



Assessment of ecosystem services

WP 4

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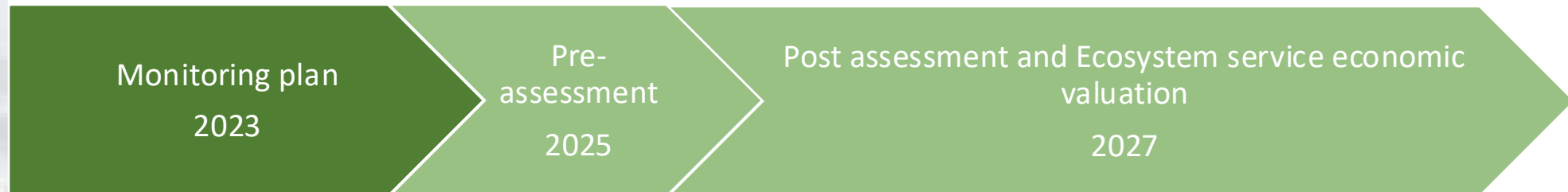
Association Baltic Coasts



Aim and timeline

- To perform expert assessment of ecosystem services.
- To monitor ecosystem services before and after implementation of the Project actions to identify and estimate environmental and economic impacts

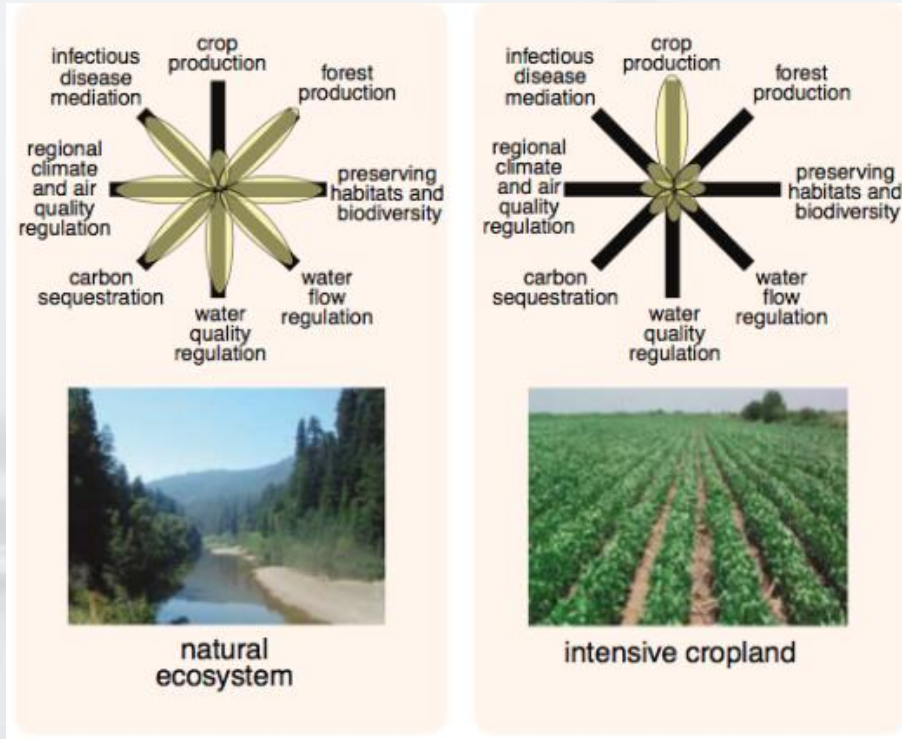
Timeline for ecosystem service monitoring



Ecosystem services and assessment

Ecosystem services - the contributions that ecosystems make to human well-being

Provisioning Services: These are the products obtained from ecosystems, such as food, water, timber, and other raw materials.



Provisioning services (Division and group)	Indicators	Measurement	Unit
Wild plants for nutrition, materials	Wild berries	Blueberries; Cranberries; Lingonberries	Kg/ha
	Plants	Medical plants	No of species
Wild animals for nutrition, materials	Wild animals	animals for hunting	Kg/ha
	Fish		Kg/ha
Fibres and other materials for direct use or processing	Wood Sphagnum Peat		Kg/ha
Non-mineral substances or ecosystem properties used for nutrition, materials or energy	Wind energy Solar energy		KW/h

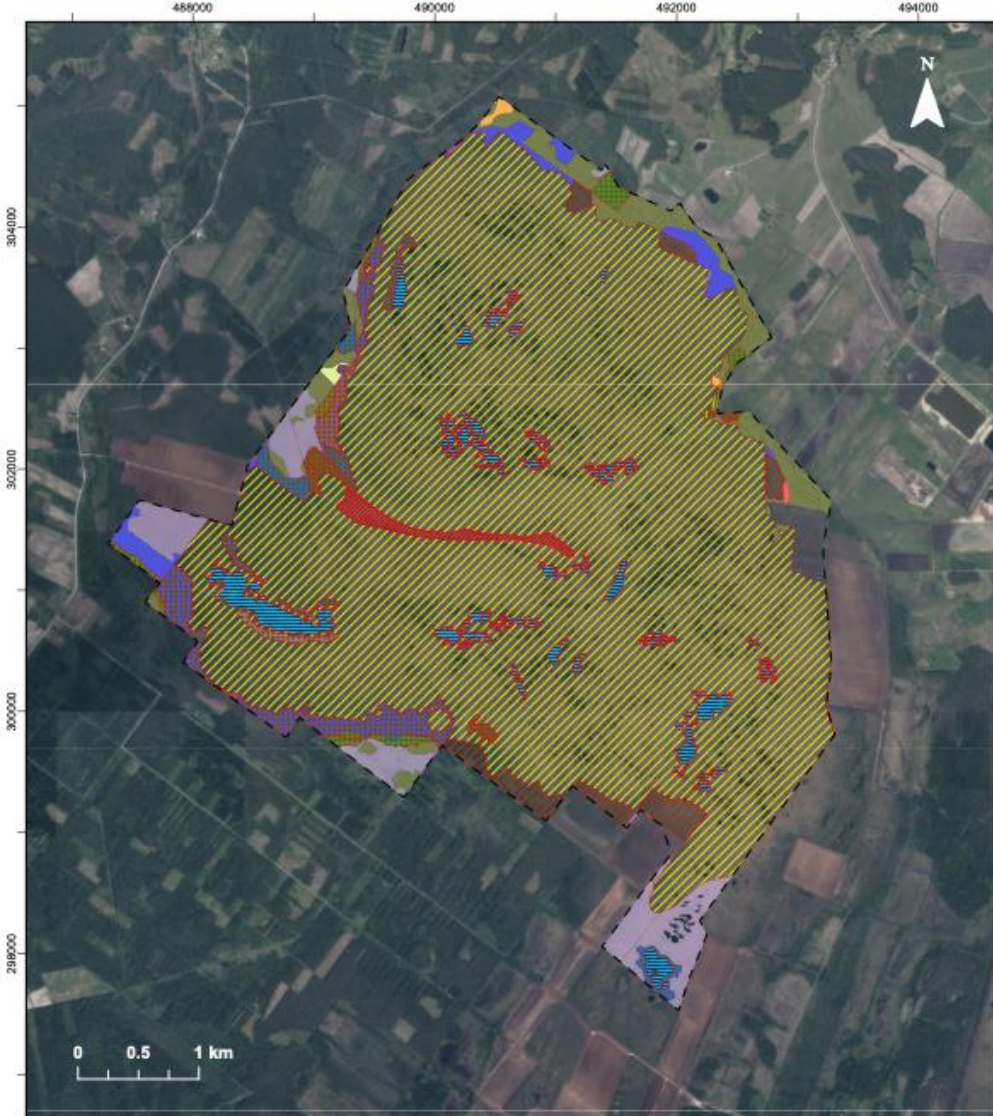
Regulation and maintenance services: that play a crucial role in regulating natural processes.



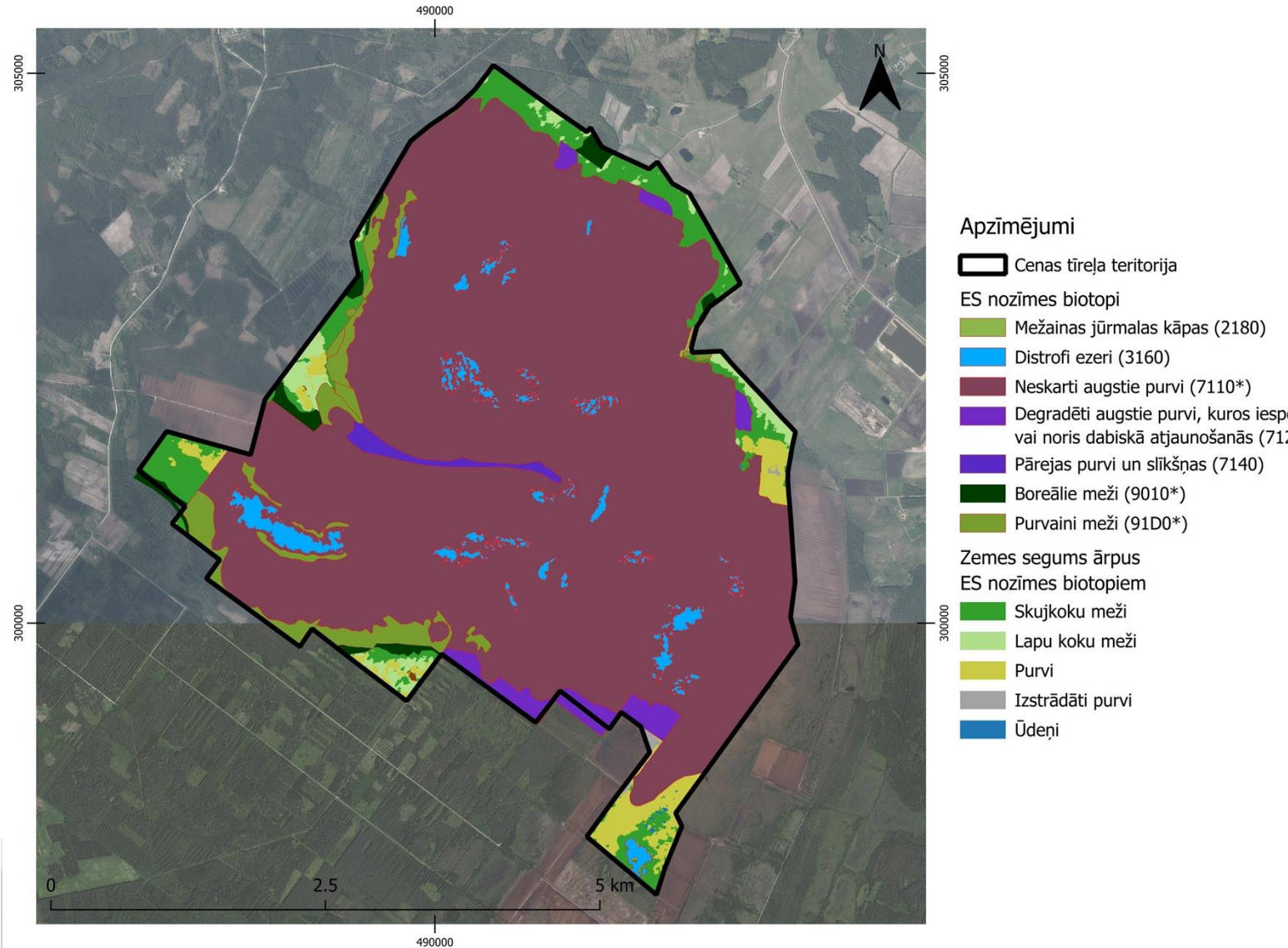
Regulation & Maintenance services (Division and group)	Indicators	Measurement
Mediation of wastes or toxic substances of anthropogenic origin by living processes	Pollution filtration	
Mediation of nuisances of anthropogenic origin	Noise reduction	Forest density
Lifecycle maintenance, habitat and gene pool protection	Seed distribution	Diversity of insect pollinators
	Life cycle maintenance, habitat and gene pool protection	Number of plant species; beetles and insect species bird species; mammal species
Regulation of physical, chemical, biological conditions	Pest and disease control	Limiting the spread of invasive species
	Regulation of temperature and humidity	
	Climate change mitigation	
	Carbon sequestration potential	
Transformation of biochemical or physical inputs to ecosystems	Filtering wastes or sequestering pollutants	

Cultural services: Ecosystems contribute to human well-being through cultural, recreational, and aesthetic experiences. This includes spiritual and religious values, as well as tourism and recreation.

Cultural services (Division and group)	Indicators	Measurement
Physical and experiential interactions with natural environment	Active recreation	Potential number of visitors
	Passive leisure (recreation) opportunities	Potential number of visitors
Intellectual and representative interactions with natural environment	Scientific research and educational opportunities	Number of researches
Spiritual, symbolic and other interactions with natural environment	Elements or features of living systems whose inter-generational existence or conservation is important to people	



Maps for ecosystem assessment



Apzīmējumi

— Cenā tīrēja teritorija

ES nozīmes biotopi

- Mežainas jūrmalas kāpas (2180)
- Distrofi ezeri (3160)
- Neskarti augstie purvi (7110*)
- Degradēti augstie purvi, kuros iespējama vai noris dabiskā atjaunošanās (7120)
- Pārejas purvi un slīkšņas (7140)
- Boreālie meži (9010*)
- Purvaini meži (91D0*)

Zemes segums ārpus ES nozīmes biotopiem

- Skujkoku meži
- Lapu koku meži
- Purvi
- Izstrādāti purvi
- Ūdeņi

Apzīmējumi

- Cenā tīrēja teritorija
- Distrofi ezeri (3160)
- Pārejas purvi un slīkšņas (7140)
- Mežainas piejūras kāpas (2180)
- Purvaini meži (91D0*)
- Veci vai dabiski boreālie meži (9010*)
- Šaurlapu kūdrēnis
- Platlapu kūdrēnis
- Lāns
- Damaksnis
- Slapjais damaksnis
- Purvājs
- Niedrājs
- Mētru ārenis
- Šaurlapu ārenis
- Platlapu ārenis
- Viršu kūdrēnis
- Mētru kūdrēnis
- Purvi, lauces

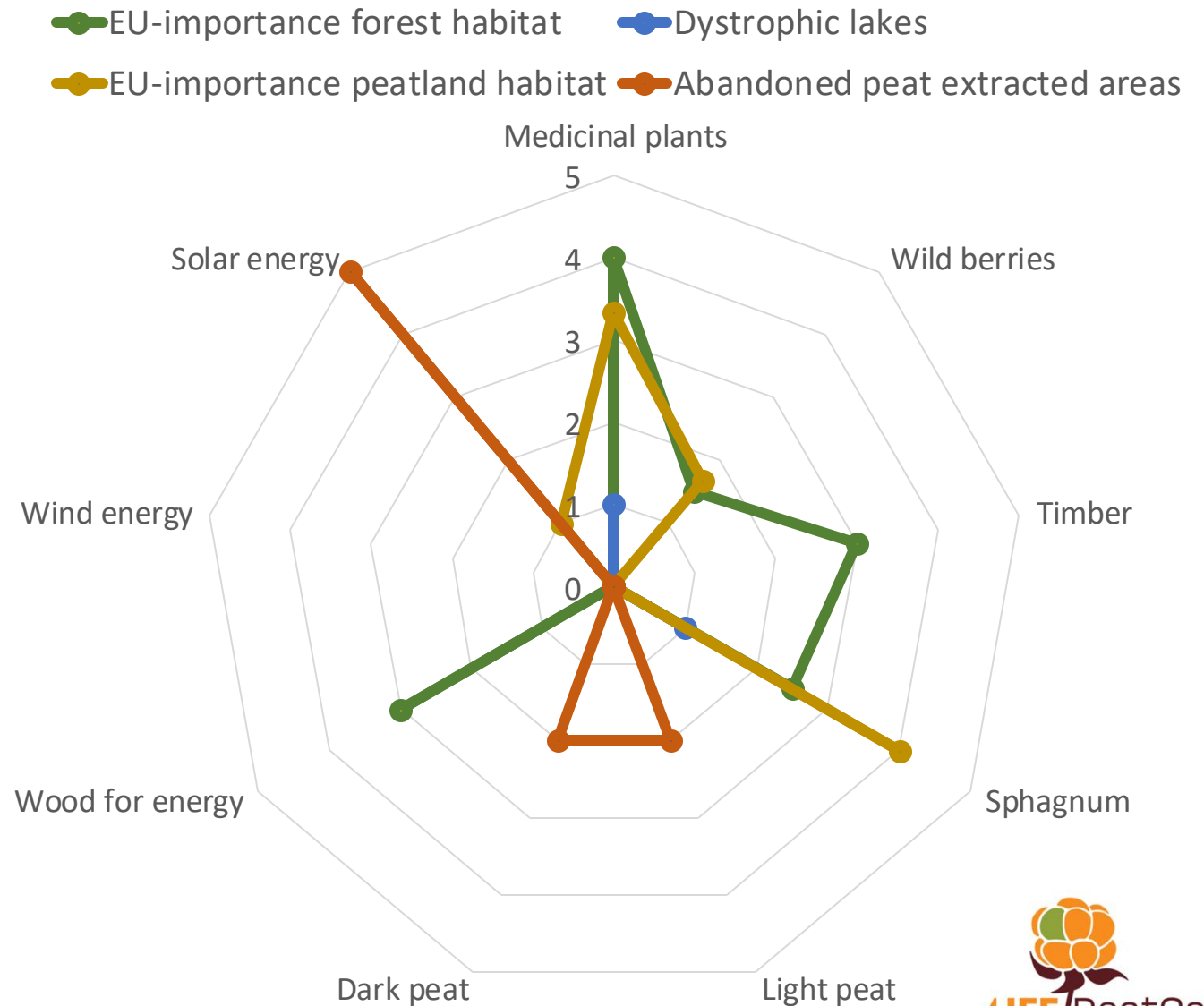
ES nozīmes biotopi

- Aktīvi augstie purvi (7110*)
- Degradēti augstie purvi, kuros iespējama vai noris dabiskā atjaunošanās (7120)

Provisioning ecosystem services

Provisioning services Cena mire

- Forests are essential for the local bioeconomy through renewable resources like timber, energy wood, and non-timber forest products.
- Peatland habitats maintain their importance in supplying specialized materials (e.g., sphagnum and medical plants)
- Provisioning services from water bodies are minimal, these ecosystems have different non-material primary values.

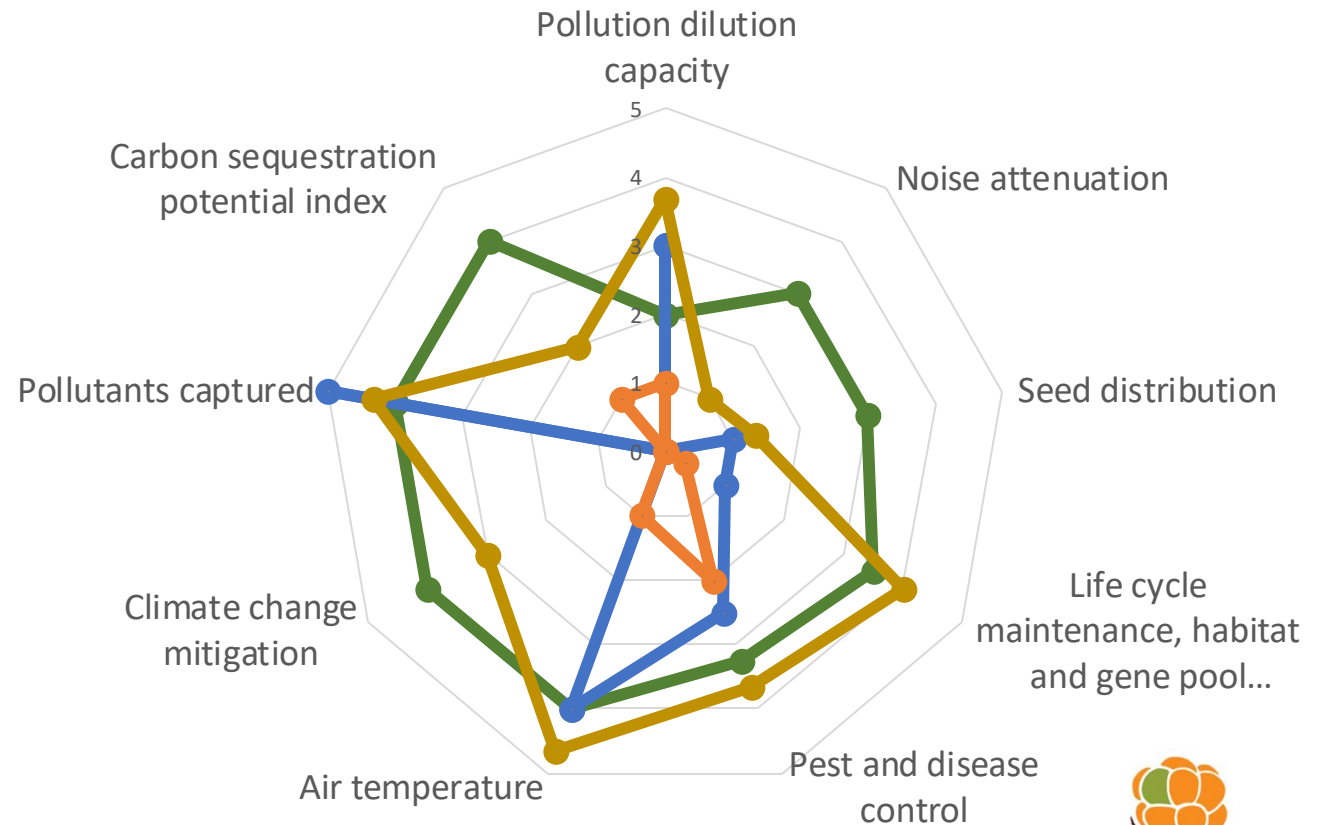


Regulation and maintenance ecosystem services

- Peatland ecosystems play a crucial role, particularly in microclimate control, pollution reduction, pest and disease control.
- Forests support ecosystem resilience, acting as buffers for pests and as crucial habitats for genetic diversity maintenance.
- Water bodies contribute to environmental quality, notably in pollution dilution, but less so in carbon functions compared to peatlands.
- While abandoned peat areas have lost much of their regulatory capacity, their partial service recovery potential reinforces the value of ecological restoration.

Regulation and Maintenance ecosystem services

- EU-importance forest habitat
- Dystrophic lakes
- EU-importance peatland habitat
- Abandoned peat extracted areas



Cultural ecosystem services

- Peatland serve as key multifunctional landscape that provides cultural ecosystem services.
- Forest and lake enrich cultural identity, offering unique opportunity nature-based mental restoration.
- The potential of abandoned peatlands to provide cultural ecosystem services is very low.

Cultural ecosystem services

- EU-importance forest habitat
- Dystrophic lakes
- EU-importance peatland habitat
- Abandoned peat extracted areas

