

A refuge-outwards approach to ecological recovery that prioritises wild trees



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Trees for Life

What are wild trees?

A scenic landscape featuring a large mountain range with green slopes and rocky outcrops. In the foreground, there is a lush green field with several trees, including a prominent one with a yellowish canopy. A small pond is visible in the middle ground.

**Trees that returned naturally
after the last ice age**



Wild trees recruit and spread through natural regeneration

Why do wild trees matter?



Reflect ecological continuity



**Often last refuges for
specialist species**



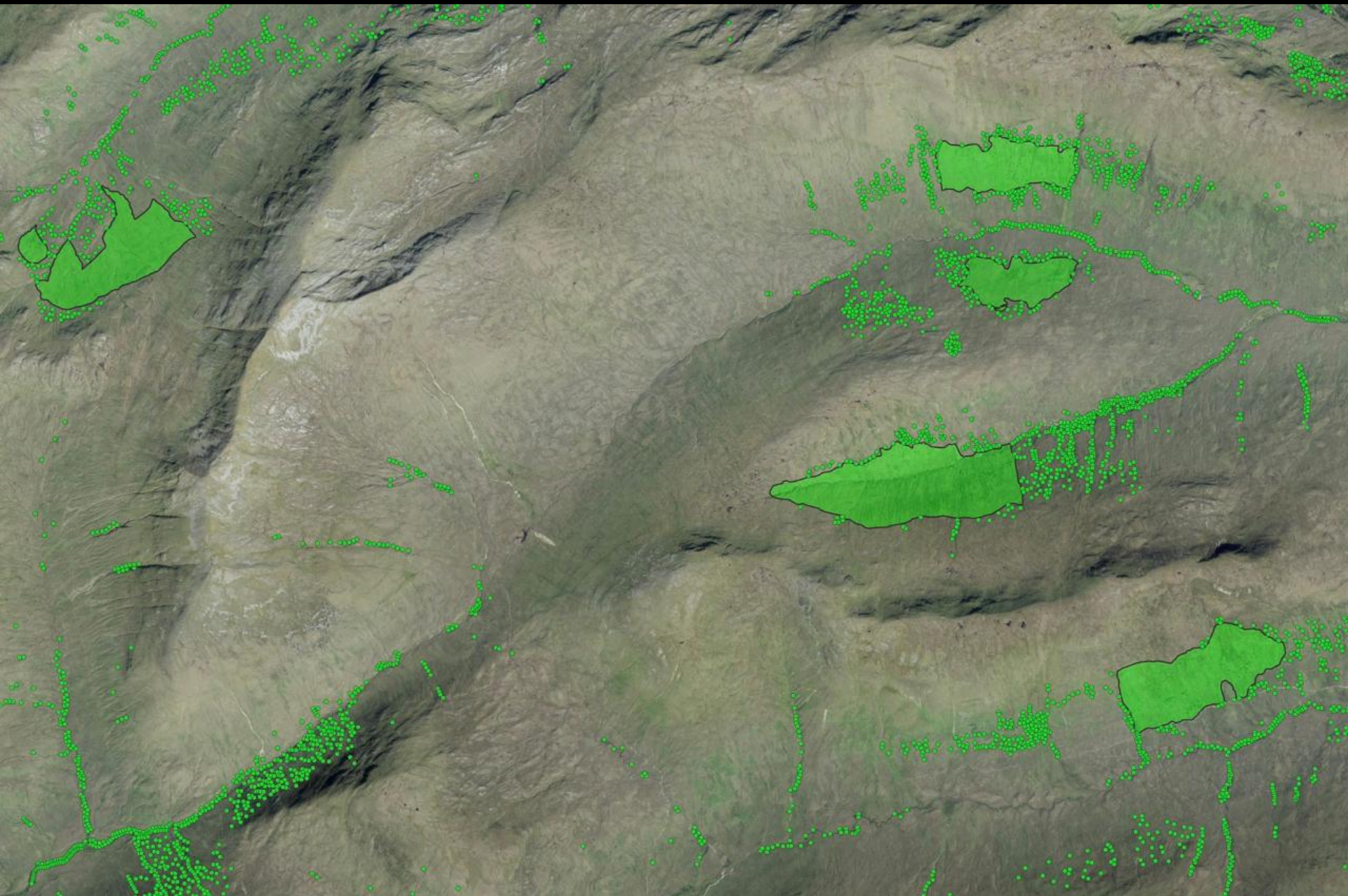
**High genetic diversity
= potential resilience**

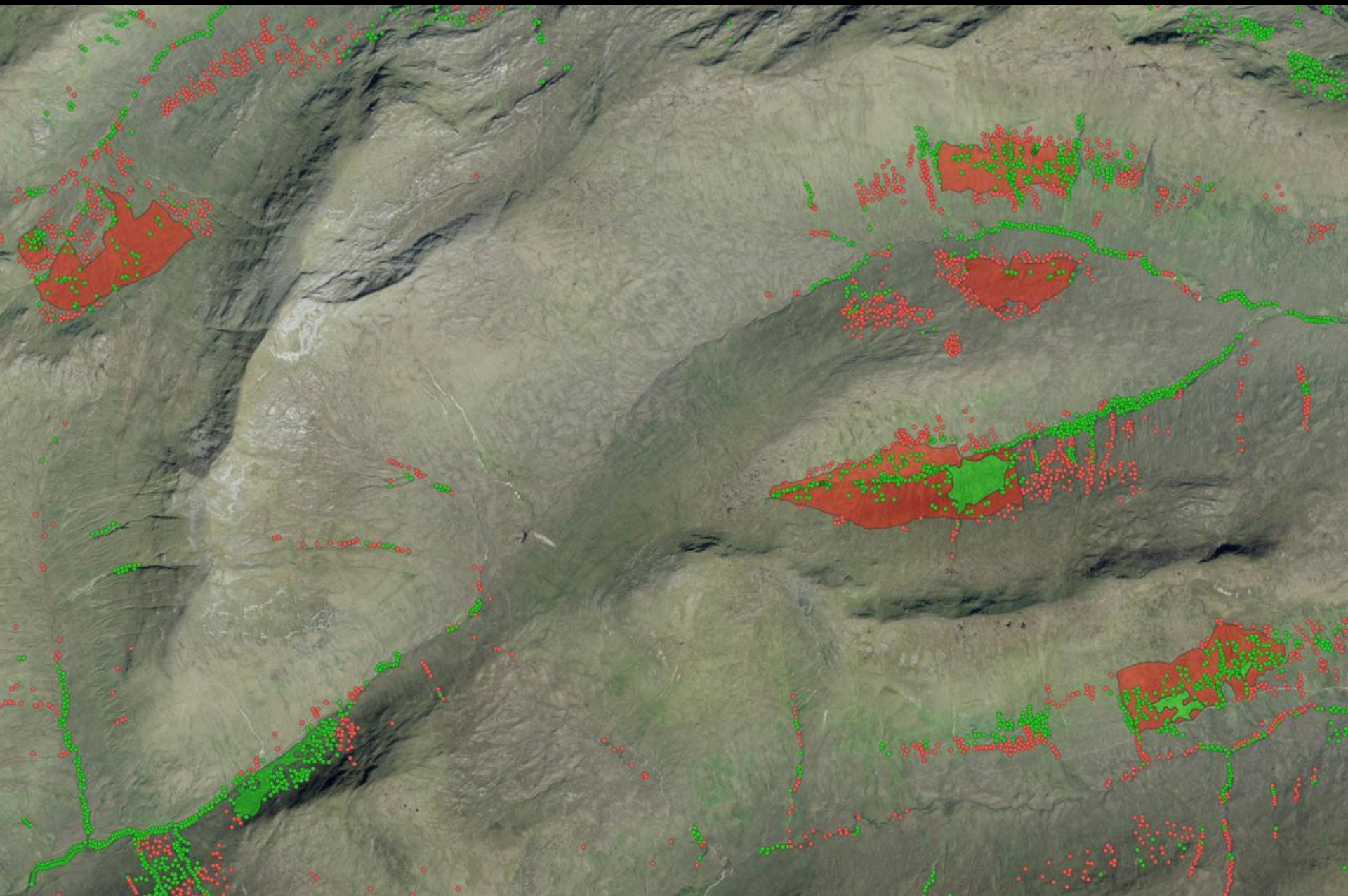


Cultural connections



**Wild trees are threatened across
much of the Highlands**







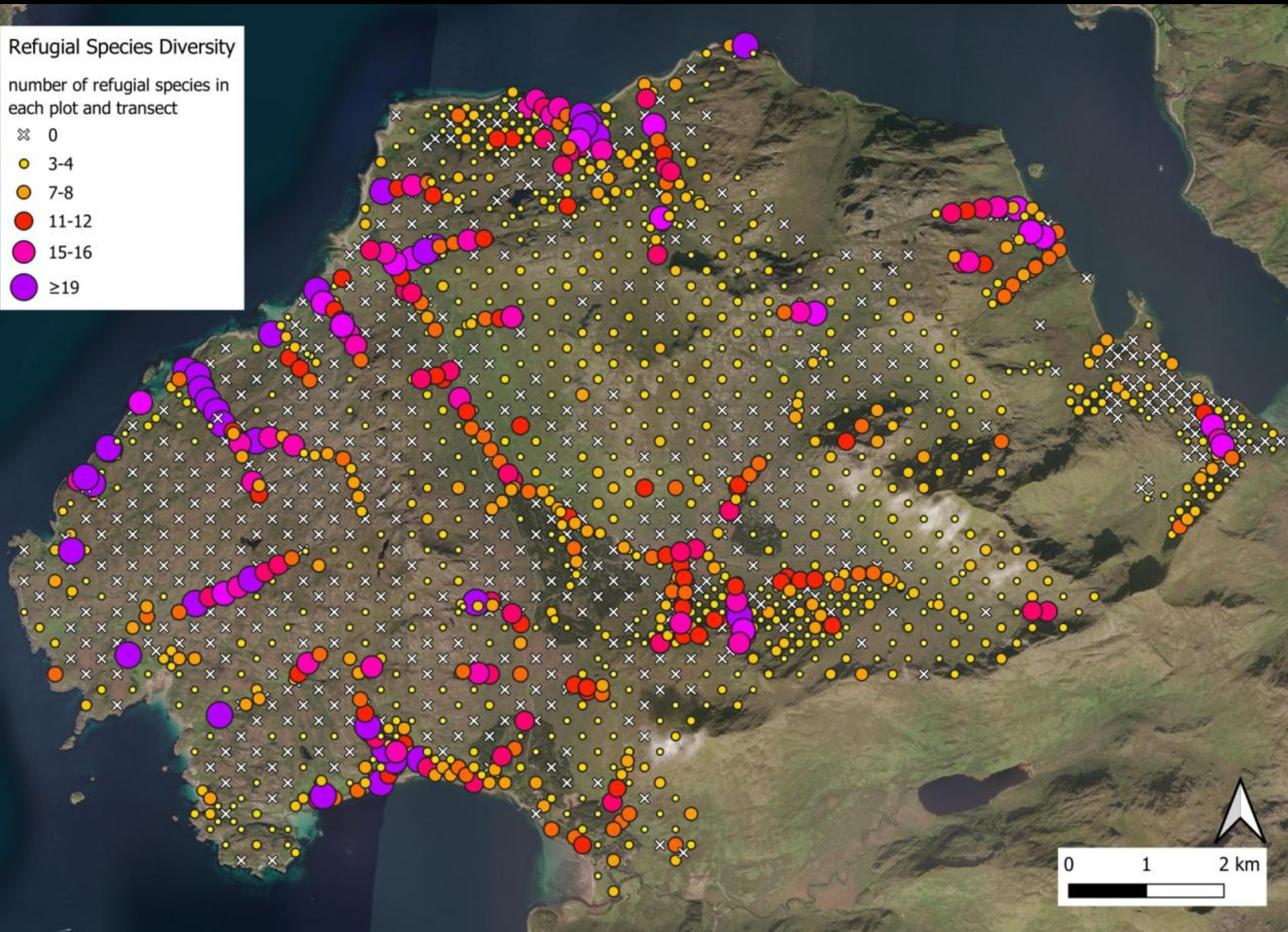
**Heavy browsing
pressure prevents
recovery**

**Planting prioritised
over wild trees**



Refugial Species Diversity

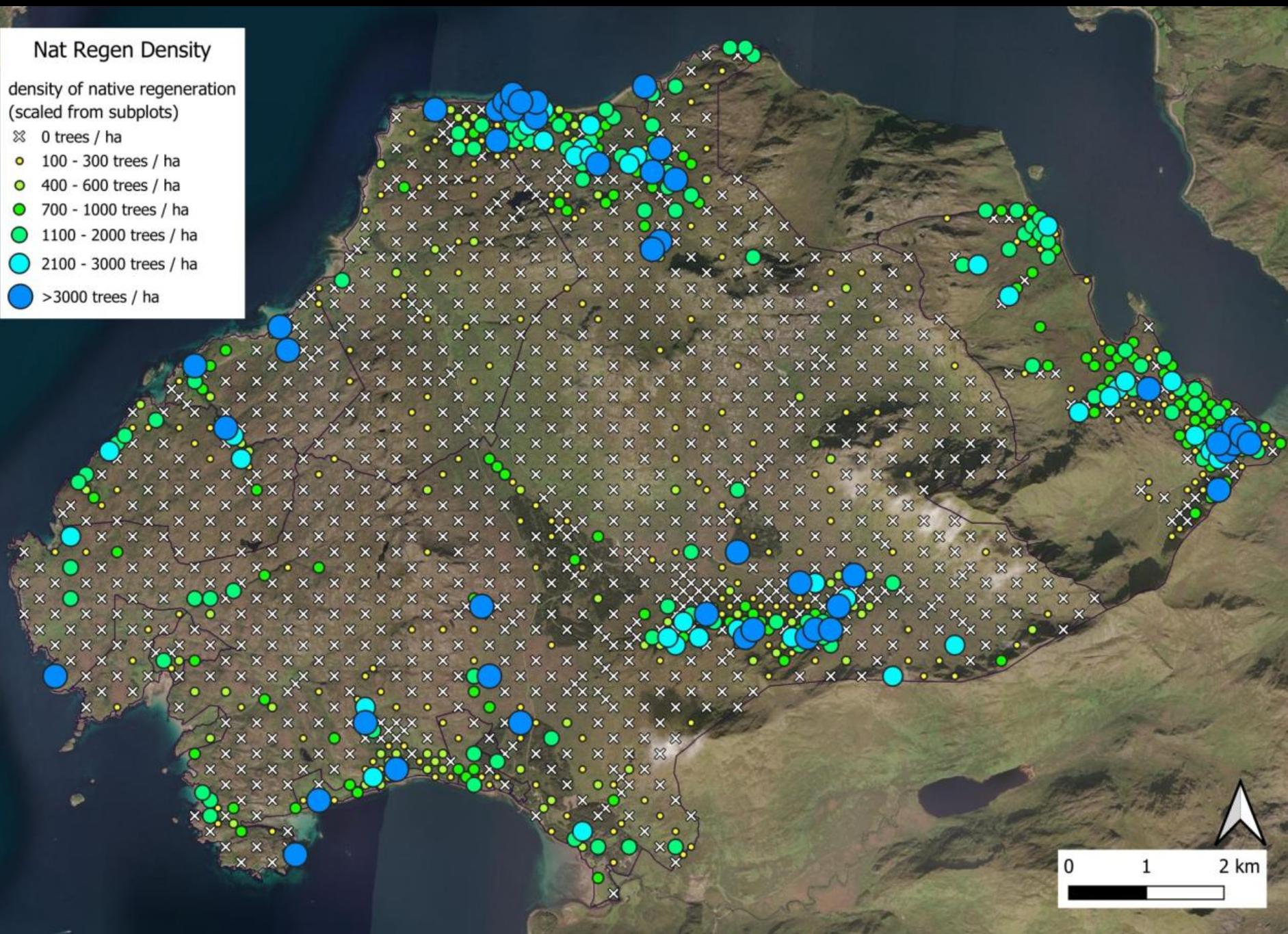
number of refugial species in
each plot and transect



Nat Regen Density

density of native regeneration
(scaled from subplots)

- ⊗ 0 trees / ha
- 100 - 300 trees / ha
- 400 - 600 trees / ha
- 700 - 1000 trees / ha
- 1100 - 2000 trees / ha
- 2100 - 3000 trees / ha
- >3000 trees / ha



**What happens when
we prioritise wild trees?**



Landscape scale deer management



How and where should Scotland restore and expand the woodlands we need for biodiversity?

- Focusing recovery efforts towards wild tree refuges can restore and expand woodland in tandem
- This can also allow diversity to spread from hotspots into the wider landscape
- Allows for recovery through natural regeneration and colonisation, minimising need for planting
- Compartmentalised management (e.g. deer fencing) is less effective than landscape-scale management
- Aligning incentives with a refuge-outwards approach is a key challenge