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XXXII ANNUAL CONFERENCE OF INDIAN ASSOCIATION FOR ANGIOSPERM TAXONOMY AND NATIONAL SYMPOSIUM ON

"The Contribution of Angiosperm Diversity to Human Wellbeing and the Risks Associated with its Decline"

November 11th - 13th, 2022

Abstracts

Orgnized by

Department of UG, PG and Research in Botany
Karnataka University's Karnataka Science College,
Dharwad, Karnataka - 580 001

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The Contribution of Angiosperm Diversity to Human Wellbeing and the Risks Associated with its Decline

Prof. Y.D. Tiagi, Prof. V.V. Sivarajan Gold Medal lectures, Prof. Kameswara Rao Endowment Lecture, Lead Lectures and Abstracts of 32nd Annual Conference of Indian Association for Angiosperm Taxonomy and National Symposium

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RSR 03

Prediction and Profiling Niches of Threatened Tree Species Contributing to IUCN Status Assessment, Ecosystem Based Conservation and Niche Specific Restoration

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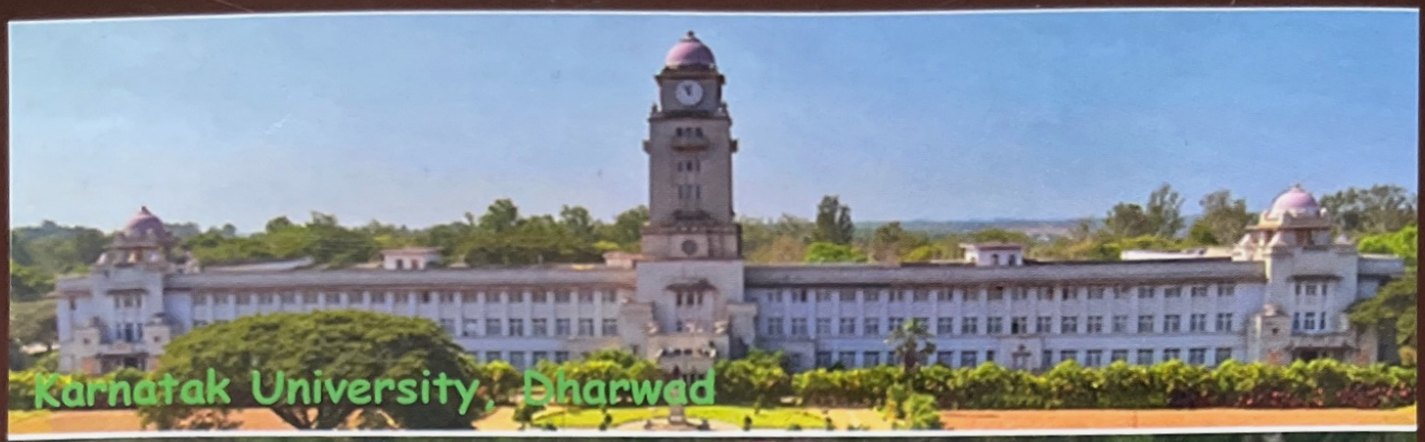
Most of the conservation and management practices unable to accommodate the kaleidoscopic vision of ecological complexity even in species focused planning. Ecorestoration sprouting everywhere but lack minimum protocol to ensure ecological integrity, genetic diversity, factors of Eltonian niche, reduce negative impact on other species niches and most of them lack ecosystem-based approach. An improvised method combining bioclimatic species distribution modelling and niche profiling of threatened tree niches as an inclusive space for its associated flora and fauna is experimented here for the Western Ghats region. Taxonomic and population data of 30 threatened trees species used here. Limitations of bioclimatic prediction of niche modelling covered through developing specific standardized data of terrain, landuse and vegetation of the Western Ghats for the first time. Species associations specific to the niches are profiled to predict suitable niches for effective conservation planning, management and ecorestoration. Taxonomic scrutiny and population data collected were used for reassessment using SIS tool and successfully submitted to IUCN for 24 species of which 9 published in the official red list. Niche models and profiles of 15 trees having differential distribution patterns were used here for niche specific identification potential conservation and restoration sites. The niche-based conservation and restoration plans were integrated to forest conservation plans, biodiversity strategy action plans and plans of the BMC. Species such as *Diospyros crumenata, Syzygium occidentale, Humboldtia vahliana, Aporosa bourdillonii, Hopea ponga* and their associates were successfully germinated and used for ecorestoration in the identified potential sites with multi stakeholder participation including MNREGA.

Keywords: Threatened, IUCN, MNREGA, Western Ghats, BMC



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