation Scheme at Karhani Anicut has significantly increased crop yields for farmers, boosting their income. Meanwhile, the Solar Energy Based Micro-Irrigation Scheme in Bilaspur has helped farmers optimize water usage and enhance their profits. These success stories showcase the positive impact of innovative solutions on local agriculture.

We welcome your feedback and suggestions for upcoming issues of this newsletter.

(Arun Kumar Pandey)
I.F.S.
APCCF and Nodal Officer
Chhattisgarh State Centre for Climate Change
Aranya Bhawan, Nava Raipur

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Workshop on Chhattisgarh Ecorestoration Policy, was held on 31st July 2024

Overview of the Workshop:

The Chhattisgarh State Centre for Climate Change organized a Consultative Workshop on the Chhattisgarh Ecorestoration Policy on 31st July 2024 at the, Aranya Bhawan, Forest Headquarters Nava Raipur. The primary objective of the workshop was to finalize an inclusive and actionable Ecorestoration Policy for the state. Participants from diverse sectors, including Forestry, Mining, Agriculture, Urban Administration, and Environment, took part, sharing their insights and suggestions for the policy.

Welcome Address: The workshop commenced with a welcome address by Shri Arun Kumar Pandey, APCCF & Nodal Officer, Chhattisgarh State Centre for Climate Change. He emphasized the critical need for an Ecorestoration Policy in Chhattisgarh that would not only address the state's environmental challenges but also benefit its various stakeholders. Shri Pandey discussed the relevance of integrating Compensatory Afforestation with conservation efforts and highlighted key findings from a recent Supreme Court report.

Keynote Address: Shri V. Sreenivasa Rao, PCCF & Head of Forest Force, delivered the keynote address. He emphasized the importance of baseline data for the policy formulation process and underscored that the policy should be people-friendly and inclusive. Shri Rao also stressed that the outcomes of the policy should be both measurable and implementable, aligning with existing Acts, Rules, and Guidelines.

Technical Discussions: Several technical sessions followed, featuring presentations from eminent experts in the fields of forestry, agriculture, and urban ecosystems.

- Smt. R. Sangeetha, IAS, Secretary, Department of Housing & Environment, Government of Chhattisgarh, addressed the urban environmental challenges facing the state. She highlighted the urgent need to manage pollutants emitted from various industries and stressed that while funds for environmental management are available, the focus should now be on good planning and quality implementation.

- Shri B. Anand Babu, IFS, discussed the Community Forest Rights and the need for a multi-tiered approach in addressing forest ecosystem challenges.
- Shri Noyal Thomas, IFS (Retd.), Former PCCF of Kerala, in his online presentation, spoke about the Ecorestoration Policy of Kerala and shared valuable lessons for Chhattisgarh. He emphasized objectives like groundwater recharge, carbon sequestration, and providing livelihood opportunities to local communities.
- Shri Jagdeesh Puppala Rao, CEO of Living Landscapes, emphasized the importance of considering Chhattisgarh's Natural History in policy design. He suggested that the state develop its own unique Gross Natural Product (GNP) integrating its ecology, society, and economy.
- Shri Pramod G Krishnan, IFS (APCCF, Kerala), shared the successful elements of Kerala's Ecorestoration Policy, such as phasing out exotic monoculture plantations and promoting urban forestry.

Sectoral Presentations: The workshop was divided into sectoral discussions, including Forest, Agriculture, Urban, Wetland, and Mining ecosystems. Each group, led by subject matter experts, discussed sector-specific challenges and solutions. These included forest degradation, water pollution, soil health, and unsustainable mining practices. The solutions ranged from sustainable grazing, agroforestry, and urban green spaces to efficient waste management and regulatory strategies.

Concluding Remarks: Shri R.K. Singh, IFS (Retd.), emphasized the need for an integrated, participatory approach to policy-making, ensuring the involvement of all stakeholders. The workshop concluded with a commitment to addressing environmental degradation while fostering socio-economic growth.

This workshop marks a significant step towards Chhattisgarh's sustainable development goals and highlights the state's dedication to environmental conservation and restoration.

Unveiling Chhattisgarh's Ecological Richness: A Rare Forest Patch in Bacheli Forest Range

In an impressive ecological discovery, the Forest and Climate Change Department of Chhattisgarh recently identified a unique and ecologically significant forest patch in the Bacheli forest range, located within Dantewada's forest division. This forest, which extends into the Gangalur forest range of Bijapur, hosts ancient plant species and is recognized for its rich biodiversity. Known primarily for its Moist and Dry Deciduous forests (Forest Types 3 and 5), this rare forest patch also includes the subtropical broad-leaved hill forest type, indicating the presence of high-altitude forest ecosystems, potentially the highest in Chhattisgarh.

Situated at an elevation of more than 1,242 meters above sea level, this remarkable forest serves as a "Living Museum," showcasing plant species that date back to Jurassic era. The forest's diverse flora and intricate layers of biodiversity provide insights into ecosystems that have withstood millennia of environmental changes. This rare find not only enriches Chhattisgarh's ecological landscape but also emphasizes the importance of preserving these natural habitats as invaluable environmental resources.

A three-day survey led by Shri Arun Kumar Pandey, APCCF (Development & Planning) and Nodal Officer, CG State Centre for Climate Change and a team of ecologists and forest officials revealed the ecological value of this forest patch. The team included IFS probationers Shri S. Naveen Kumar and Shri Venkatesha M.G., along with renowned scientists such as Dr. Rajendra Prasad Mishra from the Wildlife Trust of India and Shri M.L. Nayak, former Head of the Department of Life Sciences at Pt. Ravi Shankar Shukla University. Their survey documented a wide variety of rare and ancient plant species, highlighting the resilience of these ecosystems in the face of climatic challenges over centuries.

These findings underscore the unique ecological heritage of Chhattisgarh, which serves as a testament to the resilience of nature and the importance of conservation efforts.

Chhattisgarh State Centre for Climate Change Team's Visit to CWRDM, Kozhikode, Kerala

In August 2024, a team from the Chhattisgarh State Centre for Climate Change visited the Centre for Water Resources Development and Management (CWRDM) in Kozhikode, Kerala. The visit focused on Kerala's advancements in climate resilience and water resource management, fostering valuable knowledge-sharing opportunities.

Highlights included the Climate Learning Lab, a 5,000-square-foot interactive space supported by GIZ, featuring digital modules, educational games, and climate-themed displays. The lab's interactive design, including games and a selfie point, aims to enhance public engagement in climate science.

The team also explored the Water Heritage Museum, which highlights traditional water conservation techniques from Kerala, and the Central Instrumentation Laboratory, equipped with advanced tools for testing water quality, biotechnology, and microbiology.

Additionally, visits to the Indian Institute of Spices Research (IISR) and the Malabar Botanical Garden provided further insights. IISR's processing units support value-added spice products, while the 40-acre botanical garden, with its Butterfly Park and Aquatic Plant Conservatory, underscores Kerala's biodiversity conservation efforts.

This visit offered valuable learnings to strengthen Chhattisgarh's climate resilience and water management initiatives, furthering the state's commitment to environmental sustainability.

Chhattisgarh State Centre for Climate Change Team's Visit to Meghalaya

A team from the Chhattisgarh State Centre for Climate Change, including Ms. Shalini Raina, IFS, CCF, HRD; Shri B.P. Singh, Forestry Expert, Retd CCF; and Dr. Devyani Sharma, Program Co-ordinator, visited Meghalaya from August 5-8, 2024. The visit focused on learning from Meghalaya's community-led conservation practices, water management, and climate adaptation efforts, along with exploring the concept of India's first Climate Museum.

During the visit, the team attended a briefing by the Meghalaya Government, introducing them to the state's climate initiatives and the upcoming Climate Museum, which aims to raise awareness on climate issues through interactive exhibits and community engagement. Field visits to Mawkynrew and Mawkyrdep villages demonstrated community-driven approaches to natural resource management, including catchment rejuvenation, soil conservation, and forest management. The team observed the integration of traditional knowledge in these practices, especially within Forest Management Plans (FMPs) for climate resilience.

A major highlight was Meghalaya's unique blend of eco-tourism and conservation, particularly through the planned Climate Museum and the Nonglhyllem Forest Therapy Zone. Discussions on nature-based economies and payment for ecosystem services (PES) models showcased Meghalaya's efforts to create sustainable livelihoods and preserve biodiversity.

This visit offered valuable insights into Meghalaya's leadership in climate adaptation and conservation-based livelihoods, inspiring potential pathways for Chhattisgarh's climate initiatives.

Chhattisgarh's Transport Department: Leading the Fight Against Climate Change

The Transport Department of Chhattisgarh has taken several commendable steps to mitigate the effects of climate change by promoting eco-friendly policies and sustainable transport solutions. As one of the most significant contributors to air pollution, vehicular emissions have long been a focus area for the state, and recent initiatives reflect a strong commitment to reducing their environmental impact.

Automated Testing Stations (ATS)

After Gujarat, Chhattisgarh ranks second in India in operating Automatic Fitness Centers (ATS). To ensure that vehicles plying on the roads are fit and eco-friendly, Automated Testing Stations (ATS) have been established across the state. Out of eight approved locations, seven are already operational in Raipur, Durg, Bilaspur, Ambikapur, Jagdalpur, Korba, and Rajnandgaon, with one more in Raigarh underway. From January 2024 to September 2024, a total of 49,390 vehicles have benefited from these stations, with 24,268 vehicles in Durg, 10,608 in Bilaspur, 7,671 in Korba, 3,740 in Jagdalpur, and 3,103 in Rajnandgaon undergoing fitness checks. These automated stations provide timely and thorough technical fitness checks of vehicles, reducing the reliance on manual inspection methods. This ensures that vehicles meet the required emission standards, reducing pollution and promoting safer, more sustainable transport options.

Registered Vehicle Scrapping Facilities (RVSF)

To address the issue of aging and unfit vehicles that contribute significantly to pollution, the Transport Department has introduced Registered Vehicle Scrapping Facilities (RVSF). These facilities allow vehicle owners to scrap old vehicles and receive tax exemptions when purchasing new ones. This initiative, already operational in Raipur and under development in Jagdalpur, Durg, Bilaspur, and Raigarh, encourages the removal of polluting, outdated vehicles from the roads, thus reducing emissions.

Electric Vehicle (EV) Policy 2022

The Electric Vehicle Policy of 2022 is another ambitious step toward reducing reliance on fossil fuels and curbing pollution. Valid until March 2027, the policy aims to make Chhattisgarh a leader in electric mobility by providing generous subsidies to both electric and hybrid vehicle buyers. Electric vehicle purchasers are eligible for a subsidy of up to ₹1.5 lakh, while hybrid vehicle buyers can receive up to ₹75,000.

So far, over 31,000 electric vehicle buyers have benefited from subsidies totaling **₹55 crore**. The adoption of EVs has more than doubled since the policy was implemented, with registrations increasing from 36,329 to 78,016. Additionally, EV owners enjoy significant tax exemptions, including up to 100% tax relief during the first two years of vehicle registration.

Pollution Control Measures

To control emissions, the department has established 461 Pollution Testing Centers across the state. These centers ensure that vehicles undergo regular emission tests in accordance with the Central Motor Vehicle Rules. With the recent integration of the pollution control system with Vehicle 4.0 and the mParivahan app, the process is now fully online, ensuring real-time updates and transparency. The implementation of these systems has been crucial in reducing vehicular emissions, thus contributing to improved air quality across Chhattisgarh.

In Conclusion

The Chhattisgarh Transport Department is at the forefront of the state's efforts to combat climate change. Through innovative initiatives such as the Electric Vehicle Policy, establishment of Automated Testing Stations, and the introduction of Registered Vehicle Scrapping Facilities, the department is playing a pivotal role in promoting sustainable transport and reducing the carbon footprint of the state's vehicle population. These efforts not only support cleaner air and healthier ecosystems but also reflect the state's commitment to a greener, more sustainable future.

(Source:- Transport Department, Govt of Chhattisgarh)

EK PED MAA KE NAAM

"Special Plantation Drive" in Jaisalmer on 22nd September 2024 .

World Record For:

- **Most saplings planted by a team in one hour.**
- **Most saplings planted by a team of women in one hour.**
- **Largest number of people planting saplings simultaneously at a single venue.**

(Source:- Press Information Bureau, Govt of India)

Success story : Hydro Mechanical Pump Based Lift Irrigation Scheme on Karhani Anicut

Introduction

The Hydro Mechanical Pump Based Lift Irrigation Scheme, designed and developed by the Indian Institute of Technology, Bengaluru, presents an innovative approach to irrigation. This system comprises four main components: a Turbine Pump, a Ram Pump, a Storage Tank, and a Field Channel. Notably, the operation of this system does not rely on electricity or solar energy, making it a sustainable solution for irrigation.

Location

The scheme is implemented at the Karhani Anicut on the Son River, located in Karhani village of the Gorela Pendra Marwahi District in Chhattisgarh. This strategic location harnesses local water resources effectively, providing much-needed irrigation support to the farmers in the region.

Results

The irrigation capacity of this project is designed to cover 100 acres for both Kharif and Rabi seasons and 50 acres for summer crops. A total of 56 farmers from Karhani village have benefitted from this initiative. Prior to the implementation of this scheme, the average crop yield was around 10-15 quintals per acre. However, following the introduction of the hydro-mechanical system, the yield has risen to an impressive 25 quintals per acre. This significant increase has resulted in an enhanced income for the farmers, with earnings rising between ₹31,000 to ₹46,500.

Conclusion

The Hydro Mechanical Pump Based Lift Irrigation Scheme has proven to be a crucial development for the residents of Karhani. It successfully supports crop growth across Kharif, Rabi, and summer seasons. The satisfaction of the officials involved in the construction and operation of this innovative scheme reflects its positive impact on the local agricultural community.

(Source:- Water Resources Department, Govt of Chhattisgarh)

Success story : Solar Energy Based Micro-Irrigation Scheme in Bilaspur District

Introduction

The Solar Energy Based Micro-Irrigation Scheme utilizes the principles of drip irrigation to optimize water usage. This method employs PVC and HDPE pipes of varying diameters and discharge capacities, delivering water directly to the root zones of crops. Key components of the system include a Motor Pump, a Filter Unit, a Fertigation Unit, and a pipeline equipped with drippers and pressure gauges, resulting in high irrigation efficiency.

Location

This micro-irrigation scheme is situated between the villages of Malhar and Manadera in the Masturi Block of Bilaspur District, Chhattisgarh. The location leverages local solar energy, promoting sustainable agricultural practices in the region.

Results

The scheme is designed to irrigate 40 hectares in Malhar and 20 hectares in Manadera. Success stories from the farmers illustrate the scheme's impact:

1. Mr. Navin Agrawal from Malhar invested ₹1.20 lakhs in 2.5 acres of farmland and achieved a profit of approximately ₹1 lakh during the summer crop season of 2023.

2. Mr. Maan Singh from Manadera invested ₹58,000, resulting in a total turnover of ₹1,45,000 and a profit of ₹87,000 in the same season.

Conclusion

The Solar Energy Based Micro-Irrigation Scheme is of utmost importance to the farmers of Malhar and Manadera. The joy expressed by the farmers highlights the scheme's success and its role in raising awareness about efficient farming practices. Even with limited water availability, this innovative approach demonstrates that sustainable and productive agriculture is achievable.

(Source:- Water Resources Department, Govt of Chhattisgarh)

Ek Ped Maa Ke Naam : 80 Crore Seedlings Planted

On the occasion of World Environment Day, Prime Minister Narendra Modi launched the 'Ek Ped Maa Ke Naam' campaign, a unique initiative combining environmental responsibility with a heartfelt tribute to mothers. This campaign was inaugurated on June 5, 2024, with the planting of a Peepal tree by the Prime Minister at Buddha Jayanti Park in Delhi. The essence of 'Ek Ped Maa Ke Naam' is a symbolic gesture—planting a tree in the name of one's mother. This simple act serves a dual purpose: honoring the role of mothers in nurturing life and contributing to the health of the planet. Trees are life-sustaining, and just like a mother, they provide sustenance, protection, and a future for the next generation.

80 Crore Seedlings Planted

The Ministry of Environment, Forest, and Climate Change successfully met its ambitious goal of planting 80 crore seedlings under the 'Ek Ped Maa Ke Naam' campaign by September 2024. The target was achieved on 25th September 2024, 5 days ahead of deadline. This achievement was made possible through collaborative efforts from government agencies, local communities, and various stakeholders.

World Record of planting over 5 lakh saplings

On 22nd September 2024, the 128 Infantry Battalion and Ecological Task Force of the Territorial Army, a unit under the Ministry of Environment, Forest, and Climate Change (MoEF&CC), achieved a remarkable feat by planting over 5 lakh saplings in just one hour. This monumental achievement, carried out under the "Special Plantation Drive" in Jaisalmer, was part of the Prime Minister's campaign, "Ek Ped Maa Ke Naam", and the Territorial Army's outreach initiative, "Bhagidari & Zimmedari", aimed at promoting ecological restoration and raising environmental awareness among local communities.

The Territorial Army unit's efforts were recognized by the World Book of Records, London, with several provisional world records, including:

- **Most saplings planted by a team in one hour.**
- **Most saplings planted by a team of women in one hour.**
- **Largest number of people planting saplings simultaneously at a single venue.**

(Source:- Press Information Bureau, Govt of India)

Head Lines

Unveiling C'garh's ecological richness

A rare forest patch in Bacheli forest range in Dantewada

■ **Staff Reporter**
RAIPUR, Sept 12

IN A remarkable finding, the Forest and Climate Change Department, Chhattisgarh recently identified a rare and ecologically significant forest patch in the Bacheli forest range of Dantewada forest division, extending into the Gangalur forest range of Bijapur. This unique forest, home to several ancient plant species, showcases the state's exceptional biodiversity and deepens the understanding of its ecological wealth.

Situated at an altitude of more than 1,242 meters sea level (MSL), this forest is classified as a subtropical broad-leaved hill forest (Forest Type 8). Notably, this may perhaps be the highest-altitude forest hill in Chhattisgarh.

Additional PCCF Arun Kumar Pandey with other forest officials.

While the state is primarily known for its Moist and Dry Deciduous forests (Forest Types 3 and 5), this recent finding introduces a new ecological dimension. The area is regarded as a 'Living Museum,' preserving plant species that date back to prehistoric times, possibly even to the Dinosaur era. Some plant species identified here are believed to be recorded in Chhattisgarh for the first time.

This discovery underscores the intricate layers of biodiversity that have persisted for millions of years, surviving significant environmental changes. It enriches Chhattisgarh's ecological narrative and serves as a testament to the resilience of nature, preserving life through millennia.

The findings emerged from a three-day survey led by Additional PCCF (Development & Planning) Arun Kumar Pandey alongside a team of ecologists and forest officials. The team included IFS probationers S. Naveen Kumar and Venkatesha M.G., renowned scientists such as Dr Rajendra Prasad Mishra, Deputy Director from the Wildlife Trust of India (WTI), and M.L. Nayak, former Head of the Department (School of Life Sciences) at Pt. Ravi Shankar Shukla University, Raipur. Devyani Sharma and Anurag Gupta from the Forest Department were also part of the team.

During the survey, the team documented an astonishing variety of rare and ancient plant

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