german cooperation
DEUTSCHE ZUSAMMENARBEIT

Implemented by
giz Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ) GmbH

# ANALYTICAL REPORT

# Orientation Program for Gram Panchayats on Climate Resilient initiatives, Risk Informed Gram Panchayat Development Plans (GPDP) and Developing Contingency Plans

## (Online Sessions in Bundelkhand Districts)

# BACKGROUND

Due to changes in the climate, concerns regarding extreme weather events have intensified. Summers are becoming hotter, winters are getting shorter, irregular rainfall is increasing, and long dry spells between two rainfalls are becoming common. Along with this, the frequency and intensity of these events are also steadily rising, which, on one hand, is affecting the sustainability of development activities, and on the other, increasing their costs.

Irregular rainfall is not only intensifying water scarcity, but is also severely affecting agriculture. Meanwhile, extreme temperature rise is worsening water stress, adversely impacting crop cycles, and reducing the productivity of major crops such as grains and pulses. Due to reduced food and water availability, the health of both humans and animals is suffering. On one hand, agricultural costs are increasing, and on the other, health protection expenses are also rising. These challenges are now visibly affecting local areas, and to address them effectively, coordinated efforts by local administrations, institutions, and communities are essential.

On behalf of the German Federal Ministry for Economic Cooperation and Development (BMZ), the Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ) GmbH is implementing the Indo-German development cooperation project 'Climate Adaptation, Resilience and Climate Finance in Rural India (CAFRI II)' in close cooperation with the Ministry of Environment, Forest and Climate Change (MoEFCC), Government of India, and the National Bank for Agriculture and Rural Development (NABARD). The project emphasizes efficient localization through cross-sectoral coordination, partner engagement, and capacity building at all levels of governance. Sectoral focus is on the topics of Agriculture and Water in rural India.

Within this framework of CAFRI II, GIZ is providing technical support to the Directorate of Environment in Uttar Pradesh (UP) in implementing Sustainable Agriculture & Jal Jeevan Mission under UP-SAPCC (2021-30). This aligns with the agreed-upon commitment with the MoEFCC to concentrate efforts in Uttar Pradesh on providing technical support to facilitate execution of selected initiatives under the Water & Agriculture Missions of UPSAPCC 2.0, specifically in the Bundelkhand region.

Towards this, capacity building of relevant government institutions, as well as the vulnerable ecosystems is central to enhancing resilience in seven districts within the Bundelkhand region of Uttar Pradesh through a range of awareness, capacity development and outreach events helping them to plan and implement risk informed developmental interventions, as per the mandates of Agriculture and Water Missions of UPSAPCC.

## THE BUNDELKHAND REGION

The impact of climate change on Agriculture & allied and Water sectors in Bundelkhand has been profound, with erratic rainfall, extended droughts, depleting groundwater levels, increased soil degradation and degraded ecosystems, severely affecting crop productivity and water availability. These changes have disrupted traditional farming practices, leading to declining incomes and heightened vulnerabilities for rural communities, especially small and marginal and woman farmers, dependent on agriculture-based livelihoods.

Agriculture (and allied) and Water sectors are crucial for livelihood security and poverty eradication of the marginalized communities. Hence, climate risk informed planning and programme implementation is needed for Agriculture and Water sectors, most importantly at District, Block and Gram Panchayat levels.

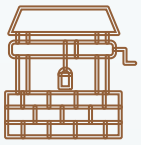
## MAINSTREAMING CLIMATE RISK INTO GRAM PANCHAYAT DEVELOPMENT PLANS

After the 73rd Constitutional Amendment, provisions under Articles 243-A to 243-O of the Constitution emphasized the establishment of a three-tier Panchayati Raj system and the preparation of development plans at the village, block, and district levels. In this system, the Gram Panchayat is the lowest and most directly elected body of representatives. It functions as a unit of local self-governance and is directly accountable to the Gram Sabha.

The Gram Panchayat Development Plan (GPDP) is an important framework to ensure participatory planning, efficient use of local resources, and sustainable development in rural areas. Prepared by taking into account the needs and priorities of the entire village, the GPDP empowers Gram Panchayats to address socio-economic needs, education, health, livelihoods, and basic infrastructure development. Its objective is to realize the vision of a "*Viksit Bharat*" through transparent, accountable, and inclusive governance based on active participation of rural communities. Gram Panchayat Development Plans are prepared in a participatory manner in collaboration with relevant stakeholders.

In the context of disaster risk reduction and climate change adaptation, village-level development planning becomes extremely important, as it helps in prioritizing actions based on development indicators at the district/block level and assessed climate vulnerabilities.

As part of positive initiatives aimed at mainstreaming climate risks into Gram Panchayat Development Plans, orientation programs were organized by Gorakhpur Environmental Action Group (GEAG) in the Gram Panchayats of districts in the Bundelkhand region —Mahoba, Jhansi, Hamirpur, Jalaun, Banda, Chitrakoot, and Lalitpur. These programs focused on the relevance, need, and guidelines for climate risk-informed and gender-responsive GPDPs. Each orientation program conducted online had a duration of approximately 2-3 hours.



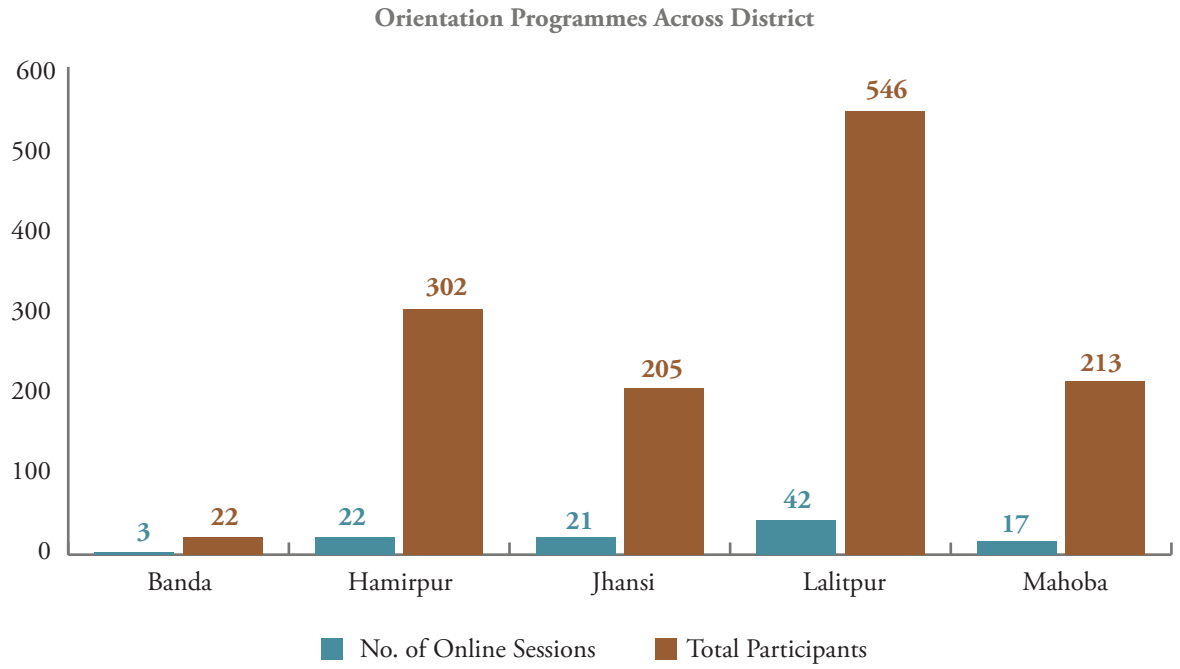
**The Gram Panchayat Development Plan (GPDP) is an important framework to ensure participatory planning, efficient use of local resources, and sustainable development in rural areas. Prepared by taking into account the needs and priorities of the entire village, the GPDP empowers Gram Panchayats to address socio-economic needs, education, health, livelihoods, and basic infrastructure development.**

The main objectives of the orientation workshops were:

- To sensitize Panchayat representatives, other stakeholders, and community members about district-specific climate risks affecting the Agriculture and Water sectors.
- To develop an understanding of the need to integrate climate risks into Gram Panchayat Development Plans (GPDPs).
- To highlight, in line with the SAPCC, the climate sensitivity of districts, with a particular focus on the vulnerabilities of rural women, especially in the Agriculture and Water sectors.
- To orient participants on preparing climate risk-informed and gender-responsive GPDPs.
- To discuss the need and usefulness of mainstreaming climate risks into livelihoods and sustainable development through the State Rural Livelihood Mission and Panchayati Raj Institutions.

## ONLINE ORIENTATION WORKSHOPS

A total of 105 online orientation sessions were conducted across various Gram Panchayats in five districts of Bundelkhand region in Uttar Pradesh—Banda, Hamirpur, Jhansi, Lalitpur, and Mahoba. These sessions were organized between 22 January 2026 and 02 March 2026. The details of these sessions are as follows:




A total of **1,288 participants** attended these sessions including Pradhans, Panchayat representatives, members of Panchayat committees, community members, and women associated with the Rural Livelihood Mission and Self-Help Groups, among others. On average, each session had around 12–13 participants present.

For organizing the sessions, meeting links were created through online platforms such as Zoom or Google Meet and shared with a designated focal point (identified in advance). The focal point was responsible for connecting the concerned stakeholders through mobile phones. Each session link was created for a duration of two hours.

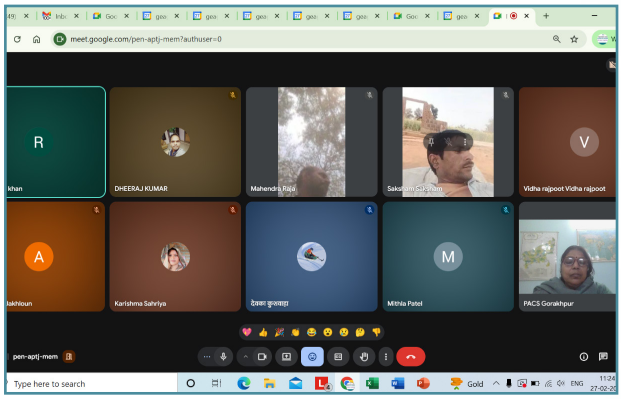
These two-hour orientation sessions were conducted simultaneously; that is, sessions were organized at the same time in two or more districts/blocks by different facilitators. From an operational perspective, each session was divided into three sub-sessions:

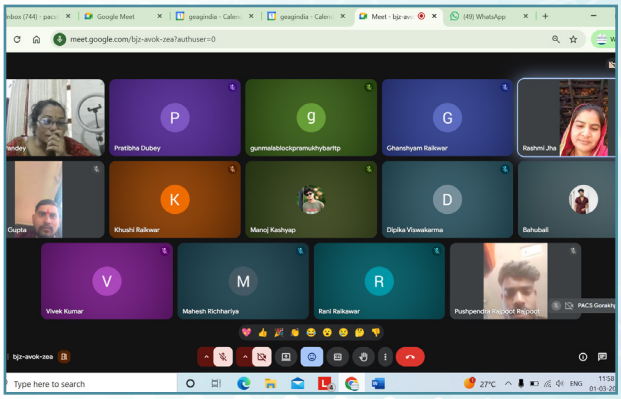
# SESSION 1:

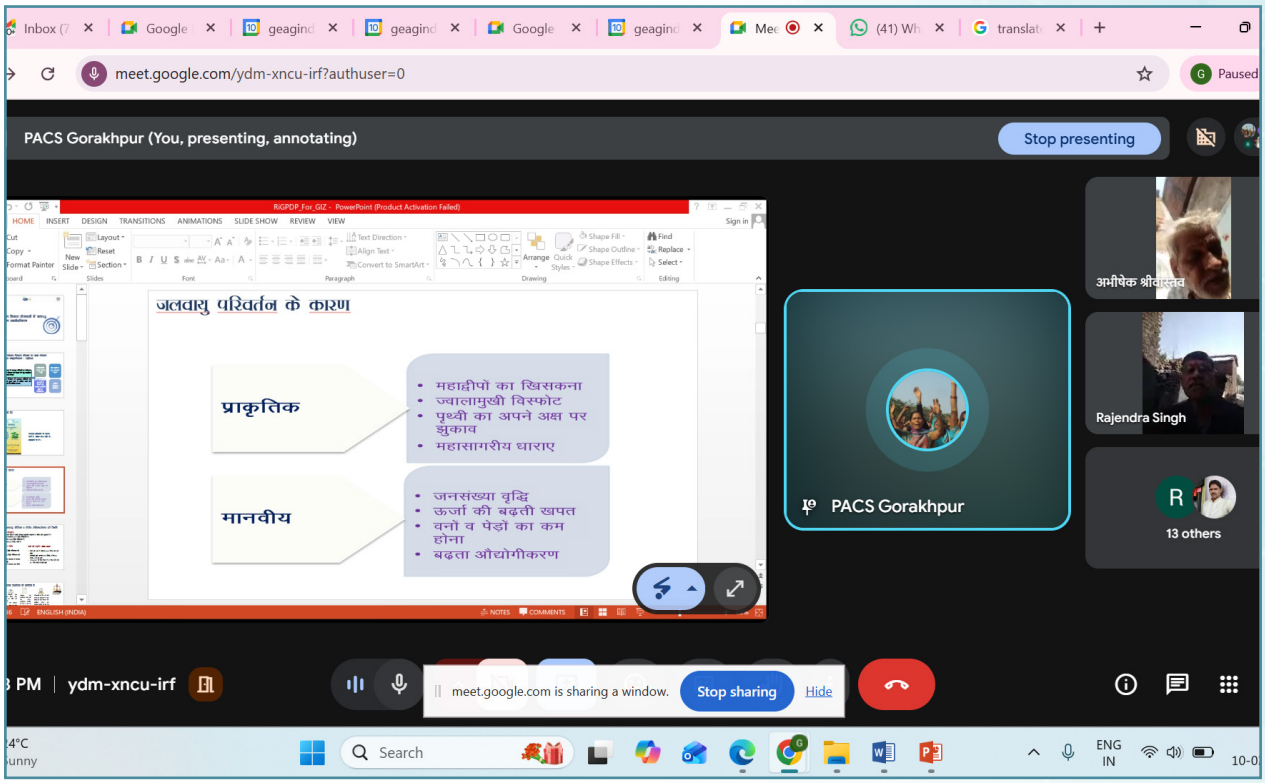
At the scheduled time, participants joined the session through the meeting links shared via the focal point. The session began with general interaction to gather basic information about the participants—for example, which block they were joining from, which village(s) they belonged to, and which category they represented (Panchayat, community, SRLM, Self-Help Groups, etc.).

Thereafter, a brief introduction to the online session was provided. This was followed by a discussion on the objectives, with a strong emphasis on the importance of local-level climate vulnerability assessment, convergence with institutions, and gender-sensitive planning. It was highlighted that ensuring active participation of women—especially in livelihoods and community institutions—is essential and must be prioritized in planning processes.

**The session began with general interaction to gather basic information about the participants—for example, which block they were joining from, which village(s) they belonged to, and which category they represented**







# SESSION 2:

During the second session, a detailed presentation was made focussing on the climate risk vulnerabilities in each of the districts and its impacts, followed by orientation on risk-informed and gender-responsive GPDP. Following are the highlights of the key presentations and discussions:

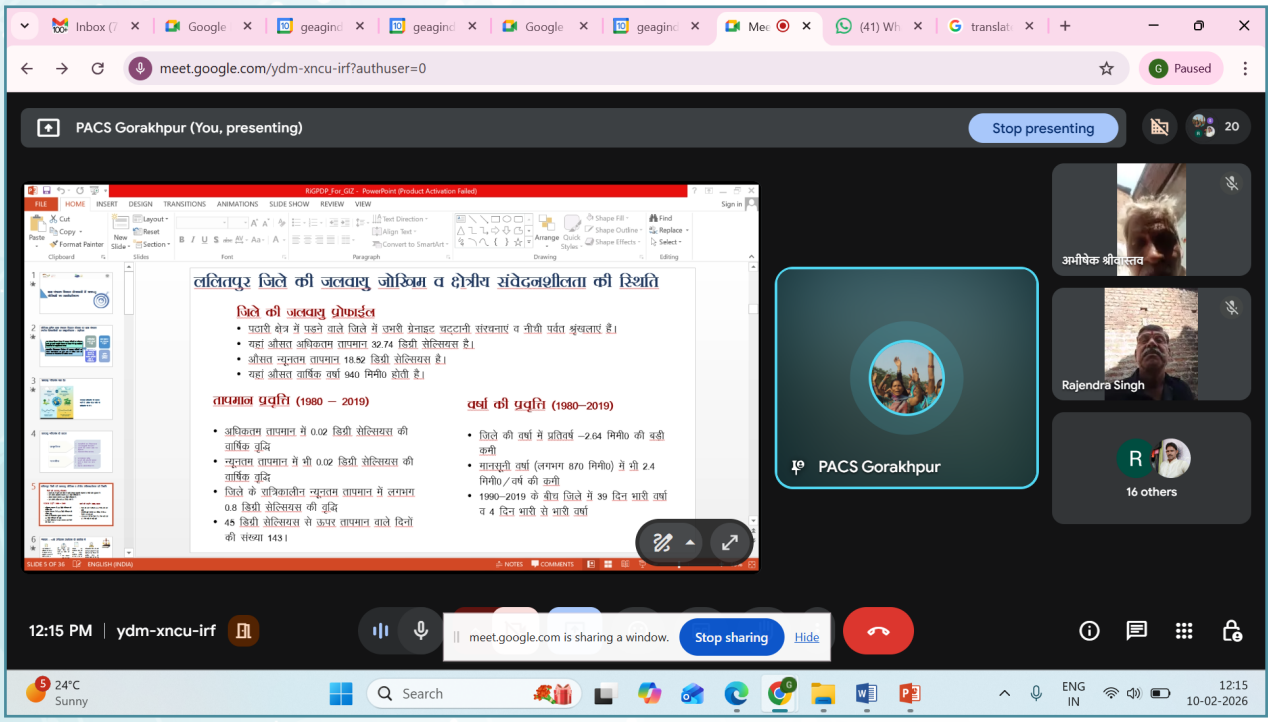
**An assessment of climate data across all seven districts of the Bundelkhand region clearly indicates that the entire region is highly vulnerable from a climate change perspective.**

## Climate Risk Profile of Bundelkhand Districts

A discussion was held on the climate profile of all the districts and the risks arising from it. An assessment of climate data across all seven districts of the Bundelkhand region clearly indicates that the entire region is highly vulnerable from a climate change perspective. Although each district has its own specific climate-related vulnerabilities, there are several common issues observed across all districts—such as rising temperatures, erratic rainfall, sudden intense rainfall events, long gaps between rainfall periods, and overall decline in rainfall.

Due to these factors, the Agriculture and Water sectors in all seven districts fall under a highly vulnerable category. Water scarcity is adversely affecting agriculture, leading to reduced productivity, and impacting livelihoods, food security, and nutritional security of the people.

Based on the two key climate parameters—temperature and rainfall—an analysis of climate-related characteristics and risks has been carried out for all seven districts: Mahoba, Hamirpur, Chitrakoot, Banda, Jalaun, Jhansi, and Lalitpur. The details of this analysis are as follows:



*Temperature Trends: Continuous Rise in Heat and Increasing Hot Winds (Based on data from 1980–2019)*

- Although the average maximum temperature across all districts ranges between 32.3°C to 32.74°C and the average minimum temperature ranges between 18.5°C to 19.1°C, the continuously rising temperature is a matter of concern for all districts.
- An annual increase of about 0.01°C has been observed in the average maximum temperature. However, in Lalitpur, this increase is higher at around 0.02°C per year.
- The average minimum temperature is also rising at a rate of about 0.02°C per year across all districts.
- An increasing trend in night-time temperatures is also being observed in almost all districts.
- The daily temperature range (i.e., the difference between maximum and minimum temperatures) is continuously decreasing. Data indicates a reduction of about 0.01°C per year.
- Based on the data, in terms of the number of hottest days, Jhansi district has experienced the highest number of extremely hot days. The below table shows the number of hot days in each district between 1980 to 2019.

| S. No. | District | Number of Hot Days |
|---|---|---|
| 1 | Jhansi | 163 days |
| 2 | Lalitpur | 143 days |
| 3 | Mahoba | 126 days |
| 4 | Hamirpur | 126 days |
| 5 | Banda | 110 days |
| 6 | Jalaun | 103 days |
| 7 | Chitrakoot | 74 days |

*Rainfall Trends: Declining Rainfall Across All Seasons (Based on data from 1980–2019)*

- Based on data analysis, majority of farmers in all districts depend on monsoon rainfall for agriculture. It is also true that nearly 80–90% of the total annual rainfall in all districts occurs during the monsoon season; however, a significant decline in rainfall is being observed.
- All districts are experiencing a decrease in annual rainfall ranging from 2.66 mm to 10.52 mm per year.
- Although a decline in rainfall is observed across all districts, Jhansi and Jalaun are more severely affected. The average annual rainfall in these two districts is approximately 783 mm and 683 mm respectively, with an annual decline of about 10.27 mm and 10.52 mm being recorded.
- A decline is also being observed in the crucial post-monsoon rainfall that supports groundwater recharge. From this perspective, Banda, Hamirpur, Jalaun, and Lalitpur districts fall under the most vulnerable category.
- In terms of extreme rainfall events, districts like Lalitpur and Mahoba are witnessing an increase in incidents of heavy rainfall. This is leading to issues such as topsoil erosion, sudden flooding, and reduced groundwater recharge.

| S. No. | District | Decline in Rainfall (in mm) |
|---|---|---|
| 1 | Jalaun | 10.52 |
| 2 | Jhansi | 10.27 |
| 3 | Hamirpur | 6.55 |
| 4 | Mahoba | 4.83 |
| 5 | Banda | 3.10 |
| 6 | Chitrakoot | 2.66 |
| 7 | Lalitpur | 2.64 |

Based on the above analysis, it is evident that although the trends of rising temperature and declining rainfall are not identical across all districts, the conditions emerging from these changes are largely similar. These district-level climate-related data are also relevant at the village level.

## Orientation on Climate Risk-Informed and Gender-Responsive Gram Panchayat Development Plans

The main objective of this session was to develop participants' understanding on preparing climate-adaptive and risk-informed Gram Panchayat Development Plans (GPDPs) by integrating climate change adaptation and disaster risk reduction into decentralized planning processes.

Under the 73rd Constitutional Amendment, the constitutional powers of Panchayati Raj Institutions were explained, and the role of Gram Panchayats in ensuring sustainable local development through participatory processes was highlighted. It was also discussed that while planning—especially in the Agriculture and Water sectors—it is essential to identify local climate and disaster risks, assess vulnerabilities and capacities, and prioritize development measures that reduce risks while promoting sustainable livelihoods.

Along with this, emphasis was placed on recognizing women as key stakeholders in Agriculture and Water management, ensuring their participation in planning processes, and preparing GPDPs in accordance with the needs and priorities of the Gram Panchayat. It was also emphasised that the needs and priorities of women farmers need to be considered while developing GPDPs.

Discussions with participants also highlighted that climate-sensitive GPDPs can serve as an effective platform for convergence of schemes and resources across sectors such as Agriculture, Water, Livelihoods, and Social Development, thereby contributing to enhanced climate resilience. During this process, the stages involved in preparing climate-resilient and inclusive GPDPs were discussed in detail. An outline of the required institutional arrangements, community participation mechanisms, and the need and availability of natural, human, and financial resources was also presented.

Special emphasis was placed on the fact that while preparing climate risk-informed GPDPs, particular attention should be given to activities related to Agriculture and Water resources. Some examples in this regard are as follows:

## *Key Strategies for Integrating Climate Adaptation in the Agriculture Sector*

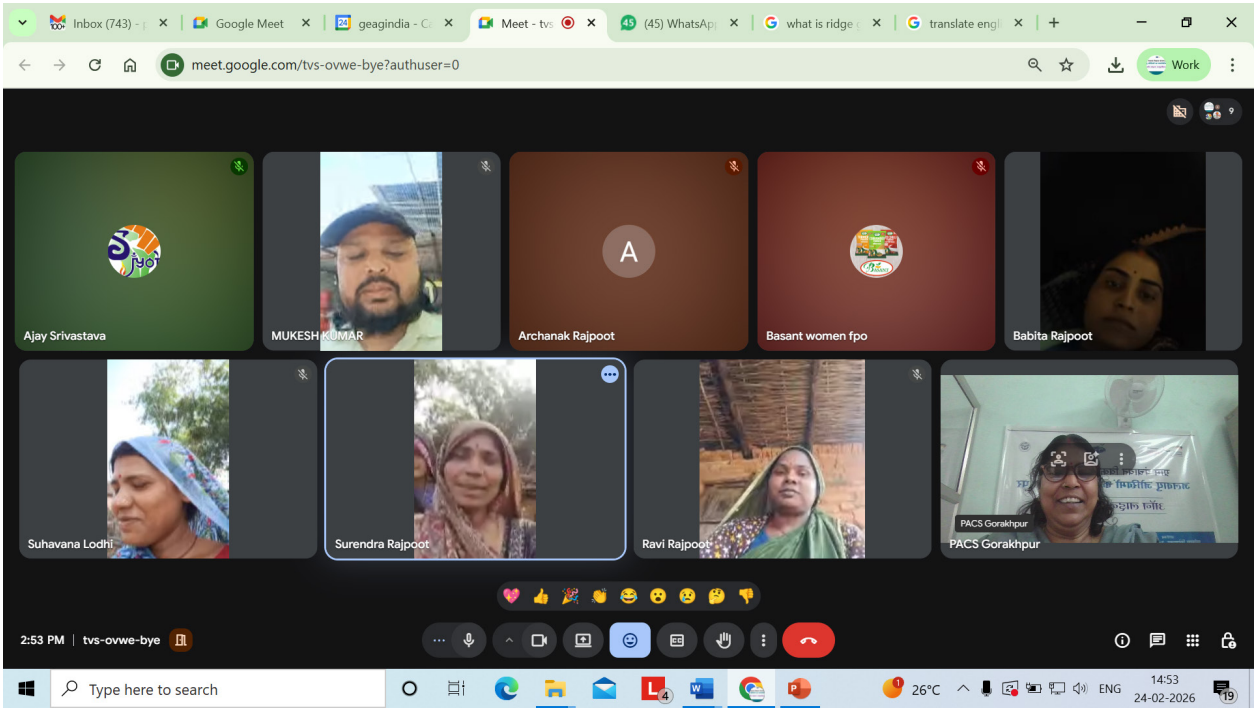
- **Crop Diversification:** Promote pulses, oilseeds, vegetables, medicinal, and high-value crops based on local water availability and market demand.
- **Promotion of Drought-Resilient Farming Practices:** Encourage adoption of agricultural practices suited to drought conditions.
- **Soil Health Improvement:** Nutrient management based on Soil Health Cards; promotion of organic, natural, and zero-budget farming practices.
- **Water-Efficient Irrigation Techniques:** Promote drip irrigation, sprinkler systems, and micro-irrigation.
- **Value Chain Development:** Strengthen linkages with processing units, cold storage facilities, and e-markets.

## *Key Strategies for Integrating Climate Adaptation in the Water Sector*

- **Water Conservation and Harvesting:** Farm ponds, check dams, percolation tanks, recharge wells, and drainage line treatment (nala bunding).
- **Revival of Water Bodies:** Removal of encroachments and cleaning of ponds, lakes, drains, and rivers.
- **Groundwater Management:** Preparation of village-level water budgets and aligning crop planning with water availability.
- **Balance Between Surface and Groundwater:** Diversification of irrigation sources to ensure sustainable water use.

## *Gender Responsiveness: A Cross-Cutting Issue for Climate Adaptation*

- It was emphasized that by building the capacities of women farmers and Self-Help Groups, improvements can be achieved in rural livelihoods, while simultaneously strengthening the local economy. At the same time, it can also promote social empowerment.
- Gender-sensitive and inclusive development planning enhances climate adaptation and disaster risk reduction, thereby making communities more resilient and self-reliant.



# SESSION 3:

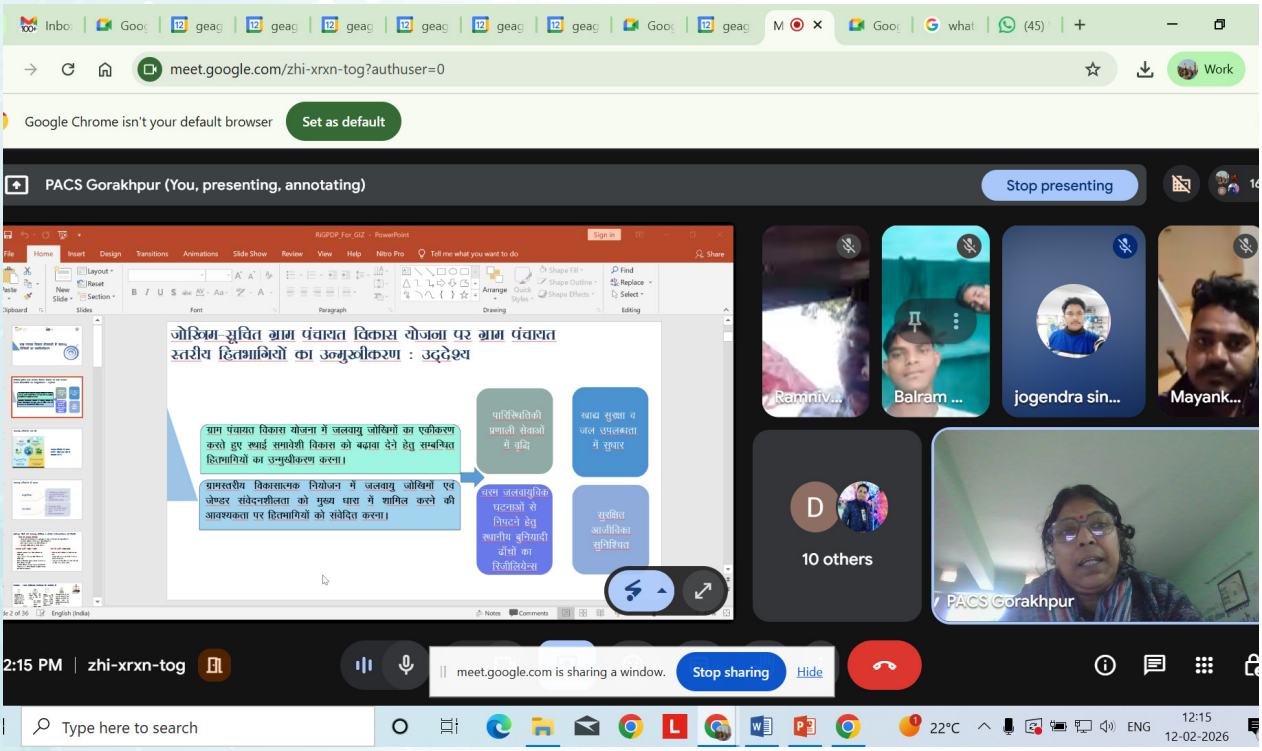
The third session was important from the perspective of addressing participants' questions and providing suggestions after the presentation. Efforts were made to respond to and resolve participants' queries. Additionally, the session provided an opportunity for participants to share and exchange their views.

*Participants' Reflections*

- Farmers are engaged in vegetable cultivation; however, due to lack of proper marketing facilities, the percentage of losses increases.
- Models related to disaster management should be developed, and exposure visits to such models in other Gram Panchayats should be organized so that people can learn from them and replicate them in their own areas.
- For ensuring sustainability of development works, participation of both the community and the Panchayat is essential. In the absence of such participation, even good initiatives tend to be neglected and become ineffective. For example, in Nawada village of Mauranipur block in Jhansi district, a pond was rejuvenated, but due to lack of proper maintenance and management, it suffered from encroachment issues.

## KEY TAKEAWAYS FROM ONLINE ORIENTATION SESSIONS

During all the online sessions, several key points emerged through discussions and interactions with participants. These points require focused understanding and action so that, through GPDPs, development can be made sustainable and communities can be made resilient to climate risks. The key points that emerged were:



- **Increased workload on women in the context of climate change:**
  Whether it is rising temperatures, reduced rainfall, or sudden heavy rainfall, all these situations are increasing the workload on women. Similarly, in cases of either deficient or excessive rainfall, the growth of weeds in fields increases rapidly, and the primary responsibility of removing them falls on women. During the harvesting stage, sudden and untimely rainfall makes the harvesting work carried out by women more difficult.

- **Limited participation of women in capacity building and extension programmes:**
  Migration is a major issue in the region, and in situations where men migrate, most agricultural activities are carried out by women. However, even today, their participation in capacity-building and extension programmes remains very limited.

- **Lack of timely early warning information:**
  Most of the work in agriculture and livestock management is performed by women, yet their access to weather-related early warning and information dissemination services is very limited or almost non-existent. As a result, they have to put in more effort and also bear greater losses.

- **Increase in cost of agriculture due to climate variability:**
  Climate variability has led to an increase in the cost of agriculture. Particularly in districts like Jhansi and Banda, the demand for water for irrigation, livestock, and drinking purposes increases during summers, thereby raising both agricultural and household expenses.

- **Livelihood insecurity among women:**
  Due to the impacts of climate-related risks on agriculture, employment opportunities for women as agricultural laborers at the village level have significantly declined.

- **Wage inequality:**
  The issue of women not receiving equal wages for equal work also emerged as a major concern.

- **Lack of awareness among women:**
  Women living in remote hamlets often do not participate in Gram Panchayat meetings, nor are they informed about the discussions held. As a result, they are unable to contribute to addressing village-level issues. In particular, due to lack of awareness about GPDP, they often feel that their participation is not important.

## KEY FEATURES OF ONLINE ORIENTATION SESSIONS

When these sessions were being conceptualized, nothing was very clear. There were doubts about how people would join a single online platform, how they would connect, and whether continuity would be maintained throughout the session. There was also a concern that the process might become a one-way communication.

In the initial phase, a few sessions did face some difficulties. However, over time, the entire process became distinctive due to several factors. These key features are as follows:

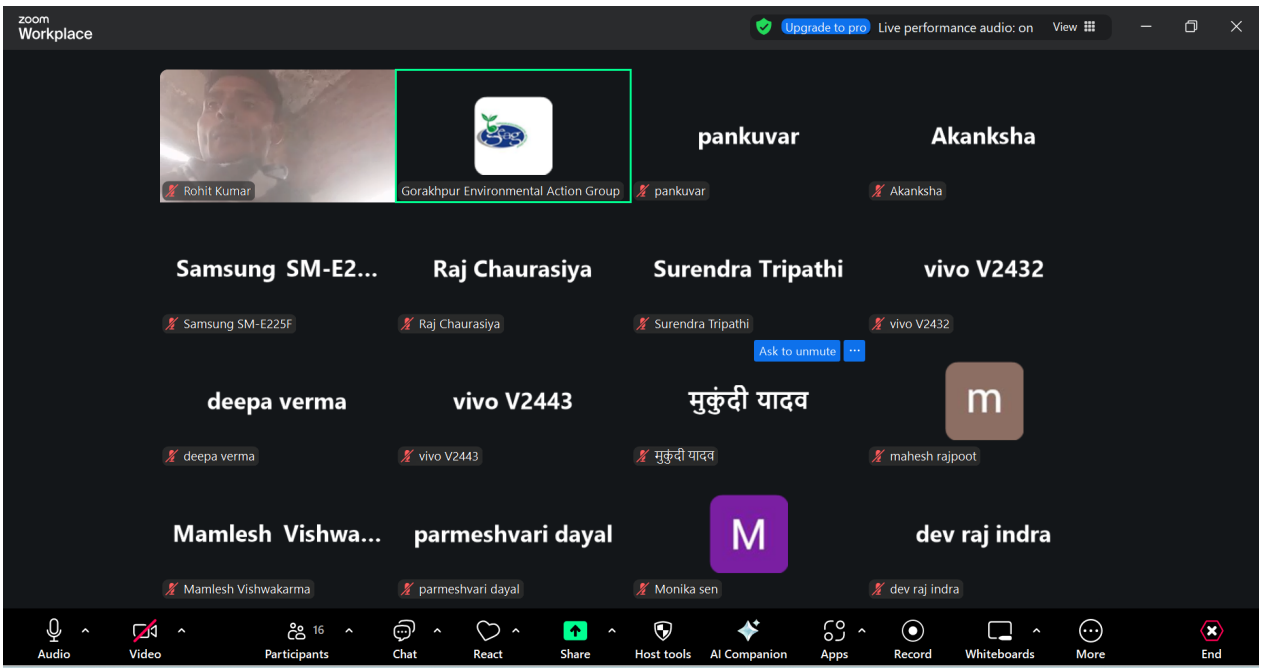
- **Participation and engagement of participants:**
  Participants joined on time—whether from fields, homes, or shops—and remained connected throughout the session. Although technical issues were occasionally faced, overall continuity in participation was maintained.

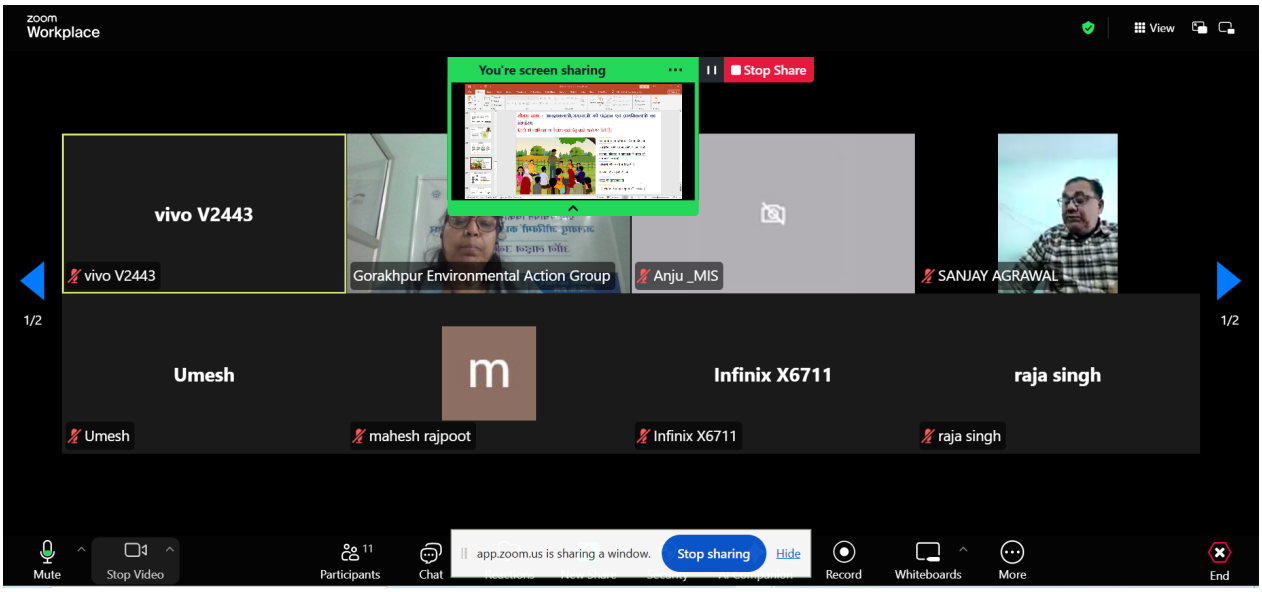
### Participation of women:

Women actively participated in all sessions. Not only was their number significant, but they also contributed enthusiastically to the discussions. Joining online through mobile phones was a new experience for many of them, and they engaged with great interest.

### Curiosity and interest in understanding the subject:

Considering the seriousness of the topic, participants—especially women—showed keen interest in learning and understanding it. For many, GPDP was a new concept. They were eager to understand it better and explore how women associated with SHGs or the Rural Livelihood Mission could link it with their ongoing activities. *For instance, Vidya Rajput and Karishma Sahariya, associated with villages in Jakhaura block of Lalitpur district, mentioned that under SRLM they prepare Village Prosperity and Resilience Plans (VPRP). They asked whether these can be linked with the GPDP. Such questions reflect the curiosity and interest of women participants.*



# CONCLUSION

Considering the vulnerabilities of Gram Panchayats in the context of climate risks in the Bundelkhand region, it was strongly felt that it is extremely important to sensitize all stakeholders associated with GPDPs about climate change and the risks arising from it.

It was collectively acknowledged that unless we view our Gram Panchayats through a climate change lens—particularly by understanding vulnerabilities related to Agriculture and Water—and unless all stakeholders actively participate at every stage from planning to implementation and monitoring, with a special emphasis on women's participation, the prospects for sustainable development will remain limited.

At the same time, convergence with MGNREGA, NRLM/SRLM, and other development schemes must also be ensured.

Overall, it was emphasized that for ensuring long-term resilience, safeguarding livelihoods, and achieving sustainable and inclusive development, local development plans must be made risk-informed and climate-resilient.

# ANNEXURE-1:
# WORKSHOP AGENDA

## On-line Orientation Program on Mainstreaming Climate Risk into Gram Panchayat Development Plan

*(Timing – 2 hours for each session)*

| Duration | Particulars |
|---|---|
| 10 minutes | Welcome, Introduction & Context Setting |
| 10 minutes | Objectives of Orientation Program |
| 15 minutes | Brief discussion on Climate Change and District Climate Profile |
| 60 minutes | Orientation on developing risk informed and gender-responsive Gram Panchayat Development Planning, mainly focusing on Agriculture and Water (detailing each step of GPDP formulation) |
| 15 minutes | Q/A and Discussions |
| 10 minutes | Way forward and Wrap Up |

**Published by:**

Directorate of Environment & Climate Change,
Department of Environment, Forest & Climate Change,
Government of Uttar Pradesh
doeccup.gov@gmail.com