



**INSTITUTE OF FOREST PRODUCTIVITY**  
(INDIAN COUNCIL OF FORESTRY RESEARCH & EDUCATION)  
RANCHI

**MONTHLY RESEARCH SEMINAR REPORT**  
**October 04<sup>th</sup>, 2021**

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**THEME – PLANT PHENOLOGY**

**Topic: Effect of climate change on the phenology of ecosystem processes having direct impact on plant productivity and survival**

Speaker: Dr. Blessing Roy Suchiang

Scientist–B, Forest Ecology & Climate Change Division, Institute of Forest Productivity, Ranchi, Jharkhand

**Topic: Forest Pollination Services: Current Status, Future Projections and Scope**

Speaker: Dr. Preeti S. Virkar,

Ecologist, Navdanya, Dehradun

The Monthly Seminar started with the welcome and opening remarks from Ms. Ruby Susana Kujur, Scientist-C, followed by the talk from the speakers. Dr. Blessing Roy Suchiang talked about climate change and its prevalence and how it affects the plants' phenology and ecosystem processes which ultimately affects the productivity and survival of plant species. He emphasized the need for research in the field of plant phenology as it affects many tangible and intangible services that human-derived from. Dr. Preeti S. Virkar talked about the importance of pollinators and their conservation. She emphasized that due to anthropogenic disturbance the population density of the pollinators is decreasing day by day. She also corroborated with the talk of Dr. Blessing Roy Suchiang that due to changes in phenology of the plants there is a mismatched interaction between plant flower emergence and pollinators' emergence which does not synchronize and will eventually affect the plant productivity and survival in the long run. Therefore, scientific research must carry on in these aspects to improve the forest productivity, its services and conservation of biodiversity in it.

The seminar was concluded after the critical discussion on the presentations and formulation of future strategies and networking under the chairmanship of Dr. Nitin Kulkarni, Director, Institute of Forest Productivity, Ranchi. A vote of thanks was proposed by Ms. Ruby Susana Kujur, Scientist – C.

## **Expected outcome of the seminar:**

### **1. Identification of research needs:**

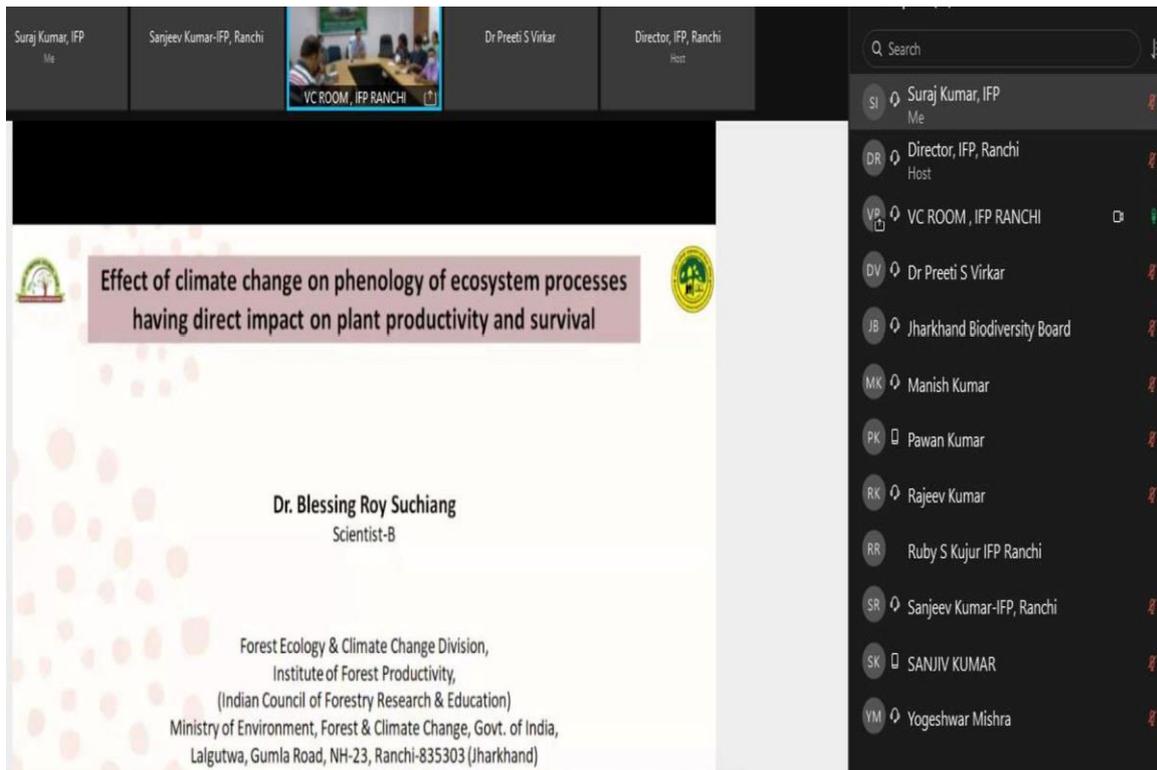
- Phenology studies of plant species specific and ecosystem type/forest type specific in eastern India.
- Plant phenology of forest ecosystem concerning the effect of climate change is scanty and needs to carry out.
- Keystone plant species must be taken as high priority as it support the forest ecosystem.
- Pollinators' diversity survey and study on their interaction with plant species.

### **2. Formulation of future strategies/road map**

- Identification of the drivers of phenological events, especially interactive effects among abiotic cues, including temperature, moisture, photoperiod, precipitation, etc.
- Phenological responses of tropical or sub-tropical and temperate trees to climate change.
- Cryptic phenological responses to the climate change manipulations, such as wood and root phenology and dormancy onset and release.
- Impact of phenology on biotic interactions (trade-offs between leaf-out timing or competition for resources such as nutrients, water, and light) and mismatch.
- Modeling phenology changes under future climate change conditions.

### **3. Networking research options & opportunities**

- Networking among forestry fraternity like research institutes, educational institutions, and governments to collect data on plants phenology, pollinators phenology and diversity, and climate.
- The data collected need to be centralised, manage and disseminate for scientific purposes.



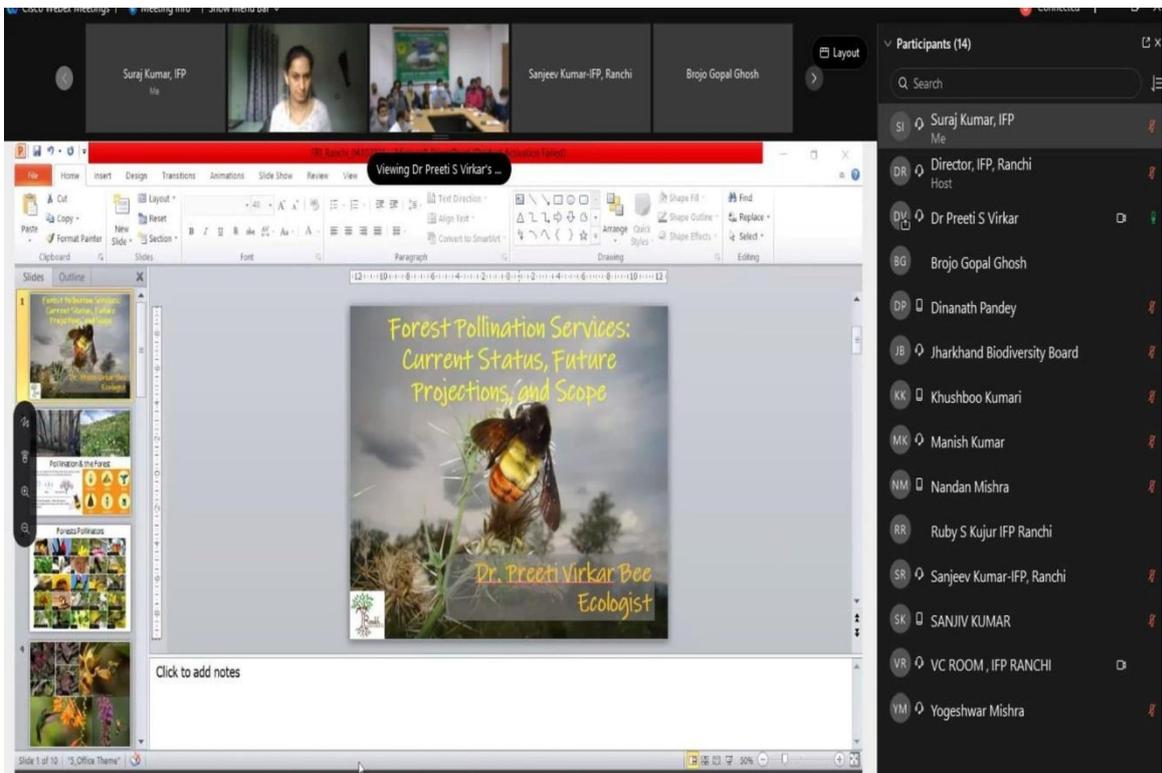
**Glimpses of the Seminar**



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