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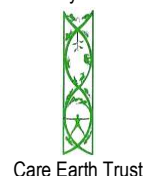
SECOND CONFERENCE

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PROGRAMME AND ABSTRACTS

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**Potential habitat modeling for *Rhinoceros unicornis* (the Great Indian One-Horned Rhino): a geo-statistical analysis****SHIVANI AGARWAL^{1,2}, G. AREENDRAN³ & PAMPOSH BHAT³****Abstract**

Increasing human population and expanding human dominated landscapes have resulted in natural land cover degradation and destruction, which has further resulted in the loss of species diversity and reduced ecological services. *Rhinoceros unicornis* (Great Indian One-horned Rhino) is one of the vulnerable species, which is facing a constant threat due to habitat loss. The present study was aimed at identifying suitable habitat area for the rhino species using geospatial tools. Seven variables, i.e. Road network, Railway network, National highways, Digital elevation model (DEM), Land use land cover (LULC) and Settlements and Protected areas (used as core habitat area), were identified as important factors in determining the habitat area. Weighted-sum technique was used to combine the weightage of each variable layer to prepare the habitat suitability map. This map was further used for gap analysis and identifying potential biological corridor for the rhino species across its range. The corridor identification was done by using Cost Distance analysis. The study highlights the importance of Remote Sensing and GIS in wildlife management and conservation planning. Geospatial tools help in identifying suitable area at spatial scale and thus help in understanding the biogeographic distribution of the species. This spatial information incorporated with other socio-economic data can be used for reserve planning, species reintroduction, better conservation policy and management planning.

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