

## Dr Dhirender Kumar

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### On-going Research Projects

- Techniques for protecting infrastructure, forest plantation and utilization of pine needles funded by Govt. of Himachal Pradesh under Research and Development Fund Scheme (Co-PI)

### Important Research Publications

- **Kumar D**, Thakur C L, Bhardwaj D R, Sharma N, Sharma P and Sankhyan N. 2022. Biodiversity conservation and carbon storage of *Acacia catechu* Willd. dominated northern tropical dry deciduous forest ecosystems in north-western Himalaya: Implications of different forest management regimes. *Frontier in Environment Science*. DOI: <https://doi.org/10.3389/fenvs.2022.981608>.
- **Kumar D**, Bhardwaj DR, Sharma P, Sankhyan N, Al-Ansari N and Linh NTT. 2022. Population Dynamics of *Juniperus macropoda* Bossier Forest Ecosystem in Relation to Soil Physico-Chemical Characteristics in the Cold Desert of North-Western Himalaya. *Forests*, **13**(10):1624.
- **Kumar D**, Bhardwaj DR, Thakur CL, Sharma P and Ayele GT. 2022. Vegetation Shift of *Juniperus macropoda* Boisser Forest in Response to Climate Change in North-Western Himalayas, India. *Forests*, **13**(12): 2088.
- **Kumar D**, Bhardwaj D R, Sharma H, Sharma P and Pala AN. 2022. Species diversity assessment along altitudinal gradient in cold desert *Juniperus* forest of North-Western Himalaya. *Indian Forester* **148**(7):459-466 DOI: <https://doi.org/10.36808/if/2022/v148i7/156300>
- Bhardwaj DR, Kumar A, Pala NA, Sharma P, **Kumar D**, Kumar A and Zahoor S. 2022. Carbon density and C-sequestration of tree plantation ecosystems in the mid-hills of the NW-Himalayas: Implications for climate change mitigation. *Land Degradation and Development* 33(12): 2115-2126. DOI: <https://doi.org/10.1002/ldr.4307>
- Sharma P, Bhardwaj DR, Singh MK, Nigam R, Pala NA, Kumar A, Verma K, **Kumar D** and Thakur P. 2022. Geospatial technology in agroforestry: status, prospects, and constraints. *Environment Science and Pollution Research*. <https://doi.org/10.1007/s11356-022-20305-y>
- Panwar P, Mahalingappa DG, Kaushal R, Bhardwaj DR, Chakravarty S, Shukla G, **Kumar D**, ... and Gurung T. 2022. Biomass production and carbon sequestration potential of different agroforestry systems in India: A Critical Review. *Forests*. **13**(8):1274. <https://doi.org/10.3390/f13081274>
- Navale MR, Bhardwaj DR, Bishist R, Thakur CL, Sharma S, Sharma P, **Kumar D** and Probo M. 2022. Seasonal variations in the nutritive value of fifteen multipurpose fodder tree species: A case study of north-western Himalayan mid-hills. *PloS one*, **17**(10): p.e0276689.

- Bhardwaj DR, Tahiry H, Sharma P, Pala AN, **Kumar D**, Kumar A and Bharti. 2021. Influence of aspect and elevational gradient on vegetation pattern, tree characteristics and ecosystem carbon density in North-western Himalayas. *Land* **10**, 1109 DOI: <https://doi.org/10.3390/land10111109>
- Garima, Bhardwaj D R, Thakur C L, Kaushal R, Sharma P, **Kumar D** and Kumari Y. 2021. Bamboo based agroforestry system effects on soil fertility: Ginger performance in the bamboo subcanopy in the Himalayas (India). *Journal of Agronomy* 1-14. DOI: <https://doi.org/10.1002/agj2.20684>

## **Awards & Recognitions**

- **Young Achiever Award-2022**, Agricultural Technology Development Society (ATDS), Ghaziabad, Uttar Pradesh