



Bridging Knowledge to Action: Strengthening Stakeholder Capacities for Climate Resilience

Report on Capacity Building Activities for Stakeholders in Peterwar, Bokaro, Jharkhand



Department of Forest, Environment and Climate Change Government of
Jharkhand

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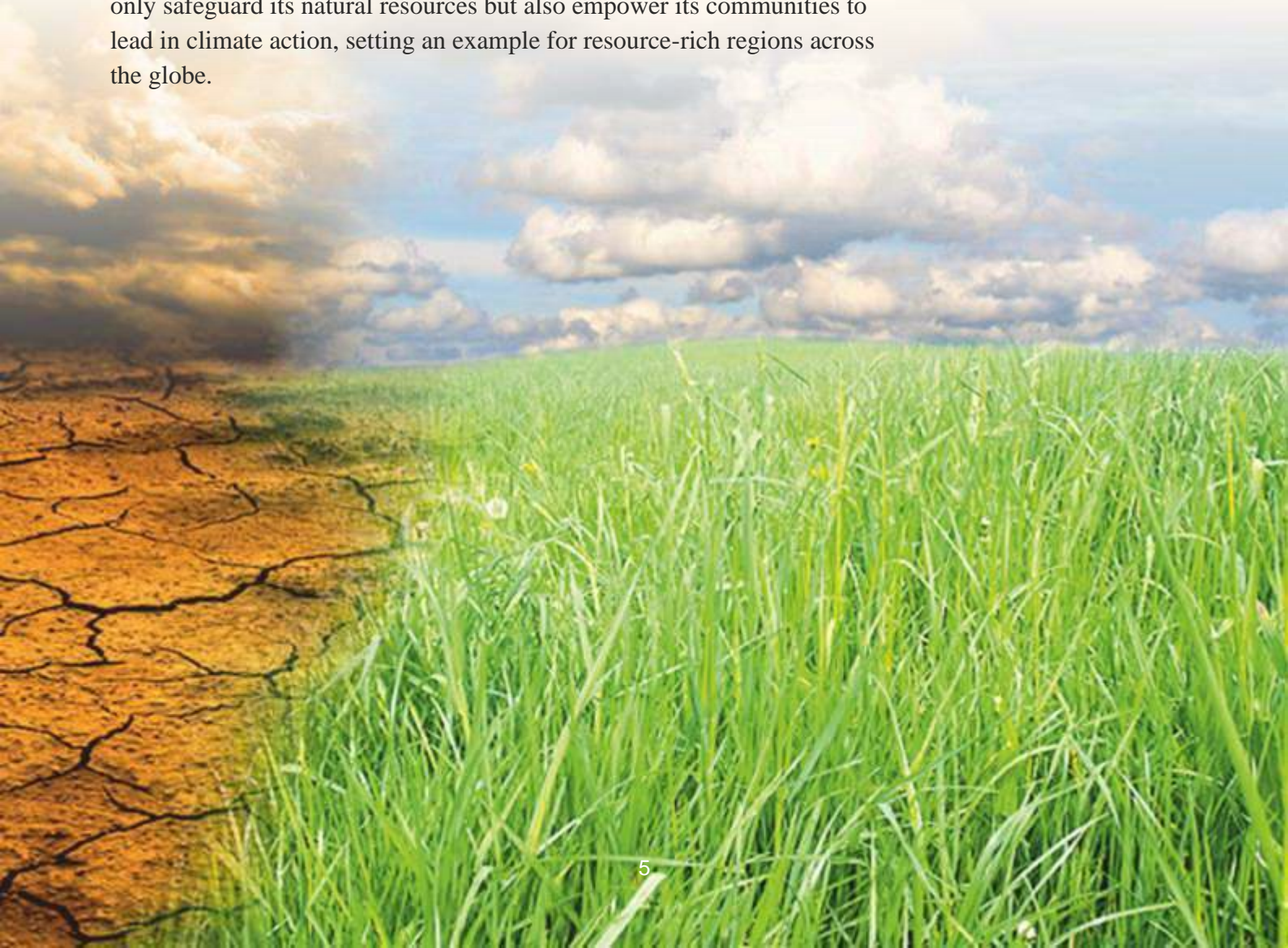
Climate change is one of the most pressing challenges of our time, and addressing its impacts requires collaborative efforts at all levels of governance, particularly in regions vulnerable to climate risks like Jharkhand. As the state moves forward with its climate action initiatives under the National Mission on Strategic Knowledge for Climate Change (NMSKCC), it is crucial to empower multiple stakeholders including local communities and frontline staff with the knowledge and skills necessary for effective climate adaptation. The capacity-building programs conducted in Peterwar, Bokaro have been instrumental in fostering climate resilience by engaging community leaders, forest staff and local villagers in direct climate action. This report highlights the significant strides made through these programs, providing a foundation for continued learning and adaptation. By enhancing the capabilities of these stakeholders, we are ensuring the successful implementation of climate resilience strategies, contributing to a sustainable future for Jharkhand. We are committed to reaching and training all the stakeholders throughout the state in the coming future

Climate Change and Jharkhand: Perspectives from a Resource-Rich State

Jharkhand, a resource-rich state nestled in the heart of India, stands at a critical juncture in addressing the dual challenges of development and climate change. Renowned for its vast reserves of coal, minerals and forests, the state has historically depended on resource extraction for economic growth. However, the changing climate around the globe has also impacted the state significantly, bringing additional challenges. The impacts of climate change, such as rising temperatures, erratic rainfall patterns, prolonged droughts and increasing incidences of extreme weather events, have further amplified vulnerabilities in the state. For a state where a significant portion of the population depends on agriculture, forests and natural resources for their livelihoods, climate change poses a direct threat to food security, economic stability and community well-being.

At the same time, Jharkhand's unique socio-economic and environmental landscape provides an opportunity to pioneer innovative climate resilience strategies. Leveraging local knowledge, fostering sustainable livelihood practices, and integrating community-driven approaches with suitable climate adaptation methods can transform these vulnerabilities into strengths. With a robust framework for capacity building, the state can not only safeguard its natural resources but also empower its communities to lead in climate action, setting an example for resource-rich regions across the globe.

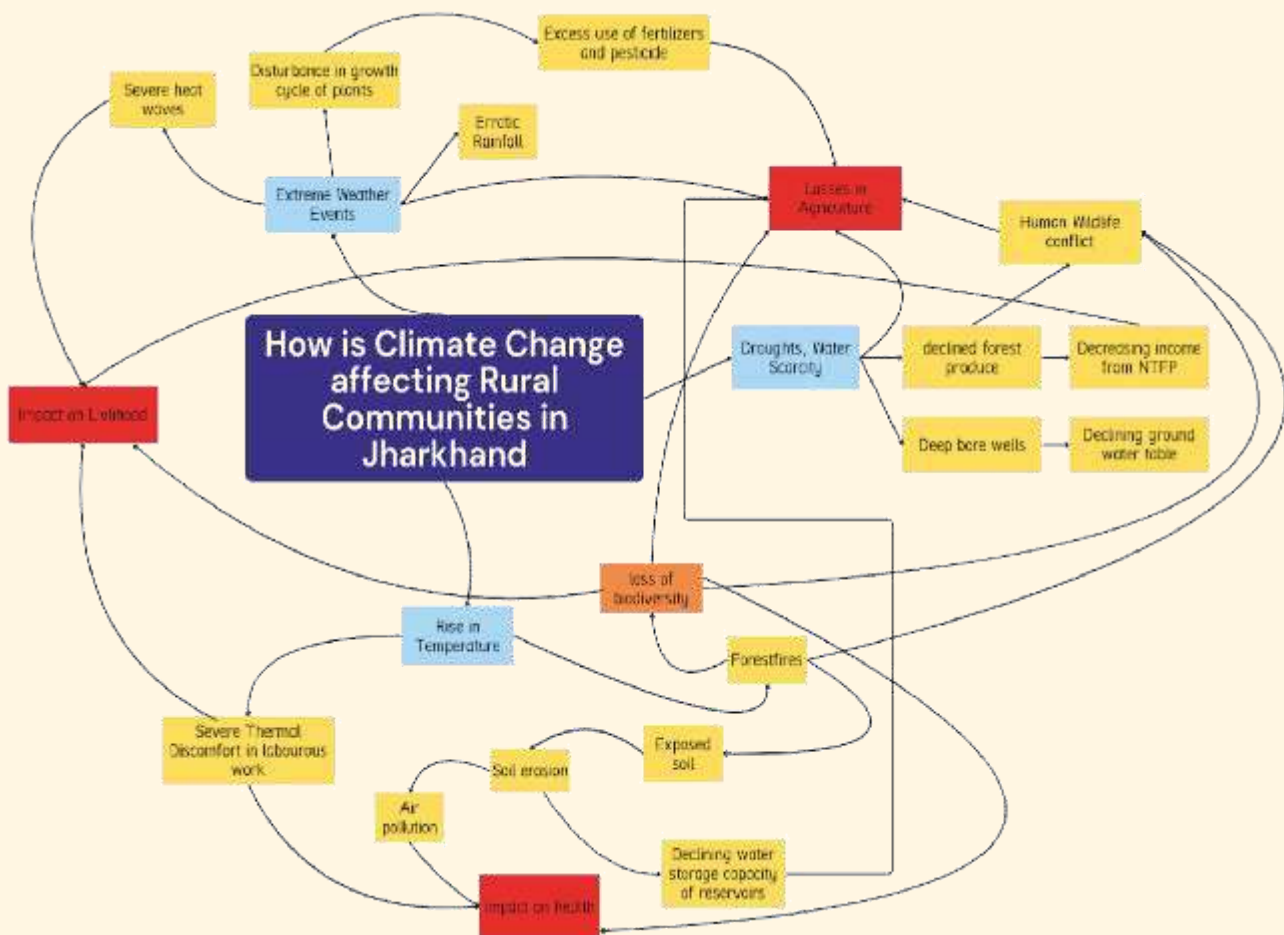
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Climate Vulnerability in Jharkhand: Key Issues in Focus

The diagram showcases the interconnections of climate change impacts on rural communities, emphasizing a chain of cascading effects that exacerbate vulnerabilities. The rise in temperature and erratic rainfall serve as primary drivers, leading to diverse issues such as forest fires, loss of biodiversity, degradation in commons, and human-wildlife conflicts. These environmental changes disrupt plant growth cycles and reduce water availability, creating a ripple effect on agricultural productivity. Biodiversity loss solely has a very large effect on rural communities. Forest produce, native plants and animals form an integral part of rural communities. For instance, the loss of pollinators like bees directly impacts agricultural productivity, while the depletion of forest cover affects livelihoods dependent on forest produce. Moreover, declining biodiversity weakens the resilience of ecosystems to adapt to climatic changes, thereby exacerbating the vulnerability of communities that rely on these resources.



Water scarcity, compounded by practices like deep boring, leads to a declining water table, further aggravating agricultural losses. This, in turn, forces farmers to adopt increased use of pesticides and fertilizers to cope with harsh weather conditions, potentially impacting soil health and sustainability. Losses in agriculture directly translate into financial hardships for rural communities, reducing their

income and resilience. This leads to overexploitation of commons for firewood, fodder, and water.

Simultaneously, extreme weather events contribute to a decline in forest produce and intensify the aforementioned challenges. State like Jharkhand doesn't have many livelihood options, if mining is excluded, forest produce and agriculture are the only livelihood sources and as we can sense from the chart how climate change has multifaceted impacts on these two main livelihood sources, they are most affected by climate change, leaving rural communities grappling with compounded social, economic, and environmental vulnerabilities.

Commons, such as community forests, grazing lands, water bodies and other shared resources, are increasingly under threat from the impacts of climate change. Forests, an integral part of the commons, face deforestation and biodiversity loss, reducing their ability to act as carbon sinks and protect against soil erosion. Water bodies are exploited when the groundwater table declines, this increasing pressure on commons leads to conflict within communities and prevents them from being self-sustaining, making their restoration challenging if they are overexploited.

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Why Jharkhand Needs an Innovative Capacity Building Program Towards Climate Resilience?

Innovative and multi-stakeholder capacity-building activities through training programs, awareness generation and skill development programs are not just a necessity but an opportunity for Jharkhand to transform its resource wealth into a catalyst for climate resilience and inclusive growth.

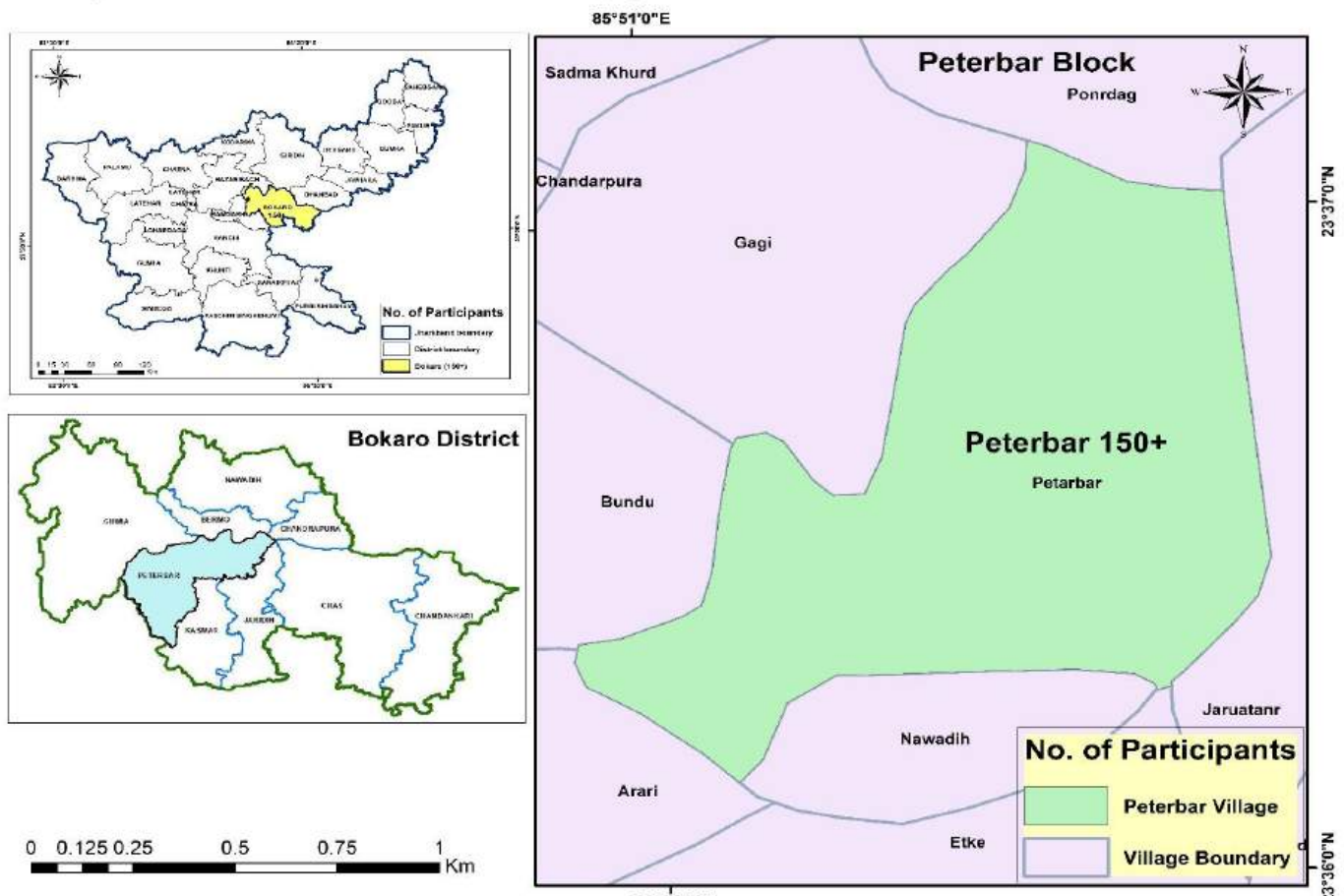
- With a significant portion of its population dependent on agriculture and forests for their livelihoods, the lack of adaptive capacities and sustainable practices leaves communities exposed to climate shocks.
- The intricate link between governance, community participation, and the implementation of climate action plans necessitates targeted interventions.
- By integrating localized knowledge systems, modern adaptation techniques and hands-on training, such initiatives can empower communities to take proactive measures.
- Adopting climate-smart agricultural practices, diversifying livelihoods and strengthening grassroots governance.
- Equipping stakeholders with the tools to assess vulnerabilities and implement resilient solutions will foster a sustainable pathway for development.

Initiatives by the Department of Forest, Environment and Climate Change, Jharkhand under the NMSKCC Project

The Department of Forest, Environment, and Climate Change, Government of Jharkhand, in partnership with multiple grassroots organizations like Asar, SIDHA and PanchSafar, has successfully organized training programs under the National Mission on Strategic Knowledge for Climate Change (NMSKCC) in different regions of the state targeting various levels of stakeholders like rural communities, frontline forest staff, farmers, members of Panchayati raj institutions (PRI) and many more. More than 300 people are trained so far across several districts of Jharkhand. The department is dedicated to training 5000+ people at different levels by the end of 2025. This report includes the details of Peterwar, Bokaro training-cum-capacity building programs organized by the department in Bokaro districts of the state.

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Geo-Spatial Visualization of Stakeholders Engagement under NMSKCC- Peterbar, Bokaro, Jharkhand





Forest Department Training Centre, Petarwar, Bokaro

Training-cum-Capacity Building of Local Leaders and Community Members

Date: 19 December 2024

Location: Petarwar, Bokaro

About the Program

The program was held on 19th December 2024 at the Forest Department Training Centre in Petarwar, Bokaro and was designed to build the knowledge and skills of local leaders and community members to address the growing challenges of climate change. The workshop witnessed active participation from over 150 individuals, including members of Joint Forest Management Committees (JFMCs), Mukhiyas, key village leaders and other community stakeholders from across the Bokaro district. The training aimed to raise awareness about climate change, encourage greater community participation in climate-related initiatives and strengthen the capacity of local leaders to create solutions for building resilience to its impacts.

This initiative is part of a larger effort to train over 25,000 individuals across Jharkhand in the next three years. By equipping communities with the necessary knowledge and resources, the program seeks to ensure the successful implementation of climate action plans and promote sustainable practices at the local level. The event marks a significant step toward fostering climate-resilient communities in Jharkhand, ensuring that both local leaders and villagers are prepared to combat the challenges posed by climate change.

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Keynote Addresses

The training program was graced by the presence of several eminent dignitaries who contributed valuable insights and guidance. Chief Guest Ravi Ranjan, APCCF-CAMPA, addressed the participants, recognizing the need for capacity-building activities in Jharkhand towards climate resilience. Rajnish Kumar, Divisional Forest Officer (DFO), Bokaro, also addressed the participants, highlighting the importance of collaborative efforts. Other dignitaries included Sandeep Shinde, Indian Forest Service (IFS) Officer; Munna Jha, Representative from Asar; Shreelata Krishnan, Representative from School of Policy and Governance; Hemant Kumar, Representative from SIDHA and Gulab Chandra Prajapati, Representative from PanchSafar. Their active participation underscored the significance of collaboration between government bodies, NGOs and community leaders in achieving the program's objectives.



Session 1: Climate Change Fundamentals

The first session, led by Ishteyaque Ahmed, focused on providing a comprehensive understanding of the fundamentals of climate change. It began with an introduction to the concept of climate change, including definitions and scientific explanations of climate variability and the impact of human-induced changes. The session highlighted global warming as a critical consequence, exploring its causes such as greenhouse gas emissions from industrial activities, deforestation, and fossil fuel combustion. The discussion also delved into the effects of rising temperatures, including melting ice caps, sea-level rise, and disruptions to natural ecosystems and weather patterns.

Further elaboration was on the sources and impacts of greenhouse gas emissions, explaining how they affect ecosystems and livelihoods, particularly in vulnerable communities. The causes and cascading effects of climate change were analyzed, emphasizing the interconnectedness of human actions and environmental outcomes. The session encouraged active participation, with attendees sharing observations on how climate change is directly impacting their local communities, such as increased frequency of droughts or erratic rainfall. Participants engaged in thought-provoking discussions, raising questions and seeking clarification on the scientific concepts. Many expressed newfound clarity on the basics of climate change and showed enthusiasm to explore practical strategies for mitigation and adaptation in their regions.

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Session 2: Climate Change Adaptation and Mitigation

The second session, led by climate expert Ishteyaque Ahmed, focused on practical ways to address climate change and its impacts. The session started by discussing vulnerability and the factors that make communities more susceptible to climate challenges, such as lack of resources, economic hardships, and environmental risks. Ahmed then explained adaptation strategies, including water conservation, rainwater harvesting, and adopting climate-resilient farming practices to help communities adjust to changing climatic conditions.



The discussion also highlighted mitigation measures, such as planting more trees, switching to renewable energy, managing waste effectively, and reducing greenhouse gas emissions. Building resilience was another important topic, with a focus on strengthening local systems to prepare for and recover from climate shocks. Ahmed also explained how government programs like MGNREGA and PM-KUSUM can support these efforts by providing resources and financial support.

Participants found the session engaging and practical, as it emphasized how communities and local governance can work together to address climate challenges. Many attendees expressed confidence in their ability to implement the learnings in their respective Panchayats, citing specific actions they planned to take, such as organizing awareness drives and promoting afforestation.

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Data from Questionnaires

Three questions were posed to participants during each session to gather their responses. Participants identified several measures to reduce the impacts of climate change, including adopting energy-efficient devices, using solar lights, planting trees, constructing check dams on drainage lines, and avoiding the overexploitation of water resources. They shared ongoing efforts such as utilizing LPG cylinders, avoiding plastic usage, promoting organic farming, conducting plantation drives, and leveraging government programs like MGNREGA for constructing wells and dobhas. Regarding their engagement with government schemes, participants expressed interest in programs like CM Van Jan Yojna, PM-KUSUM, and soil and water conservation initiatives, emphasizing their role in supporting climate-resilient agriculture and sustainable water management. The collective responses highlight a growing awareness of practical actions and the importance of government support in mitigating climate challenges.

Outcomes

The training program successfully equipped 150+ participants with the knowledge and tools to address climate change in their communities. Key outcomes include:

- Increased awareness and understanding of climate fundamentals.
- Improved capacity to identify vulnerabilities and adopt adaptive measures.
- Enhanced collaboration between government officials, NGOs, and local leaders.

The program is the first step in a larger initiative to train over 25,000 people across Jharkhand in the next five years. The Forest Department of Jharkhand and Asar will work together to achieve this ambitious goal, ensuring the effective implementation of climate action schemes.

Details of the Participants

Name of the Participants	Village
Chotelal Tuddu	Udda
Dainaram Manjhi	Udda
Nirulal Manjhi	Udda
Denaram Manjhi	Udda
Sona Ram Soren	Ponda
Laljee Manjhi	Putkado Ulgadda
Madan Kumar Rajwar	Bagiyari Pantagtola
Alimum Ansari	Vaniyari
Shivlal Tuddu	Siyari
Bhadru Mahato	Sadmakhud
Dasrath Manjhi	Chargi
Barjun Manjhi	Gopalpur
Om Prakash	Dandubagh Chargi
Nandlal Mahato	Elke Khangi
Geeta Devi	Chando
Manoj Rajak	Chando
Bilaso Devi	Gopalpur
Ganesh Rajwar	Bundu
Bansighar Mahato	Manjura
Sarfaraz Ahmad	Garri
Habib Ansari	Garri
Rani Kumari Murmu	Chardi
Surajmani Devi	Silisarmu
Aghni Devi	
Dulari Devi	Chargi
Lalita Devi	Chargi
Sunny Kumar	Dhanbad
Savitri Devi	Sadma Kala
Bilaso Devi	Pordag
Simran Soren	Chargi
Dhaneshwar Kumar	Odana
Ravi Kumar	Bahadurpur
Ram Chandra Kumar	Chardi
Gangadhar Mahato	Pardi
Dasrath Manjhi	Murhu
Niranjan Mahato	Sighpur
Manmohan Tiwari	singhpur
Imwaiswer	Chandu bhadra
Maheshwar Manjhi	Chandu bhadra
Mangal Hosda	Patki

Jeetan Kumar	Bundu
Vishu Raja	Lodhkiya
Rahul Kumar	Lodhkiya
Kamal Kishore Mahato	Chipundag
Laldev Mahato	Sadma Kala
Basanti Devi	Sadmakhurd
Rinku Kumari	Sadmakhurd
Niyandan Mahato	Karma Singhpur
Aanand Kumar	Heshal
Guddu Mahato	Tangtona
Pradeep Sethi	Petarwar
Upendra Tuddu	Chardi
Ratan Lal Bediya	Chardi
Manoj Kumar	Chardi
Milsesh Kurmashi	Urdana
Deepmala Devi	Bokaro
Dilip Manjhi	Koha
Shankar Hasda	Aurdand
Deewakar Rajan	Madhukarpur
Maghawlal Manjhi	Rukam
Rekha Devi	Jarandih
Gautam	Jarandih
Ujala Dubey	Jarandih
Amit kumar Mahato	Chargi
Nakul Ram	Jhunkko
Sunita Devi	Sadma Kala
Sumitra Kumari	Sadma Kala
Kamlesh Kumar Mahato	Chandrapura
Gopal Baske	Tailmunga
Haran Rajveer	Ponda
Sudheer Kumar Hembram	Ponda
Lalchandra Manjhi	Ponda
Binod Kumar Yadav	Swang Basti
Omkar Nagawade	Ranchi
Nishant Chandra	Bokaro
Vijay Kumar Gupta	Badki
Satyam Kumar	Chugnu
Gulab Chandra	sebra
Satira Chandra	Jarandih
Vikash Goswami	Bokaro
Manju Devi	Sonpur
Sahani Parween	Bundu
Girja Devi	Bundu
Imran Ansari	Bundu

Prakash Kr. Mahato	Tainmumunga
Permeshwar Manjhi	Gopalpur
Sunder Munda	Bakeshpura
Sushila Devi	Kathara
Kesori Mahato	Sarlakhurdh
Kapil Dev Mahato	Hadmita
Shiv Charan Manjhi	Chass
Ram Nandan	Baru
Aakash Kumar	Chandrapura
Seeta Devi	Bokaro
Nageshwar Mahato	Petarwar
Lobh Manjhi	Chardi
Deelip Mahato	Hasim
Laxmi Devi	Chandrapura
Manju Devi	Chandrapura
Urmila Devi	Argua
Indra Devi	Aurdana
Gulab Chandra Manjhi	Aurdana
Muneshwar Mahato	Kalyanpur
Narayan Singh	Prathuriya
Kisun Ram Baske	Argua
Mohan Karmali	Chatugara
Chinta Devi	Sadma Kala
Dhanulal Mahato	Chargi
Jyoti Kumari	Kurpaniya
Manoj Kumar	Sunday Bazar
Amlesh Kumar Mahato	Gulmar
Umeshwar Turi	Uttarsara
Mansa Marandi	Katarbera
Hub Lal Mahato	Ambadih
Suraj Karmali	Raghubahiyaar
Kajri Devi	
Mdan Manjhi	
Dherendra Nath Mahato	Sadma Kala
Madhumani	Cimradih
Devnand Prasad	Utmara
Nirmala Devi	Raghubahiyaar
Niranjan Kumar	Pordag
Shankar Bediya	Gola
Sravan Hemram	Kojram
Arbind Kr Murmu	Uljarra
Vdudas Murmu	Adhypur
Sambhu Murmu	Purnadih
Bhola Bhokta	

Jakul	Sanipur
Devnath Mahato	Aurdana
Bhadru Manjhi	Sondra
Manohar Manjhi	Aurdana
Sulekha Devi	Singhpur
Shanti Devi	singhpur
Purnima Devi	singhpur
Shankar	
Ram Charan Manjhi	Sindhu
Sheela Prasad	
Yodha Mahato	Jarandih
Ranjit Mahato	Jarandih
Kaisap Kr Mahato	Chainpur
Kajri Devi	Godda
Chatanya Ram Mahato	Murhulsuddi
Panchanand Mahato	Durgapur
Gulab Chandra	Panch

