

Background: For prioritising practical conservation measures in areas of high endemic plant diversity, a fine-scale hierarchy of sites needs to be established. In this context, conservation sites designed at local and regional levels are considered a network of interconnected areas.

Aims: The main aim was to identify two hierarchical levels of a network of conservation sites, called 'micro hotspots' and 'nano hotspots', and test their efficiency for achieving conservation objectives across the island of Sardinia, Mediterranean Basin.

Methods: We analysed the spatial distribution of endemic vascular plant species (EVPS) richness. Additionally, the area, perimeter, connectivity and surplus costs for the protection of all endemic plant populations were used as ranking criteria for a hierarchical classification.

Results: We identified eight micro hotspots and 82 nano hotspots. Amongst the three possible solutions compared, the integrated network of micro and nano hotspots resulted in more effective conservation than any of the single-level network solutions with only micro or nano hotspots, and it included 89% of all EVPS in a relatively small areal extent.

Conclusions: The identification of hotspot networks at the regional level allowed determining priority areas to implement conservation efforts for EVPS. The integration of micro hotspots with nano hotspots resulted in the most effective network from both conservation and economic perspectives. We suggest that our model may provide an effective tool for integrated and effective conservation actions in the Mediterranean Basin.