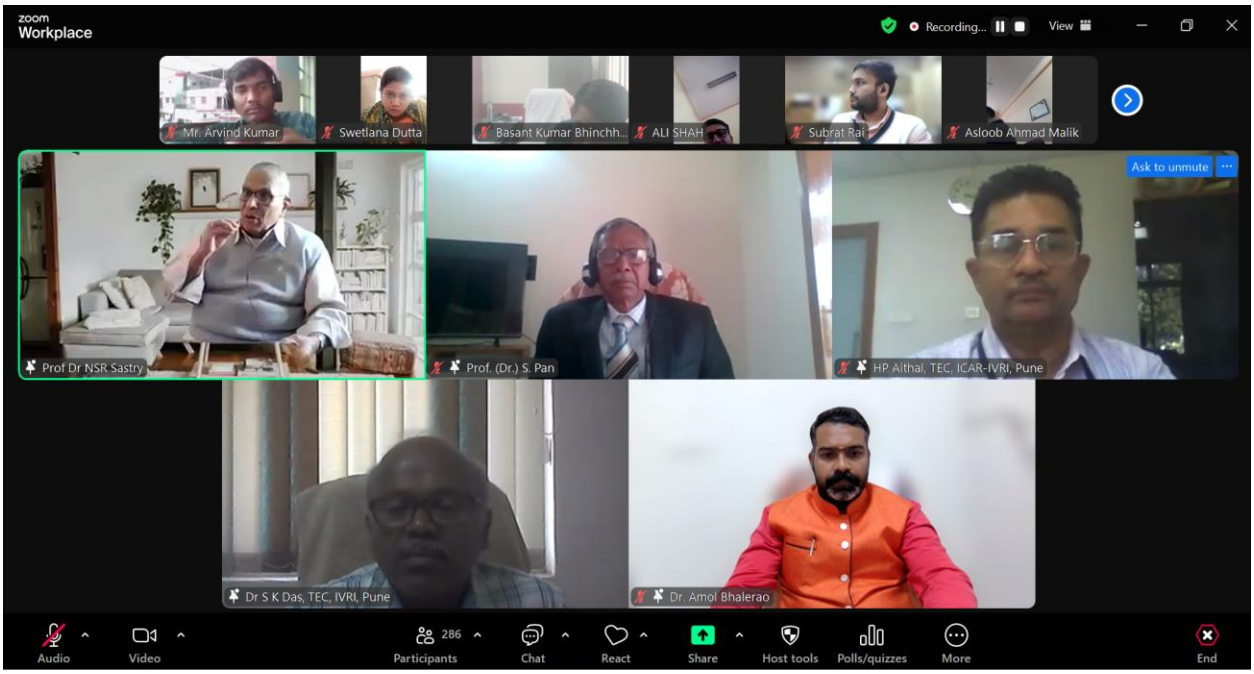
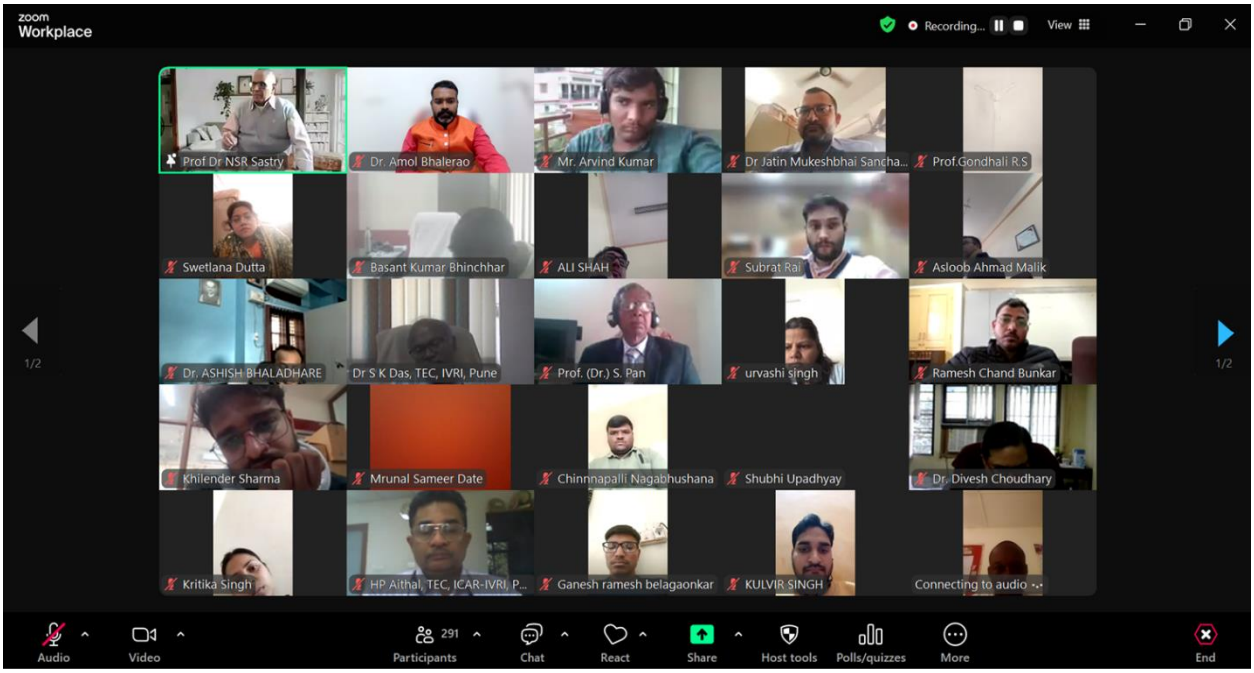
TEC, ICAR-IVRI, Pune Organised an Online Training Programme on "Climate Resilience Livestock Farming" from 20th to 24th January 2025

"Greater adoption of indigenous breeds of cows will prove much beneficial for small and marginal farmers" stated Professor (Dr) NSR Sastry, Former DDG of NIRD & Panchayat Raj, Hyderabad, while delivering an inaugural address of online training programme on ***"Climate Resilience Livestock Farming"*** organized by Training and Education Centre, ICAR – IVRI, Pune during 20-24 January 2025. In his deliberation, Professor Sastry emphasized on factors causing climate change, global warming, GHG emission and its long-term effect on livestock production system along with ameliorative measures for sustainable livestock production, food security and biosecurity. He applauded the efforts of the IVRI Centre to sensitize the various stakeholders of livestock sector as well as agriculture sector to boost adoption of climate resilient technologies. A total of 704 individuals registered for this online training programme belonging to 28 states of India. Moreover, 10 participants from Ghana also registered for this training.



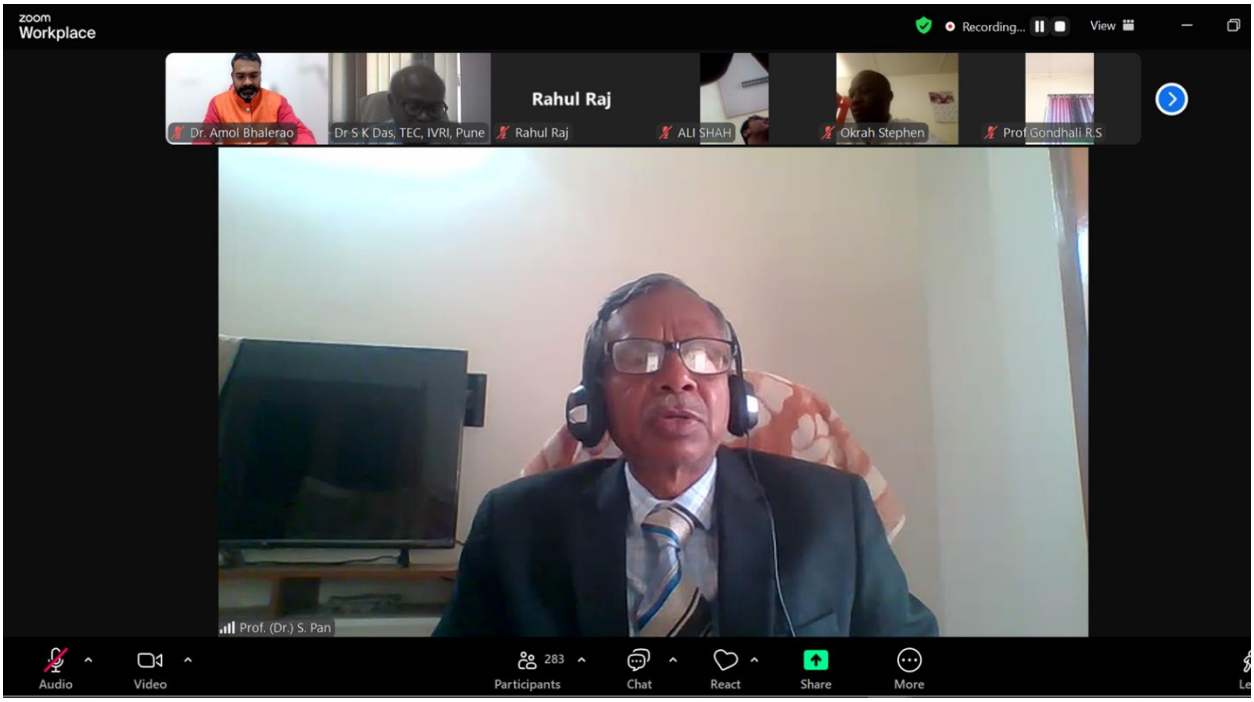
(Professor (Dr) NSR Sastry while delivering inaugural address)



(Glimpse of inaugural session with various trainees)

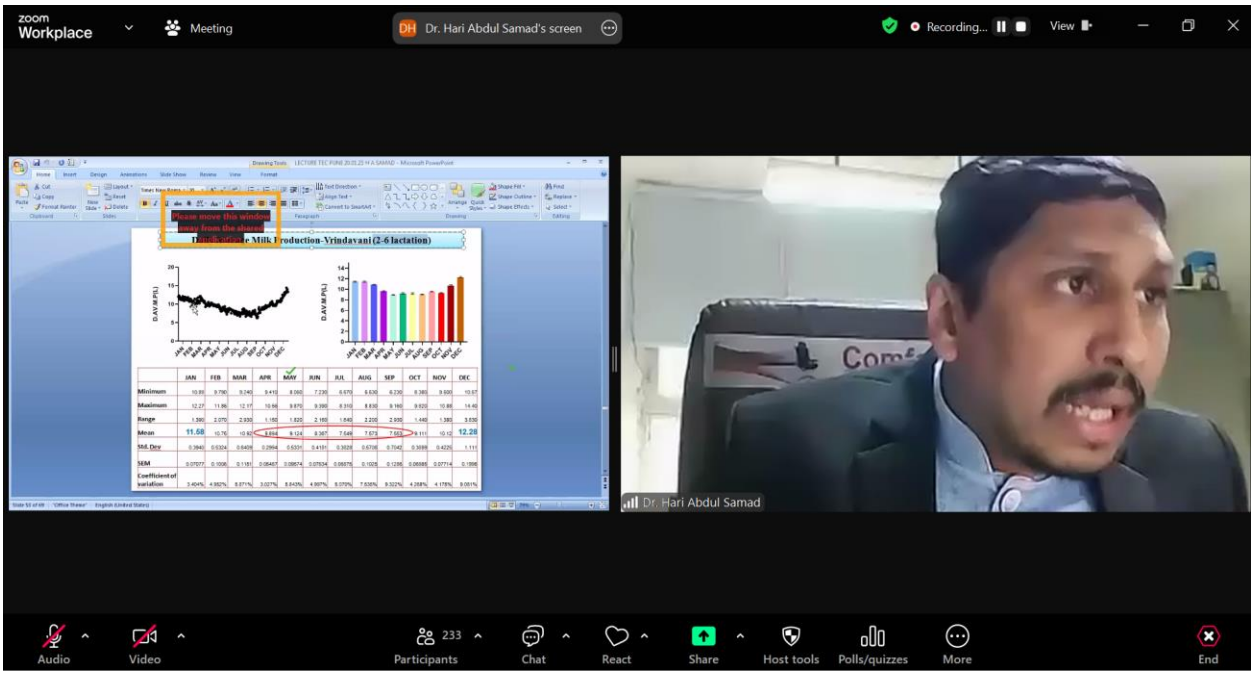
Earlier, on 20th January 2025, five days online training on "Climate Resilient Livestock Farming" started with the IVRI song. Dr Amol K Bhalerao, Scientist and Course Coordinator at the onset briefed about the portfolio of participants. Dr HP Aithal, Principal Scientist and Station in-charge delivered welcome address while he emphasized the activities and achievements of the Center and importance of this training programme. He also emphasized how climate change is impacting livestock and poultry production. Subsequently Dr SK Das, Principal Scientist and Course Coordinator proposed formal vote of thanks. A total of 299 trainees and faculty attended the inauguration session.

Thereafter, the technical sessions commenced with the first lecture delivered by **Professor (Dr) Subhranshu Pan**, former Professor and Head, Division of APM, WBUAFS, Kolkata (West Bengal). His lecture, titled ***"Climate Resilient Livestock Farming – Indian Perspective"***, provided a comprehensive overview of the pressing issues related to climate change and global warming, specifically in the context of India. Dr Pan discussed various adaptation and mitigation measures to address these challenges, offering actionable insights. His highly informative presentation captured the attention of the participants, sparking significant interest and engagement.



(Professor (Dr) Subhranshu Pan delivering an online lecture)

The next session was led by **Dr Hari Abdul Samad**, Scientist (Senior Scale), Division of Physiology and Climatology, ICAR-IVRI, Izatnagar, Uttar Pradesh.



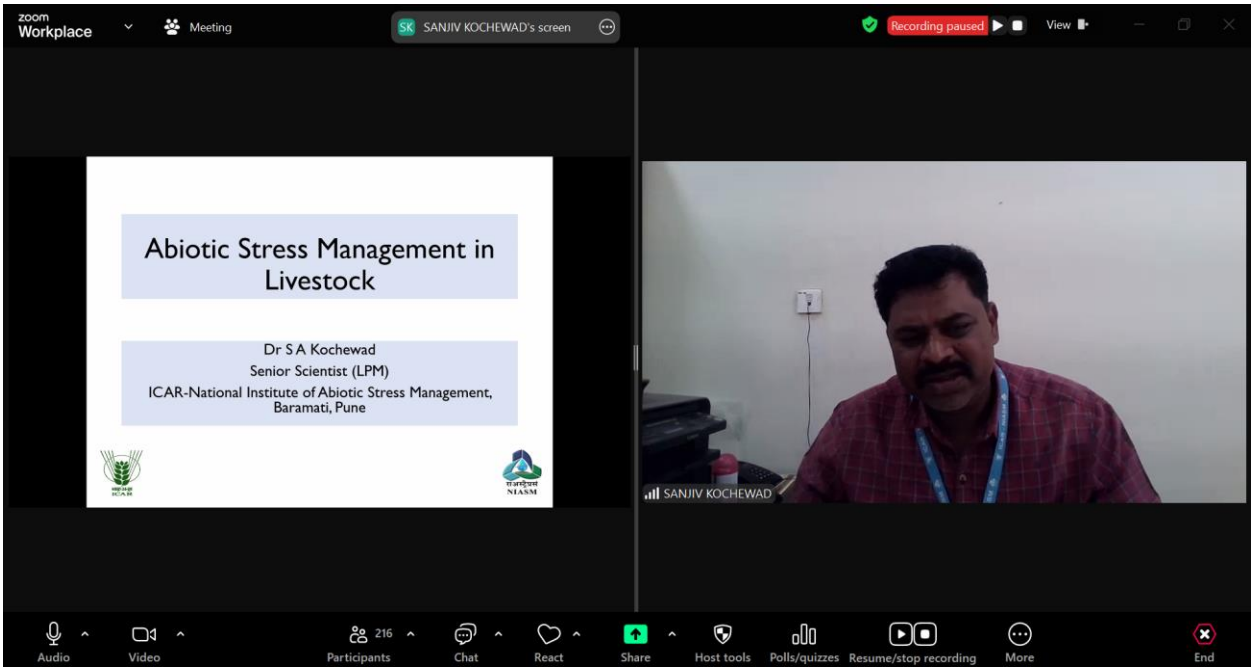
(Dr Hari Abdul Samad, delivering session in online training)

Dr Samad's lecture focused on the ***"Impact of Climate Change on Physiological Processes in Livestock"*** and provided an in-depth exploration of the physiological effects of climate change on livestock. He delved into the underlying mechanisms of heat stress and introduced various indicators used to measure its impact. The session offered valuable scientific perspectives and practical understanding, further enriching the knowledge of the participants.

(Dr V Sejian, delivering session in online training)

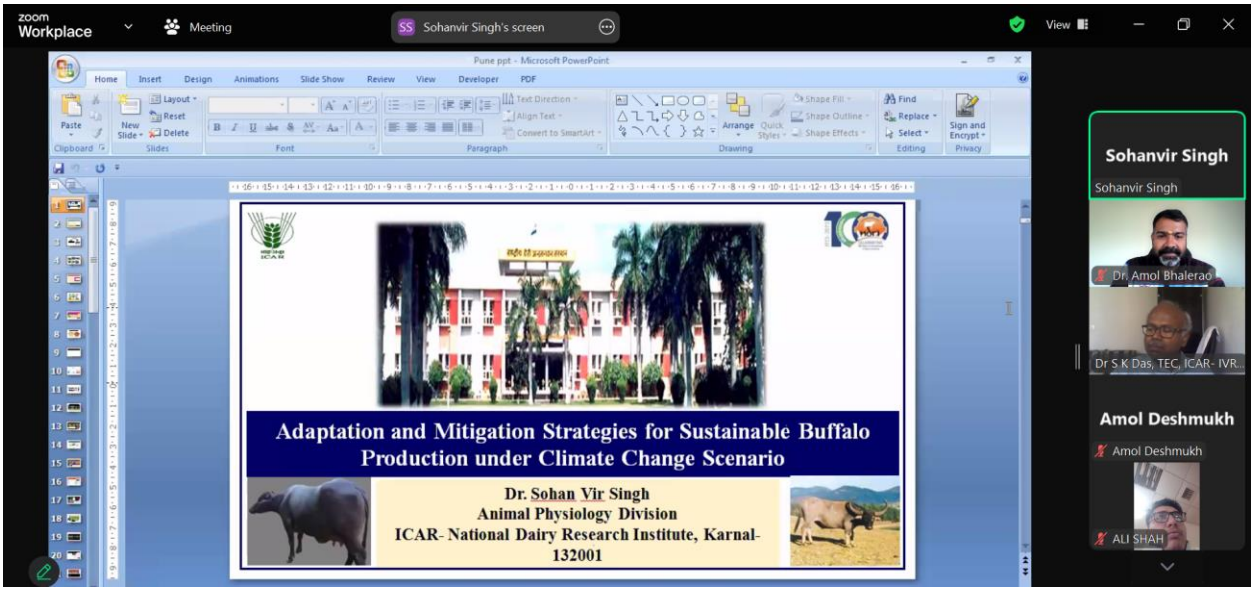
On the second day, 21st January 2025, first lecture was delivered by **Dr V Sejian**, Dean, Rajiv Gandhi Institute of Veterinary Research and Education, Puducherry on ***"Climate resilient goat farming"***. Dr Sejian in his talk narrated reasons of climate change on livestock and how danger is it – a worldwide view. Then he described different markers for identification of heat stress in goat, moreover he emphasised on multiple stressors producing heat stress on goat and different climate resilient measures to overcome the impact and consequently economic loss.

Second session was by **Dr SA Kochewad**, Sr. Scientist, ICAR – National Institute of Abiotic Stress Management (NIASM), Baramati, Pune (Maharashtra) on the topic "***Abiotic Stress Management in livestock***" and he delineated about different abiotic stressors particularly climatic extremities and their impact on livestock production. He emphasised on climate resilient integrated farming system as a solution of adverse impact of abiotic stress.



(Glimpse of session by Dr SA Kochewad)

On the third day (22nd January 2025), first talk was delivered by **Dr Sohan Vir S**ingh, Principal Scientist, ICAR- National Dairy Research Institute (NDRI), Karnal, Haryana on "***Adaptation and Mitigation Strategies for sustainable buffalo production under CC Scenario***". He gave an overview of Indian livestock and GHG emission from different livestock with special reference to Buffalo and how it is being affected by climate change with different ameliorative measures.



(Glimpse of session by Dr Sohan Vir Singh, Principal Scientist, ICAR-NDRI, Karnal)

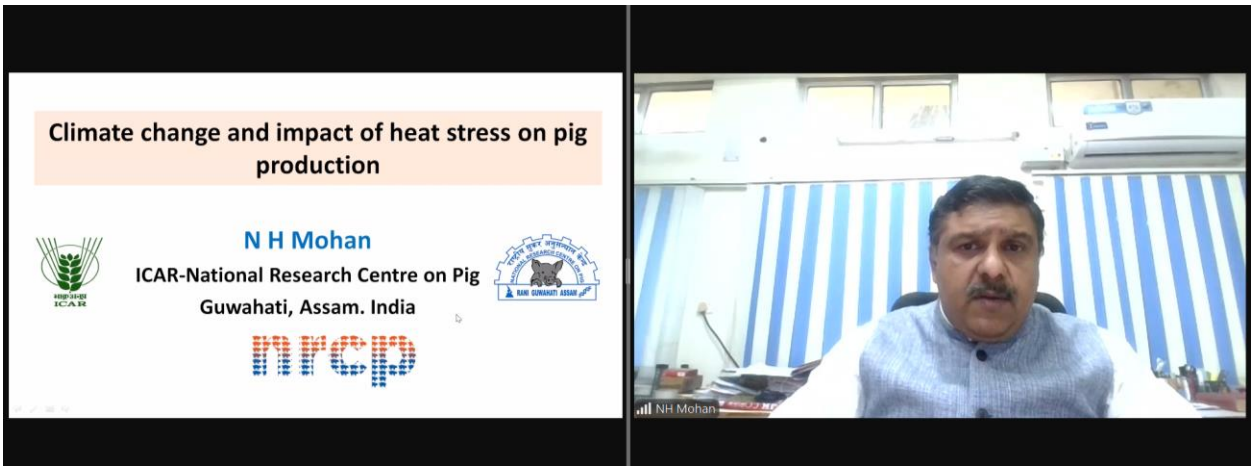
Second lecture was delivered by **Dr SK Das**, Principal Scientist, TEC, ICAR-IVRI, Pune on "***Impact of climate change on cattle production - Adaptation and mitigation strategies***". In his lecture, he explained how heat stress is affecting growth, milk production, physiological responses, feeding, reproduction, disease incidences in cattle and how is it can be adapted and mitigated by housing, nutritional, breeding and managemental interventions.

(Dr SK Das, delivering session in online training)

On the fourth day (23rd January 2025), first lecture was delivered by **Dr NH Mohan**, Principal Scientist, ICAR – National Research Center on Pig on "***Impact of CC on pig production - Adaptation and mitigation strategies***". In his lecture he described how climate change and global warming is happening and its effect on pig production followed by different measures to adapt and mitigate the impacts.

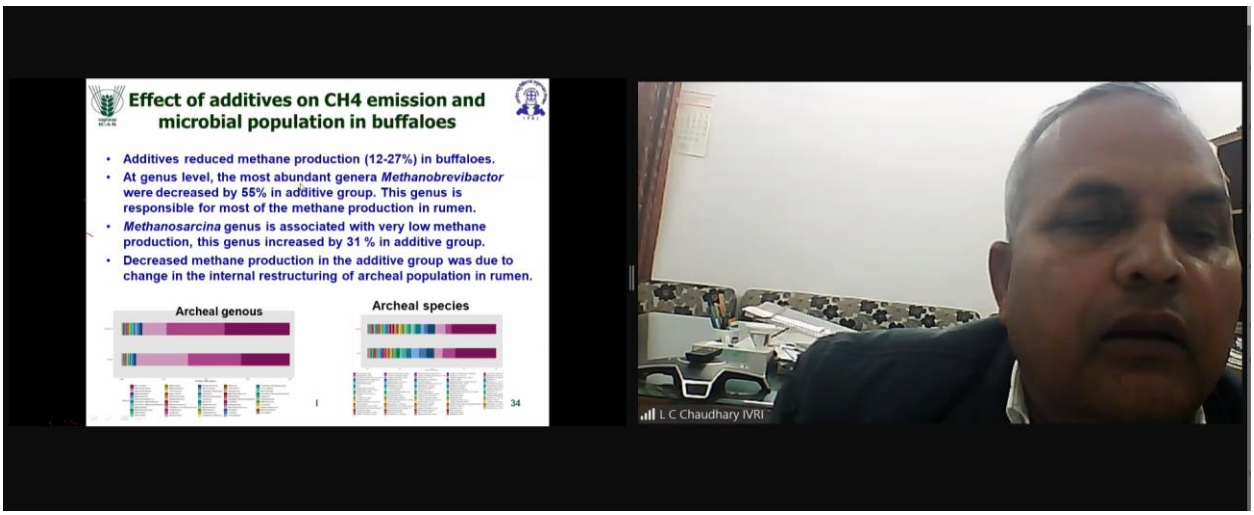
The second lecture was delivered by **Dr Amol K Bhalerao**, Scientist, TEC, ICAR-IVRI, Pune, on the topic **"*Farmer's Perception about the Climate Change Impact on Livestock, Adaptation, and Mitigation*"**. During his presentation, Dr Bhalerao discussed various approaches to enhance awareness among farmers about the effects of climate change on livestock. He provided insights into practical adaptation and mitigation strategies that can help address these challenges

effectively. Additionally, he introduced the ‘Delphi Technique’ as a valuable tool for forecasting the development of specific sectors in any region, highlighting its potential for strategic planning and decision-making in livestock management under climate change scenarios.



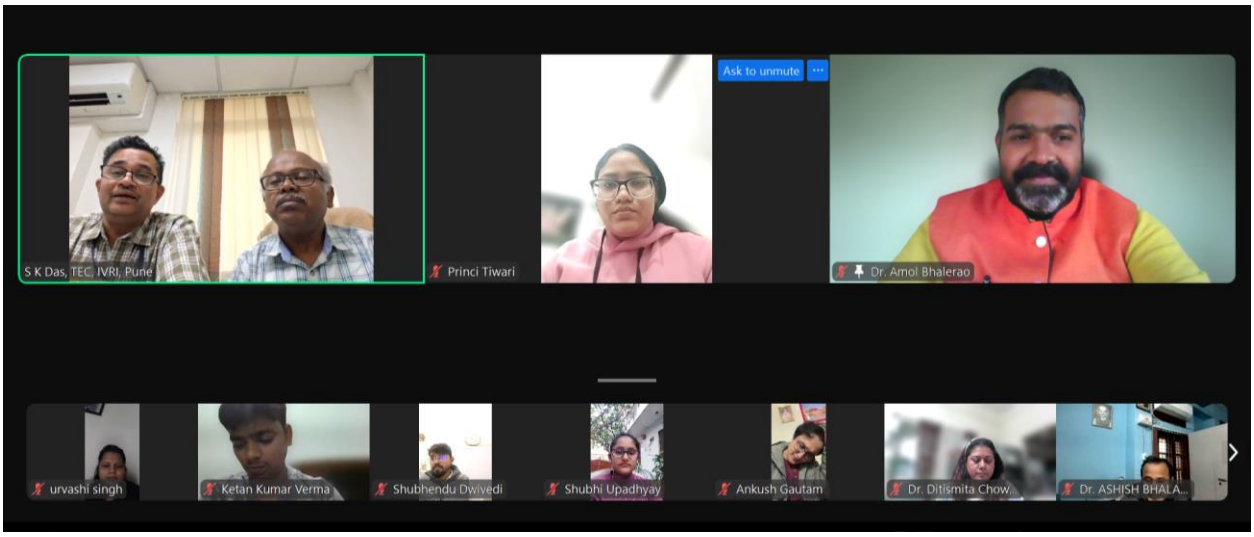
(Dr NH Mohan, delivering session in online training)

On the fifth day (24th January 2025), first talk was delivered by **Dr LC Chaudhary**, Head (Animal Nutrition), ICAR- IVRI, Izatnagar (UP) on the topics **“*Nutritional interventions for adaptation and mitigation of climate change impact in livestock*”**. In his deliberation he informed about different nutritional technologies developed for mitigation of CC impact on livestock.



(Dr LC Chaudhary, Head, Division of Animal Nutrition, ICAR-IVRI, Izatnagar delivering online lecture)

Thereafter, **Dr Sanghratna V Bahire**, Scientist, TEC, ICAR - IVRI, Pune delivered session on "***Impact of climate change on the occurrence of animal diseases – Its ameliorative measure***". He described how adverse events of climate change causing prevalence of livestock diseases, particularly emerging viral disease, vector borne disease and zoonotic disease etc. and way forward to reduce the impact.



(Glimpse of valedictory session, valedictory address by Dr HP Aithal, SIC, TEC Pune)

Following the conclusion of the sessions, feedback was collected from the participants. Several participants expressed their gratitude to the TEC, ICAR-IVRI for organizing such a highly informative and beneficial training program. At the outset, Dr AK Bhalerao provided guidance on the submission of feedback forms and assignments, ensuring that all participants were aware of the procedural requirements. Subsequently, Dr SK Das delivered a concise overview of the five-day training programme, summarizing its key highlights and achievements. Dr HP Aithal, Station in-charge, addressed the participants and congratulated them on the successful completion of the programme, acknowledging their active participation. Finally, Dr SV Bahire, extended a formal vote of thanks, appreciating the contributions of all speakers, organizers and participants in making the training a success.