The EUFORGEN Programme and the Pan-European strategy for genetic conservation of forest trees

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Civil Dialogue Group on Forestry and Cork
Brussels, 8th June 2017

Outline

1. Conservation of forest genetic resources
2. EUFORGEN
3. Pan-European strategy for genetic conservation of forest trees

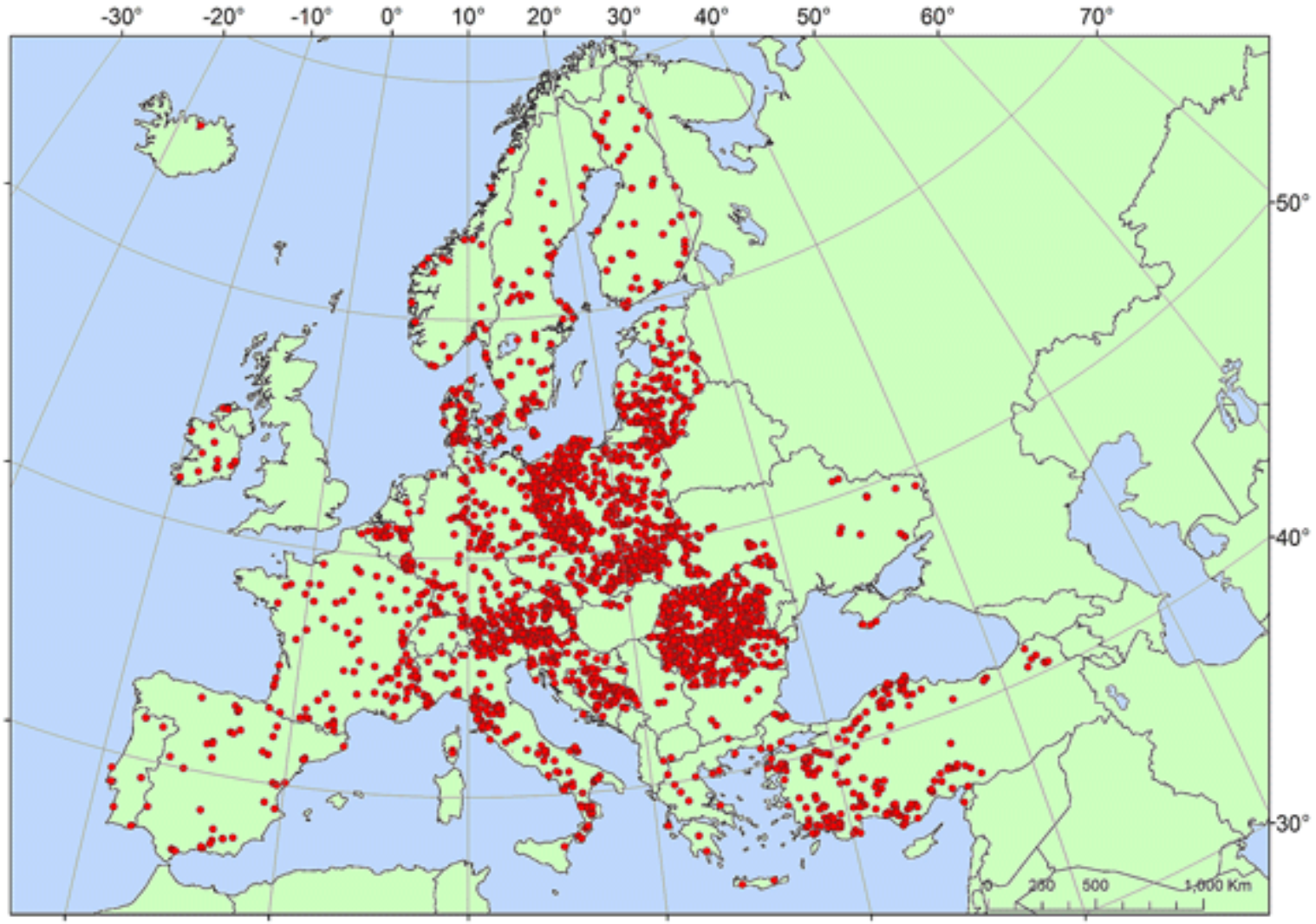
Importance of forest genetic diversity

provides the **adaptive potential** for a species (or a population) to cope with climatic changes and future challenges

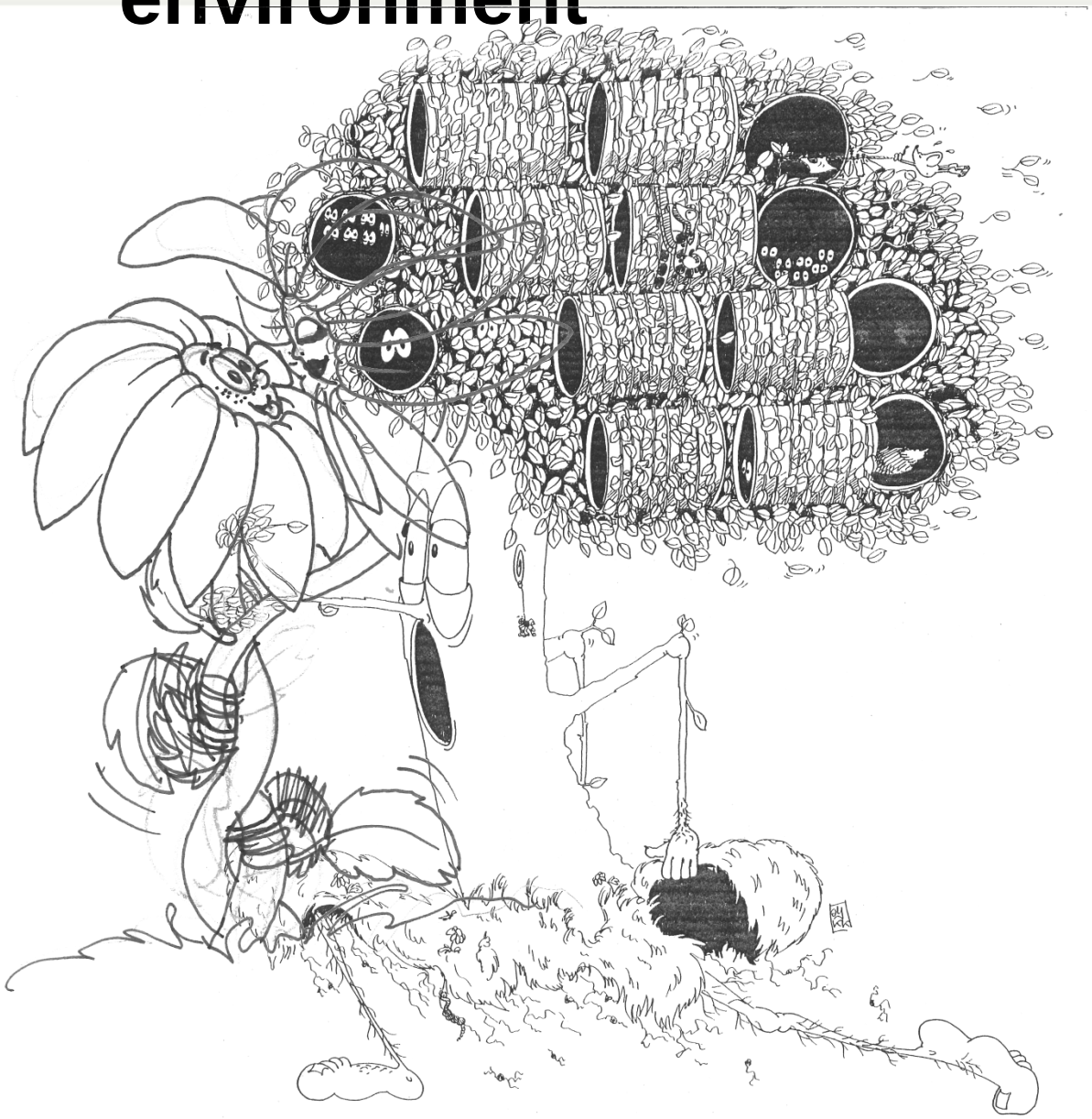
Conservation of forest genetic resources

Forest trees genetic diversity needs to be **conserved in the forests together with the ecosystems** they grow in

Dynamic genetic conservation units



How do trees cope with unsuitable environment



effective regeneration

Forest management

It is a misconception that the best way to protect a forest is to leave it alone – and with climate change gathering pace and the world's population rising, active forest management is more important than ever.

Forests cover roughly one third of the world's surface and provide vital environmental services such as climate regulation, soil protection and water management. They also produce food and raw materials, which sustain hundreds of millions of people and support economies.

But the world is changing. Temperatures are predicted to rise, due

Swiss forests to be rejuvenated

Published: 17/10/2016

Seedling of *Picea abies*

Switzerland recently adopted a new forest law that is the first to specifically link forest protection with adaptation to climate change. The plan allows for the rejuvenation of forests, enhancing their genetic adaptive capacity and thus helping to secure their long-term sustainability. The new law allows for assisted migration of tree species and distant but suitable sources of forest reproductive material.

The new policy may result in a reduction of the amount of CO2 stored as forest biomass in the short term. Longer term, it is indispensable to ensure the survival of the forests.

According to Rolf Manser, Head of the Forest Division of the Swiss Federal Office for the Environment,

IUCN on track to give protected status to forest genetic conservation units

Published: 22/11/2016

EUFGIS genetic conservation unit of beech in Baigorry, France. Credit: A.Ducousso/EUFORGEN

The World Conservation Congress, held in Hawai'i in early September, adopted a motion calling for forest genetic conservation units to be recognised with the IUCN protected areas status of category IV - Habitat/Species management area. The motion, promoted by the French National Conservation Congress, will now be considered by national authorities and NGOs and is expected to help forest geneticists to work with conservationists to secure the long-term conservation of forest tree diversity essential for climate change adaptation.

Alexis Ducousso, president of the Forest Group of the French IUCN conservation committee spent two years working with colleagues from the French Commission on Forest Genetic Resources (CRGF) to get the motion adopted.

"You had protected species and protected ecosystems," he said, "but nothing to protect genetic processes."

The IUCN motion is based on the fact that "dynamic conservation of genetic diversity favours the adaptive capacities and evolution of forests in the face of environmental changes." Its preamble includes several

Related links

- Text of the IUCN m
- IUCN protected ar (Habitat/Species m
- Forest Group of th
- French Commissio Resources (CRGF)
- EUFGIS informatio

News | Events

Genetic conserva need of human in

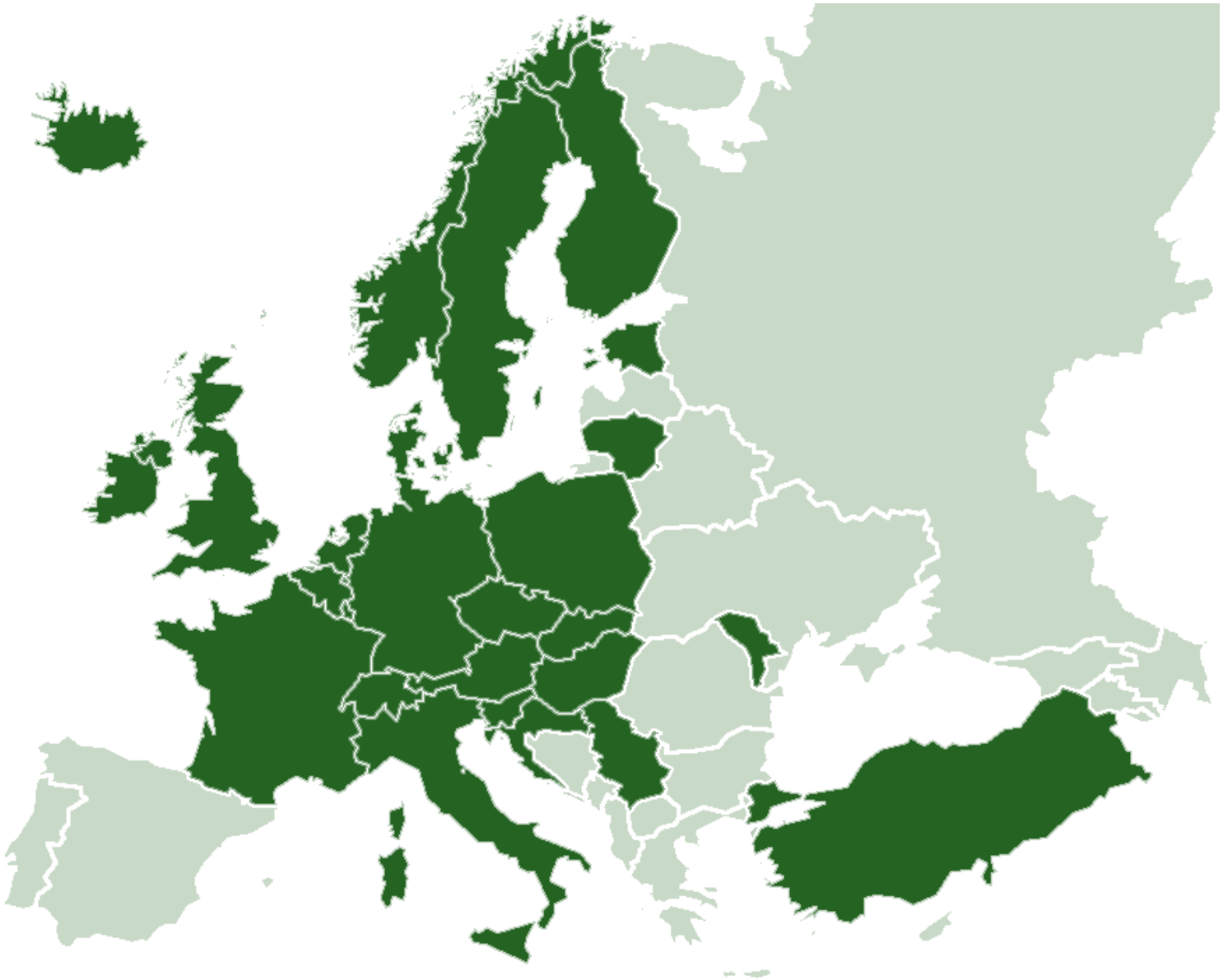
23 May 2017

About EUFORGEN

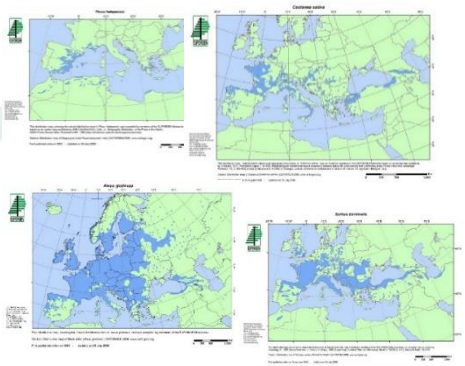
European Forest Genetic Resources Programme

The overall **goal** of EUFORGEN is to promote the **conservation** and appropriate **use** of forest genetic resources (FGR)
in Europe as an integral part of sustainable forest management

Membership

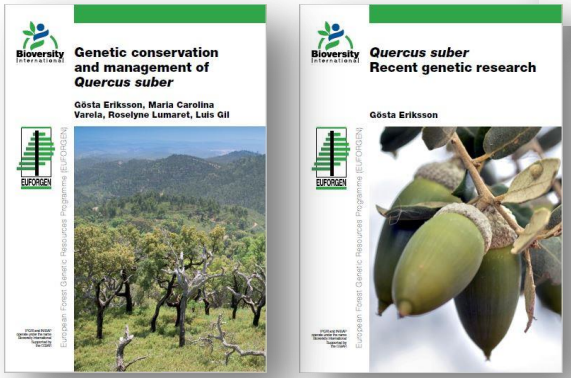


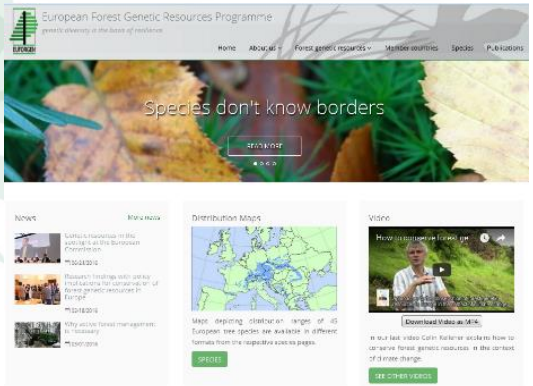
Outputs



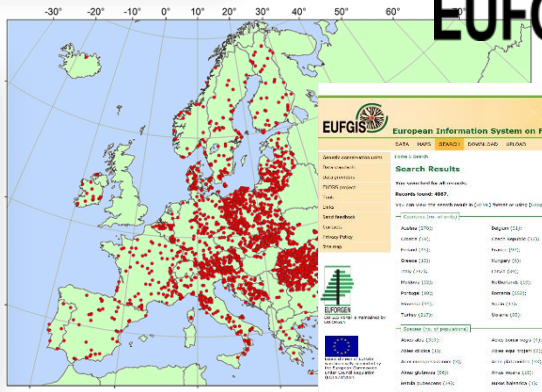

Chestnut
Castanea sativa
Aleppo and Brutia pines
Wild service trees


Genetic monitoring methods for genetic conservation units of forest trees in Europe
Use and transfer of forest reproductive material
The implications of global, European and national policies
Pan-European strategy for genetic conservation of forest trees
Approaches to the conservation of forest genetic resources


Genetic conservation and management of Quercus suber
Gösta Eriksson, Maria Carolina Varela, Roselyne Lumaret, Luis Gil
Quercus suber Recent genetic research
Gösta Eriksson


European Forest Genetic Resources Programme
Species don't know borders
News
Distribution Maps
Video


State of Europe's Forests
2015




EUFGIS
European Information System on Forest Genetic Resources
Search Results

Mandate

Established in 1994 to implement **FOREST EUROPE** Strasbourg Resolution 2

Contributes to the implementation of relevant decisions **CBD** decisions

implementation the Global Plan of Action for the Conservation, Sustainable Use and Development of Forest Genetic Resources adopted by the **FAO**

Madrid Resolution 2

Strengthening cooperation in the pan-European region

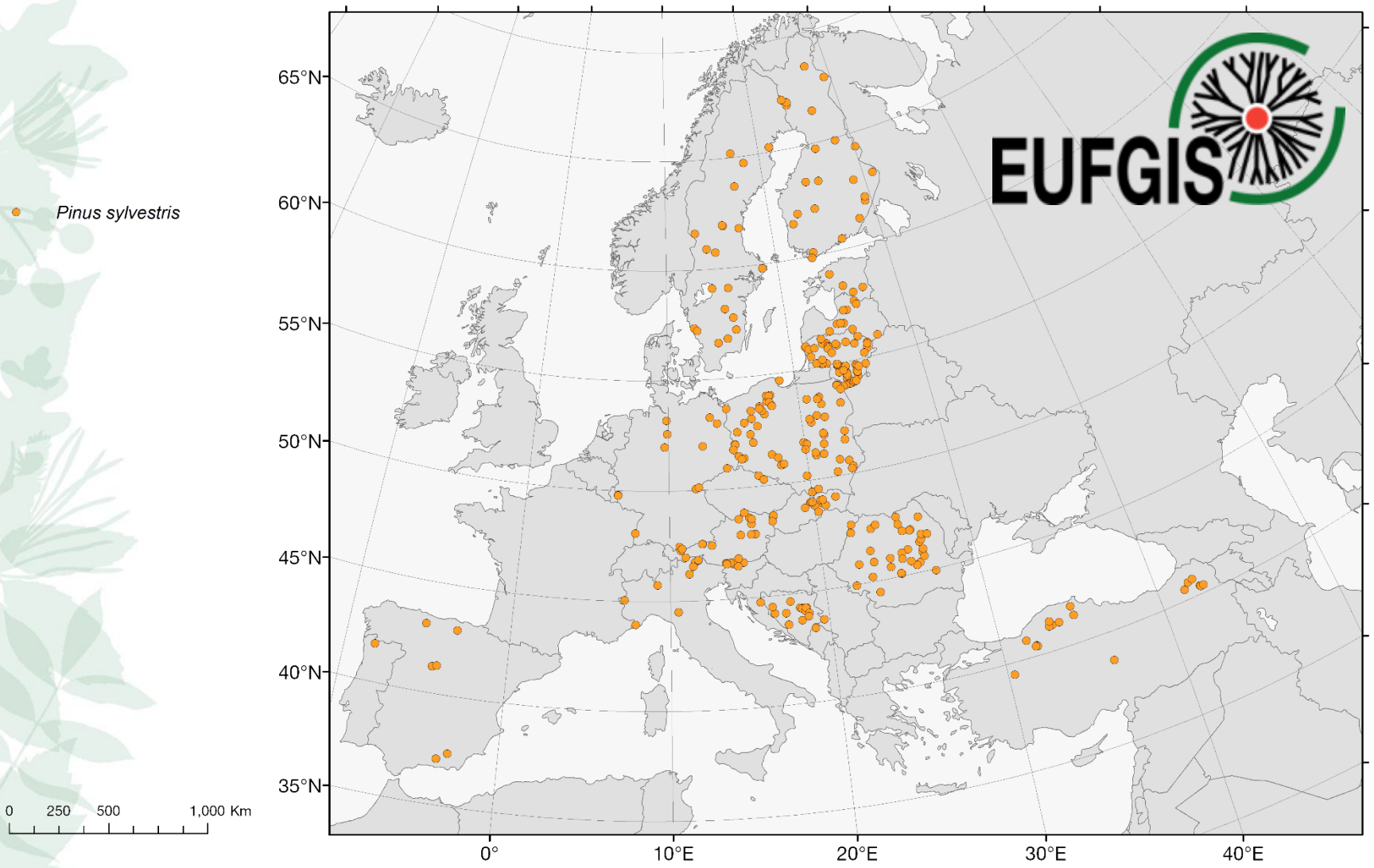
Continue pan-European collaboration on forest genetic resources through the European Forest Genetic Resources Programme (EUFORGEN)

Enhancing the protection of forests

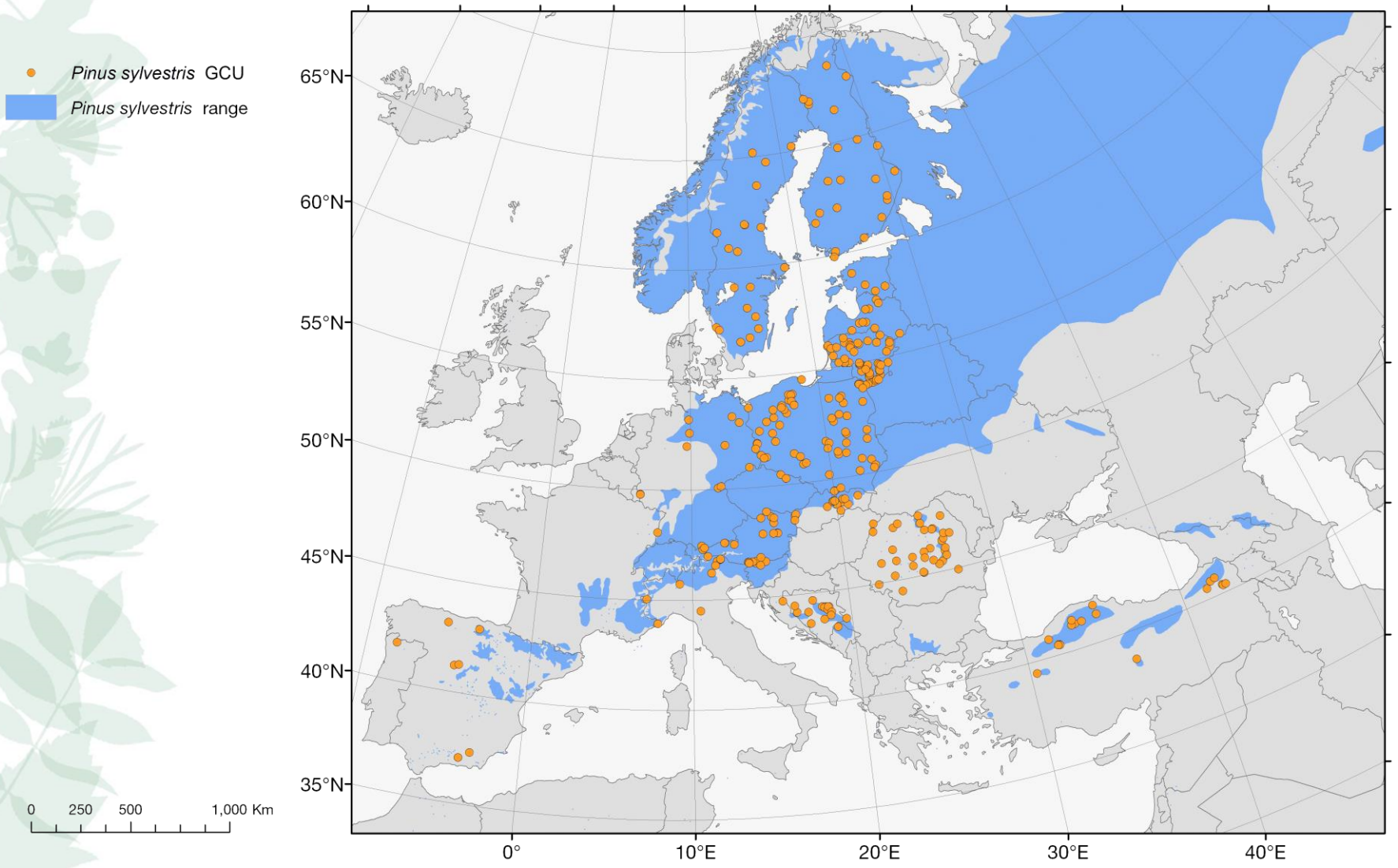
Promote national implementation of **strategies** and guidelines for **dynamic conservation** and appropriate use **of forest genetic resources under changing climate conditions**

Pan-European strategy for genetic conservation of forest trees

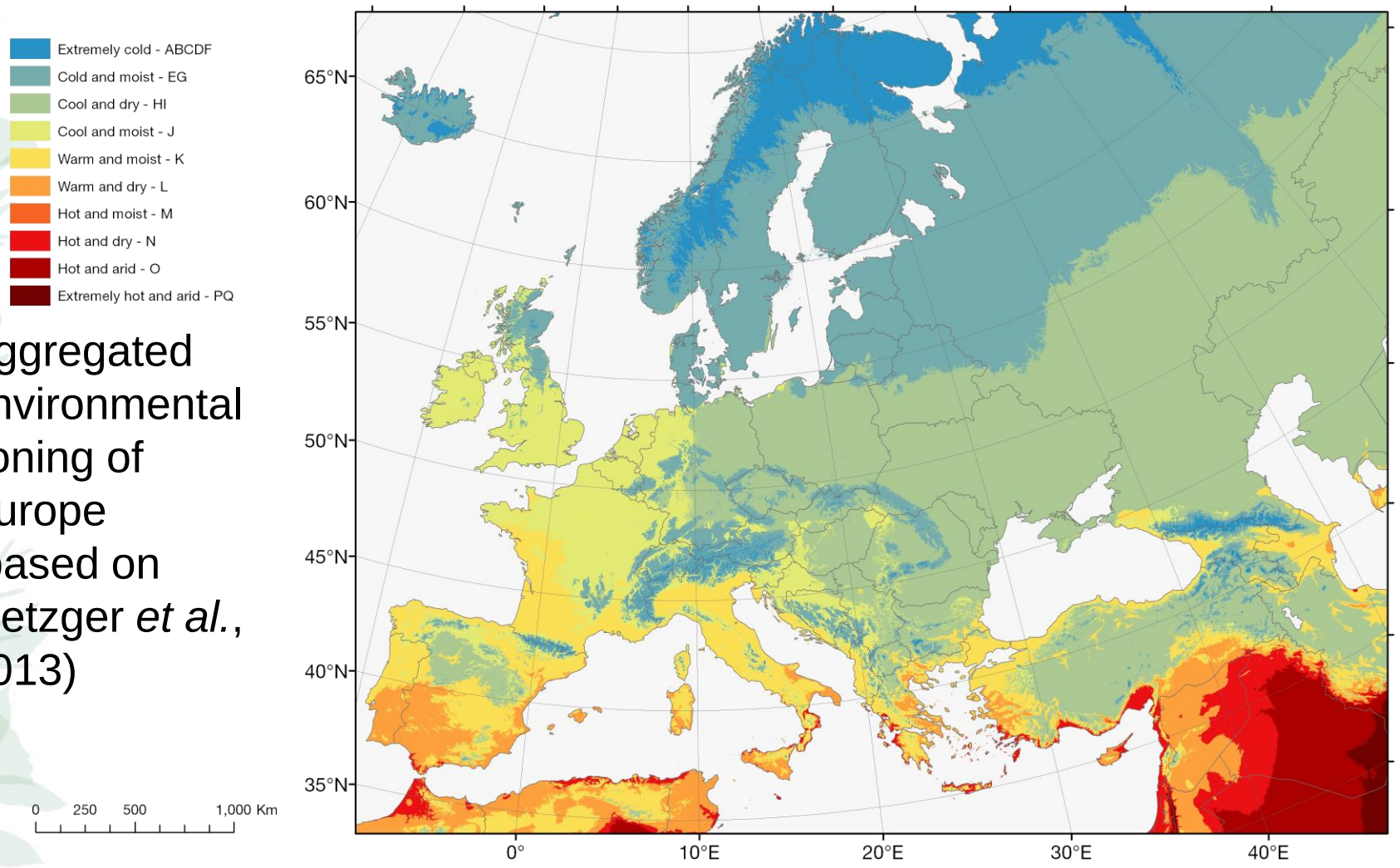
Pinus sylvestris



Pinus sylvestris

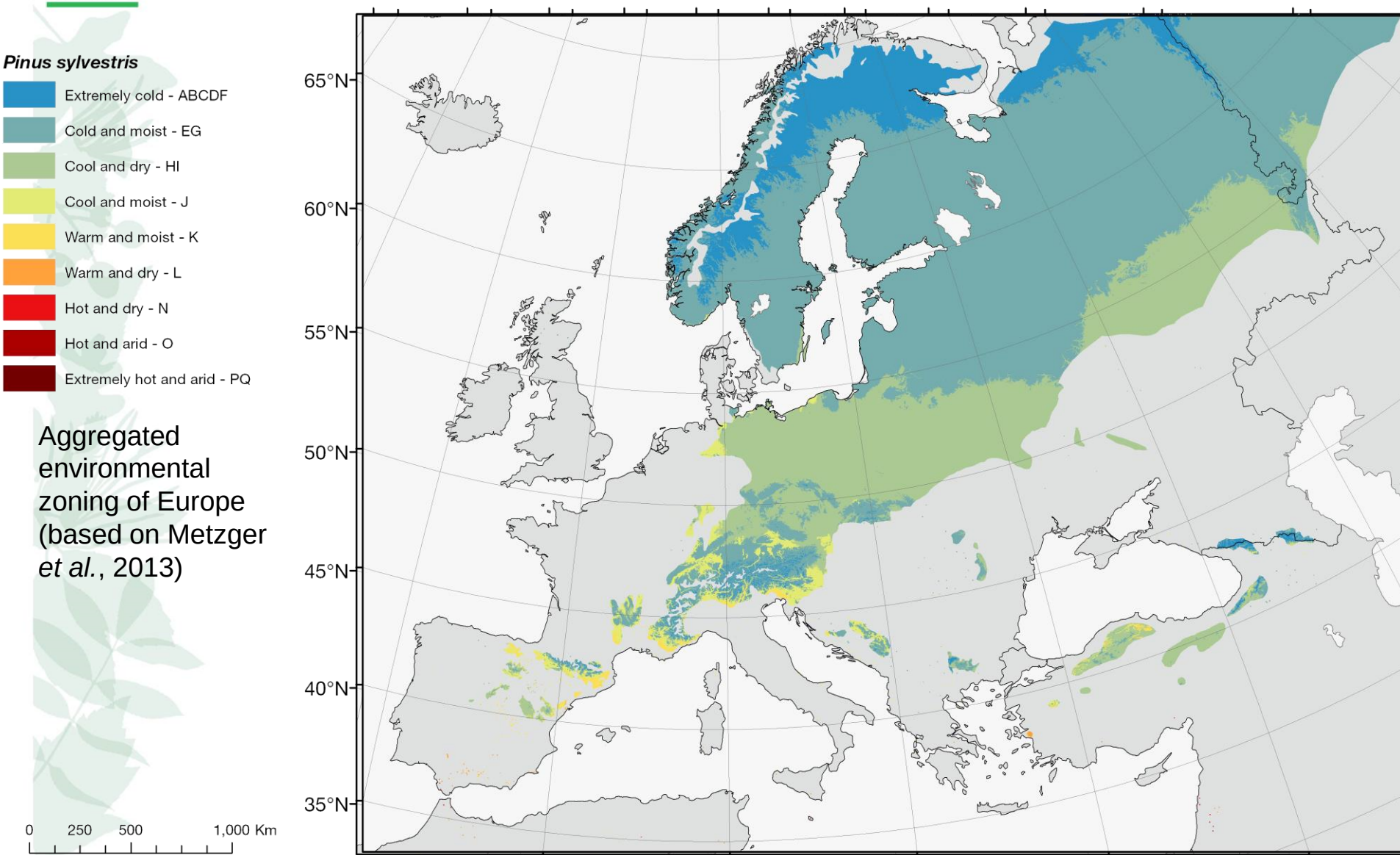


climatic classification of Europe



Aggregated environmental zoning of Europe (based on Metzger *et al.*, 2013)

Pinus sylvestris (Environmental classification)



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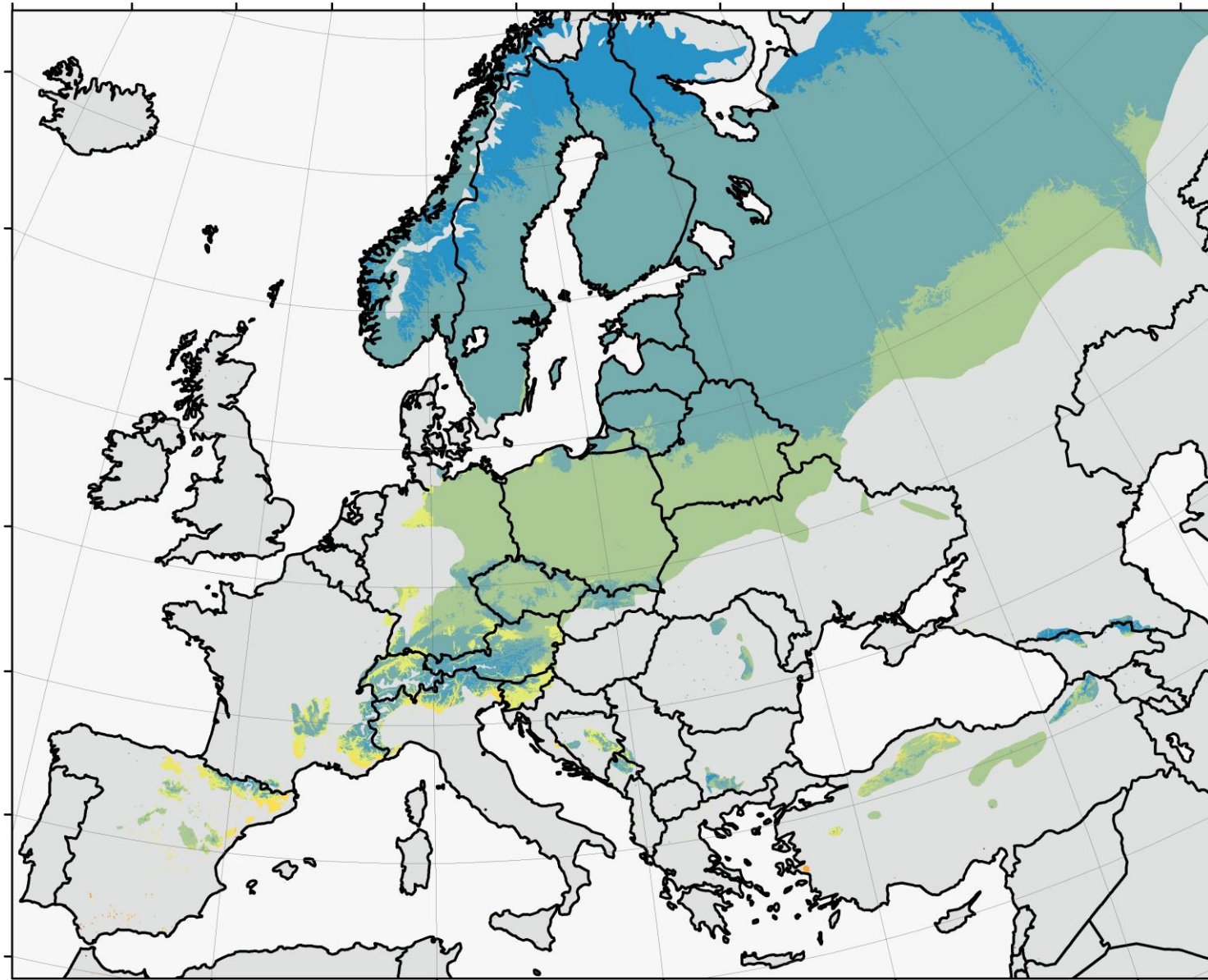
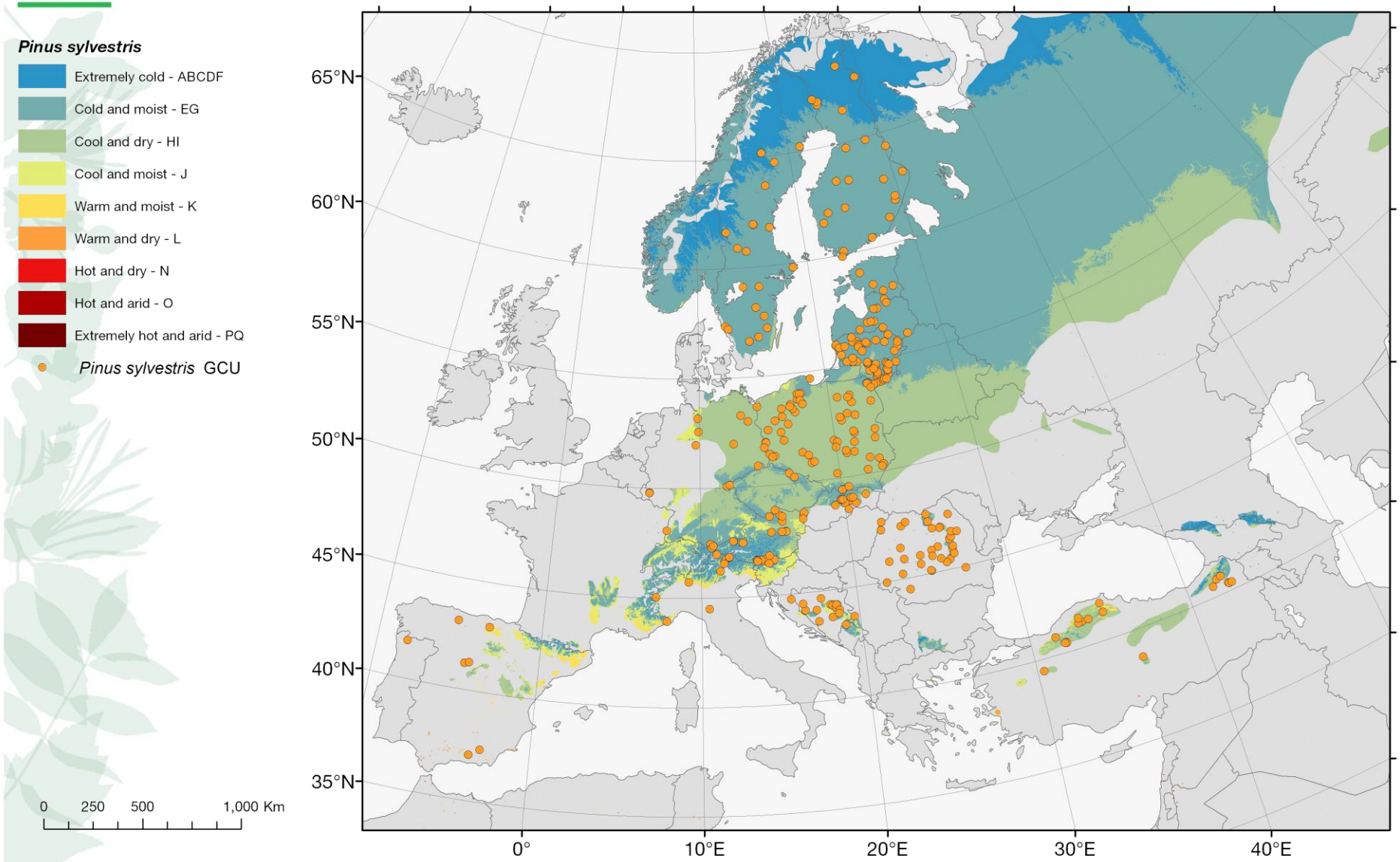
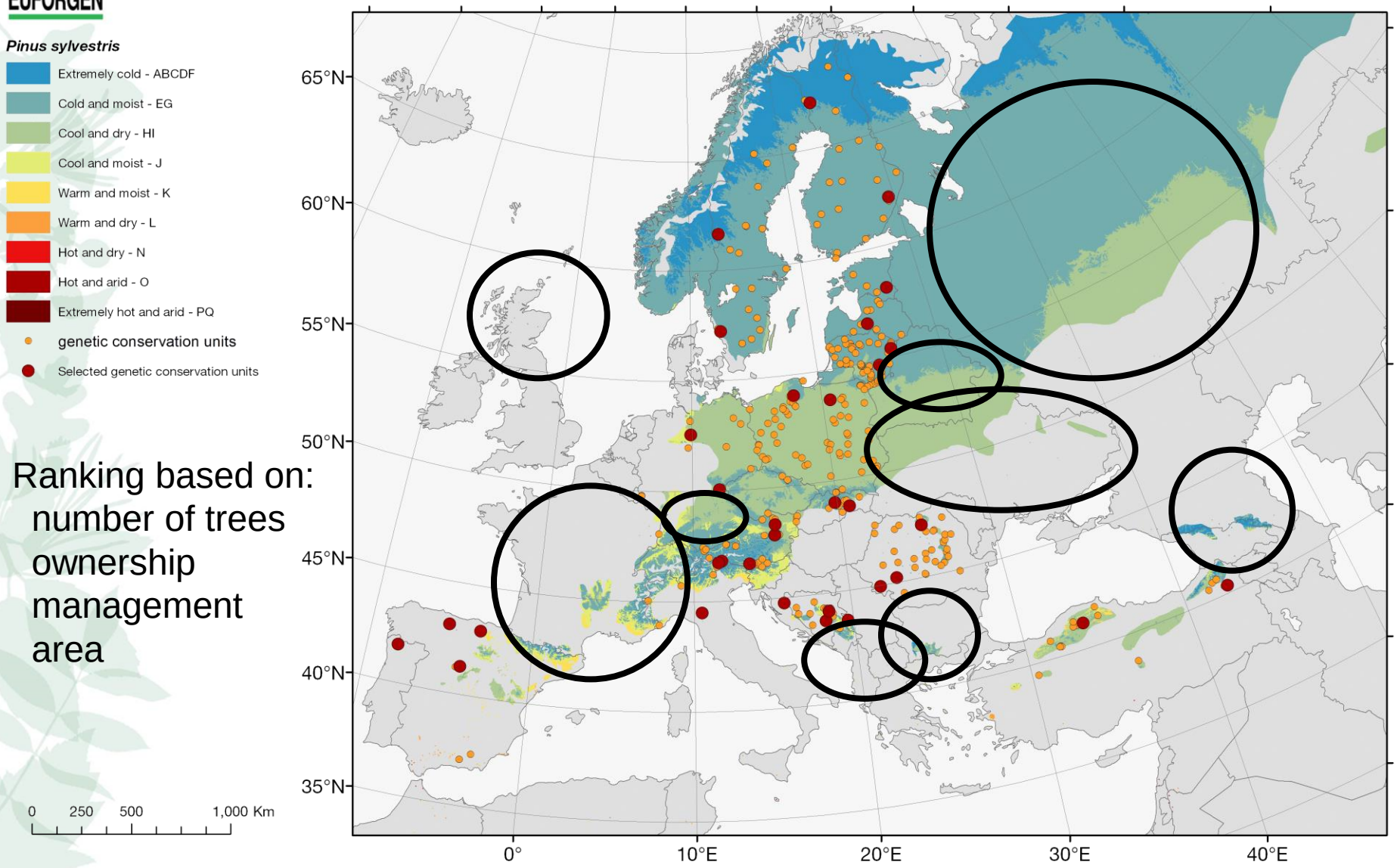


Aggregated environmental zoning of Europe (based on Metzger *et al.*, 2013)

Pinus sylvestris (countries' responsibilities)



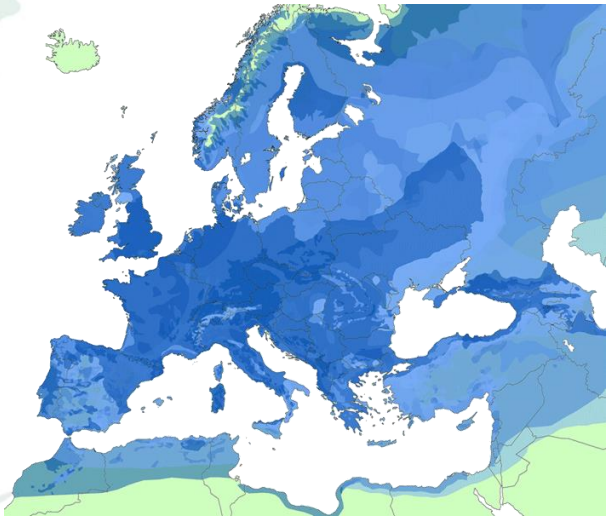
Pinus sylvestris conservation gaps



Ranking based on:

- number of trees
- ownership
- management
- area

Pan-European collaboration on forest genetic resources



Genetic diversity varies within species ranges

Species do not restrict themselves to political borders

All countries where species occur need to take part in conservation

Next steps

EUFORGEN is currently developing

guidelines and decision support tool for **better incorporating genetic aspects into production and use of forest reproductive material**

Will be available by 2019

Once a genetic resource is lost, is lost forever

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