



## पारि-पुनर्स्थापन वन अनुसंधान केंद्र प्रयागराज FOREST RESEARCH CENTRE FOR ECO-REHABILITATION, PRAYAGRAJ

In House Seminar on “Biodiversity Conservation and Restoration” was organized by Forest Research Centre and Eco Rehabilitation, Prayagraj on 24/01/2020. Dr. A. N. Shukla, Scientist C, Botanical Survey of India, Central Region, Prayagraj was the Key speaker on the occasion.

Dr. Sanjay Singh, Head, FRCER, Prayagraj welcomed the guest and participants of the Seminar. He briefed about the role of this Centre in the Biodiversity Conservation and Restoration of Uttar Pradesh. He also emphasized the relevance of the in-house seminar observed that the recommendations of the seminar will be helpful for planning in further research in the arena of biodiversity conservation and restoration.

Coordinator of the Seminar Dr. Kumud Dubey, Scientist, FRCER, Prayagraj presented her experiences on “Biodiversity Conservation and Restoration” in her lecture on the scientific approach towards the restoration of the plant species. She explained about the strategies for restoring a degraded ecosystem in detail and explained about the importance of different ecological indices as indicator in restoration. She also highlighted the various threats for biodiversity conservation and the difficulties which may occur in restoration of mined areas and how to solve them.



Dr. A.N. Shukla Scientist, BSI Prayagraj presented his lecture on “Biodiversity Conservation of a Biosphere Reserve and Restoration”. He described about different Biosphere Reserve, National Parks and Sanctuaries. He explained the biodiversity of the Indian continent and the other some important species of the plants and animals for conservation of the species before answering different queries of the participants in interaction session.

Dr. Anubha Srivastava had informed about the application of mulches in reclamation and its importance in moisture conservation. Dr. Anta Tomar, Scientist, E, FRCER, Prayagraj emphasized on the relevance of key stone species in restoration and proposed vote of thanks.

Dr. S.D. Shukla, Ratan Gupta, researchers, students/researchers from different organizations were present during the seminar and actively participated.



## **Recommendations:**

### **Identification of Research Needs:**

- Conservation of habitats that is relatively fragile and susceptible to natural or human-induced threats.
- Researches focusing on the rarity, areas of occupancy and total known populations of a given species to assess the degree of threat to that species for conserving particular species.
- To assess the biological diversity of particular area which may be used as a criterion and prioritizes the degree to which an area has a relatively higher number of biotopes, habitats, species or genetic diversity.
- To develop sustainable restoration strategy for a fragile and degraded ecosystem

### Formulation of Future Strategies/ Road Map:

- To conserve the biodiversity, habitat destructions should be avoided.
- For biodiversity conservation, introduction of the invasive species should be restricted.
- For biodiversity conservation, harvesting of any forest produce should be done in sustainable manner and overexploitation should be avoided.
- To restore an area that may develop into a functional ecosystem in due course of time; an innovative mechanisms should be developed to make it self-enforcing and self-sustaining.
- Beneficial microbes should be used to develop self sustainable restoration procedure.
- Judicious selection of species for the restoration. Local species with multiple uses that yield forest products to support livelihoods of the communities may be in priority.
- Leguminous species, because they enhance soil microbial biomass and N mineralization and promote growth of other saplings growing in their vicinity. It improves the soil conditions.
- As several keystone species, also socio-culturally valued, their inclusion in ecological restoration programme may be helpful and may be included in restoration programme. Examples of such species are *Ficus religiosa* and *Ficus bengalensis*, *Bombax malabaricum*, *Prosopis cineraria*, and *Acacia* species.
- Selection of species attracting to wildlife (such as fruit and nectar or perching and nesting sites), may be fruitful. These species attract birds which may disperse seeds of other species into the restoration sites and activate it.
- Restoration programmes should address both local challenges and the connected global issues.

### Networking Research Option and Opportunities:

- Collaboration with State Forest Department, Universities and other Research Organization should be done for networking for restoration programmes.
- Publication of Technical Bulletins for site specific Restoration Package.

