

Uma Shankar, Ph. D. (NEHU)
Professor



Professor Uma Shankar specializes in Plant Ecology with a focus on plant biodiversity, and structure, function and conservation of terrestrial ecosystems. Prof. Shankar's research encompasses varied ecosystems in all three hotspots of biodiversity in India, viz., the Himalaya, Western Ghats and Indo-Burma.

He developed a package for eco-restoration of Cherrapunji, one of the wettest spots on the earth. He has the distinction of investigating two important pathways of forest management in northeastern India, namely 'jhum' and 'taungya'. His work on non-timber forest products in Biligiri Rangan Hills has received wide international attention and citation. He has been investigating the global hypothesis that successful in-situ conservation of biodiversity rests in a balanced trade-off between the extracted quantities of non-timber forest products that are extracted by the local tribes for subsistence as well as cash income, and renewable productivity of these products. He developed value addition models for amla (*Phyllanthus emblica*), broomstick (*Thysanolaena maxima*) and plum yew (*Prunus nepaulensis*). He devised a technique to precisely quantify the fuelwood pressure on a given forest area with unknown entry/exit points. He recorded the highest tree diversity among Indian sal forests from the Mahananda Wildlife Sanctuary in Darjeeling. He has been working on the strategies of the tree species during regenerative phase and found in *Dipterocarpus macrocarpus* that the seed size (weight-dimension relationships) can predict germination success and early seedling growth, and assort the seeds that would germinate and establish healthy seedlings. He investigated the existence of a 'neighbour effect' among sibs growing within a leguminous fruit.

Prof. Shankar has over 50 research publications including an edited book and an edited abstract volume. He has completed several research projects funded by MoEF, IERP, etc. Currently, Prof. Shankar is coordinating a multi-institutional research project funded by the DBT on "Mapping and quantitative assessment of geographical distribution and population status of plant resources of eastern Himalayan region" with collaborators from institutions such as NERIST, RFRI, IBSD, GBPIHED, Assam University, Nagaland University, Mizoram University and Tripura University. He is guiding masters and doctoral students. Under his supervision, six students have completed their master degree dissertations, and one scholar (Ms. Biswarupa Ghosh) has been awarded Ph.D. degree on "Regeneration ecology and sustainability of harvest of bay leaf (*Cinnamomum tamala* Fr. Nees, Lauraceae) in Meghalaya". Currently, six research scholars are pursuing doctoral research with him.

Prof. Shankar has spent his career at reputed institutions such as Tata Energy Research Institute (1992-97), G. B. Pant Institute of Himalayan Environment & Development (1997-2002), George Perkins Marsh Institute at Clark University, USA (2003) and North-Eastern Hill University (NEHU), Shillong. Prof. Shankar's research has got wide recognition. The Council of Scientific and Industrial Research selected him for independent Research Associate Award in 1992. The Department of Science and Technology awarded him the Young Scientist Project Award under SERCYS scheme in 1993. The Indian National Science Academy awarded him the INSA Young Scientist Medal in 1999 for his study of nutrient cycling and productivity of humid grassland ecosystems and their management. The Council of Science and Technology of Uttar Pradesh recognized his contributions with the CSTUP Young Scientist Award in 2002. Prof. Shankar is a recipient of the BOYSCAST Fellowship of the DST in 2003, Honorary Fellow of the Ashoka Trust for Researches in Ecology and the Environment (ATREE), Bangalore and FNIE from the National Institute of Ecology, New

Delhi. The University of Massachusetts, Boston invited him as a short-term scholar in 1996. He is a Fellow of the National Institute of Ecology (FNIE) since 2006. He is a life member of several scientific societies in the country. Prof. Shankar has intensively worked in tandem with the tribal communities in northeastern region of India during last two decades.