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**FORUM NAZIONALE
DELLA BIODIVERSITÀ**

(La biodiversità è la soluzione)

FORUM NAZIONALE DELLA BIODIVERSITÀ

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Posters

Integrating the NBFC BEF monitoring network with old-growth forest sites: assessing the role of age and management on biodiversity and ecosystem function relationships

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The National Biodiversity Future Center (NBFC) has established a network of 190 sites to assess the relationships between Biodiversity and Ecosystem Function (BEF). The network focuses on seven key forest tree species along a pedo-climatic gradient. A contrast between young and old-growth forests was included in the network to assess BEF relationships within old-growth forests. Eight forest sites, which are potential candidates for the designation as "boschi vetusti" (i.e., old-growth forests, Ministerial Decree 18.11.2021), were included in the network and investigated with a cross-taxon methodology, coupled with a nearby plot of the same forest type but younger. The protocol includes recording DBH, height, occurrence of dendro-micro-habitat within

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1-hectare plots, for all trees within the plot, assessment of standing and lying deadwood, flora, and presence of seedlings. Structural information will be enriched using cloud points acquired by UAV with LiDAR. The investigation includes the survey of deadwood insects, fungi, lichens and bryophytes. Information on fauna (i.e., vertebrates) is based on historical data kindly provided by local forest authorities (e.g., FoReSTAS in Sardinia). Furthermore, a paired sampling of eDNA is planned in the old-growth forests and in nearby control areas to get information on soil, litter and canopy biodiversity. This case study exemplifies how integrating the NBFC BEF monitoring network with old-growth forest ecosystems can provide valuable insights into biodiversity assessment and forest conservation.