

ASSESSMENT AND ECONOMIC VALUATION OF PEATLAND ECOSYSTEM SERVICES



EXPRESSING ECOSYSTEM SERVICES in economic values is a practicable approach which can be used, for example, in nature conservation and management, where difficult decisions has to be made, to compromise the interests of economy and nature conservation. The economic evaluation of ecosystem services provides assistance for decision making and prioritising different, sometimes conflicting, development plans.

AIM is to present and discuss the ecosystem services assessment and economic valuation for sustainable management of degraded peatlands in Latvia.

In LIFE REstore project, ecosystem services were assessed in five demo sites. Four of them are located in post-harvested peatlands, where after-use measures included tree planting (afforestation); plantations of high blueberries and large cranberries; restoration by planting (inoculation) of Sphagnum moss. The fifth site is located in a degraded raised bog, and rewetting was the after-use measure here.

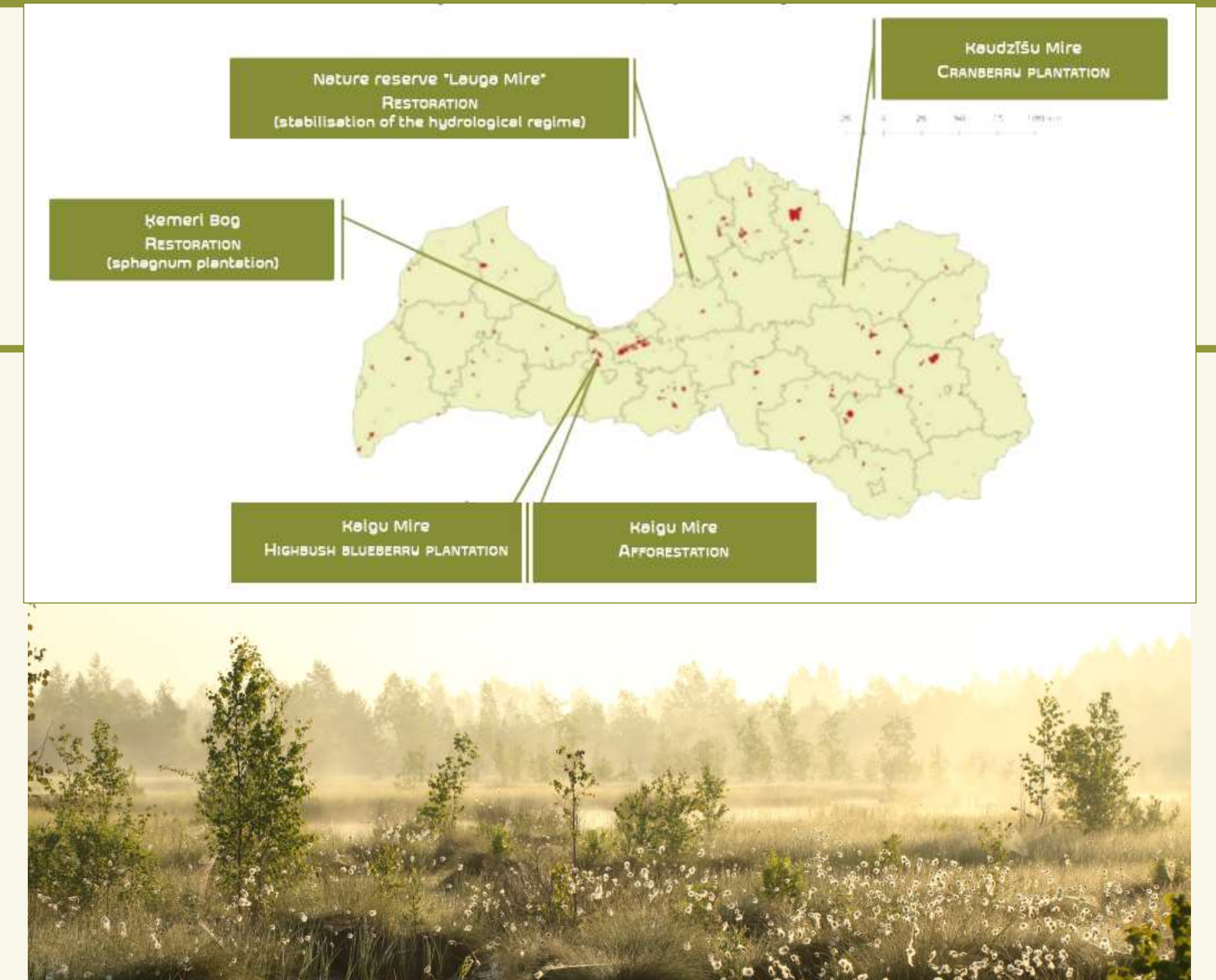


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ACTIVITIES

- Determination of land cover types and their areas in project demo sites
- Determination of ES and their indicators in demo sites
- Assessment of ES by evaluating each indicator of each land cover type

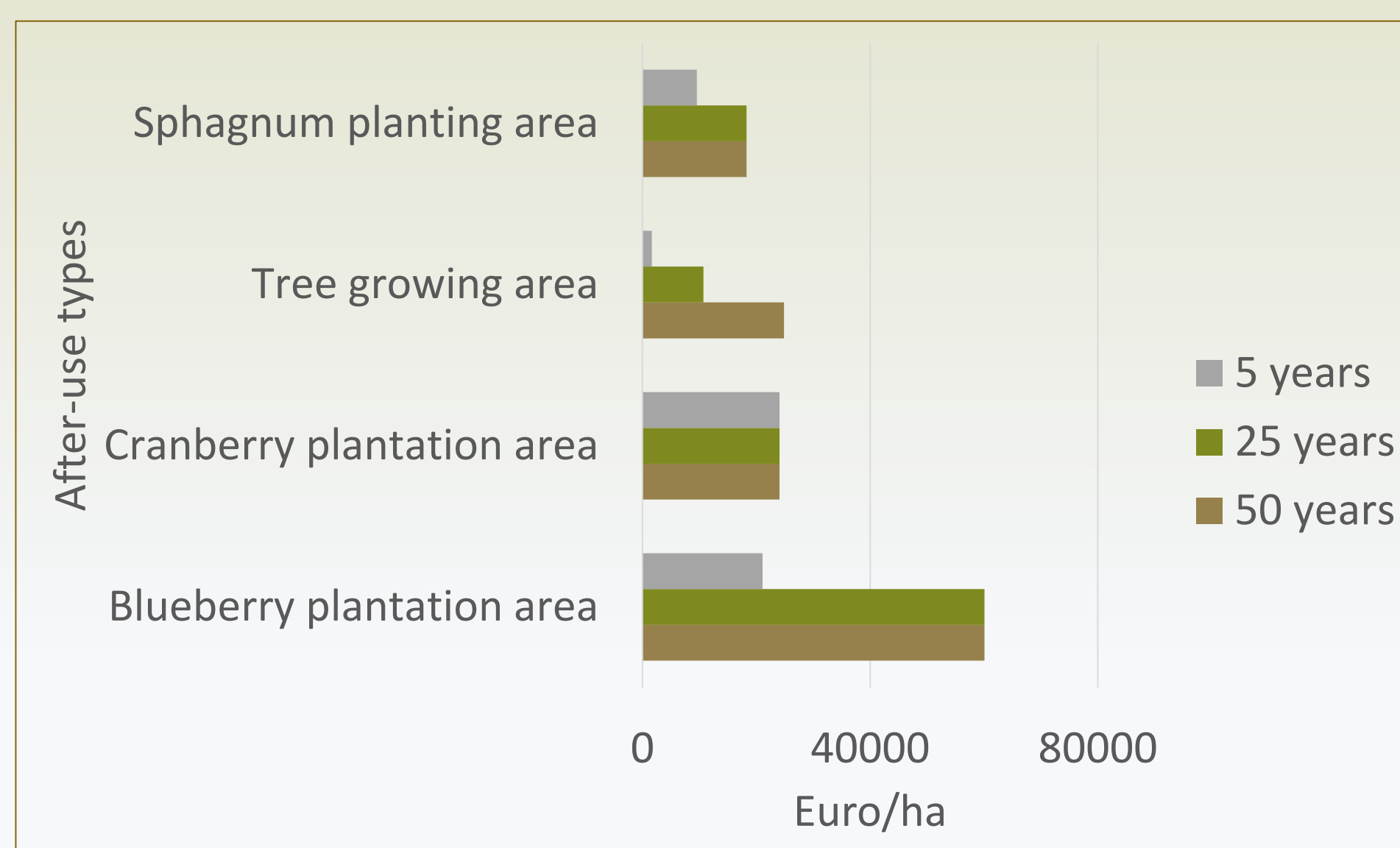
METHODS

- Market price method for provisioning and regulation ES
- Benefit transfer method for regulation and cultural ES
- Replacement cost method for provisioning and regulation ES
- Avoided cost method for regulation ES

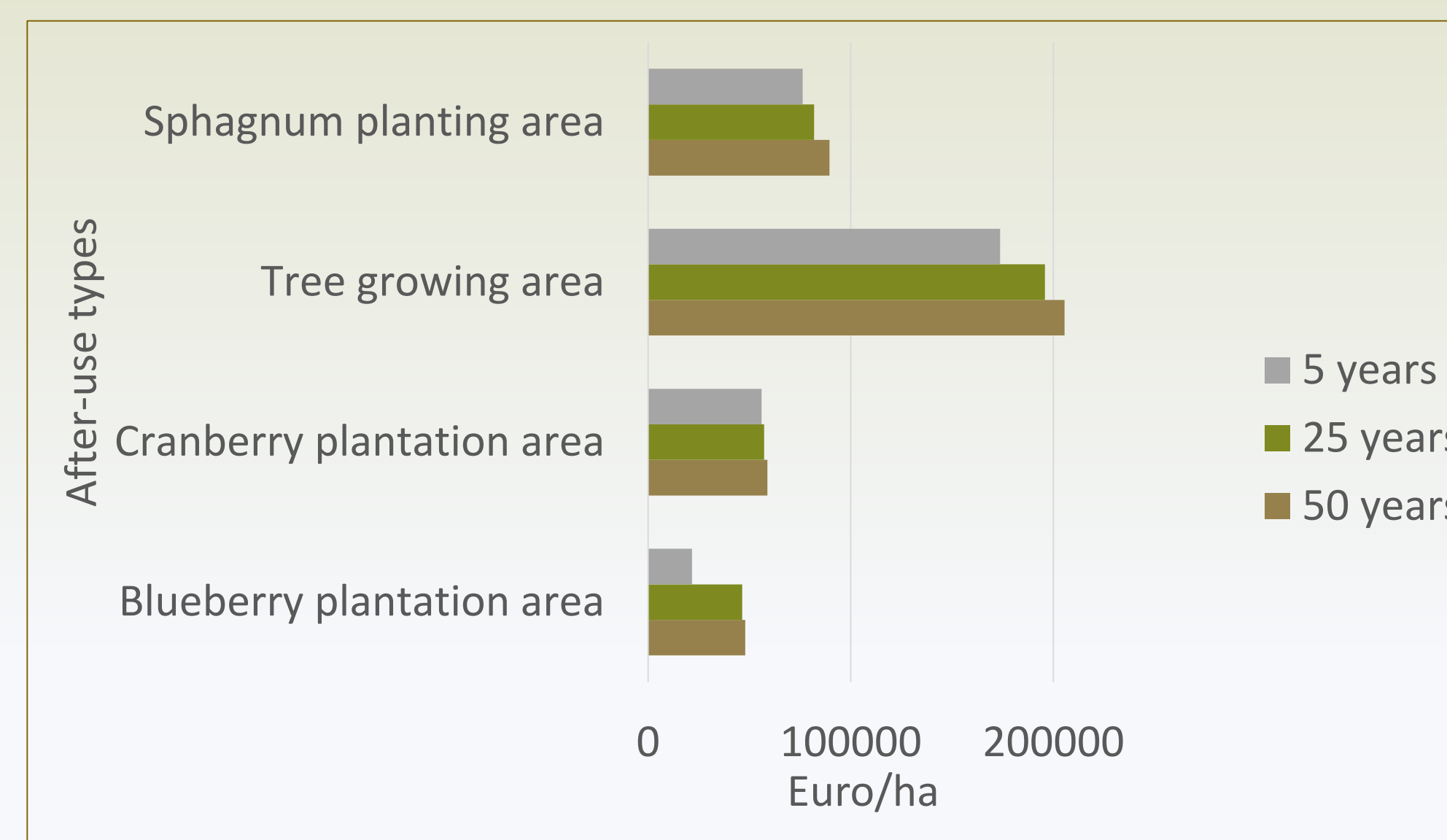
DATA

- ES assessment was mainly based on secondary data (from previous studies and available information)
- Economic valuation of ES was based on biophysical ES assessment for 28 indicators, 3 scenarios, in 5, 25 and 50 years perspective

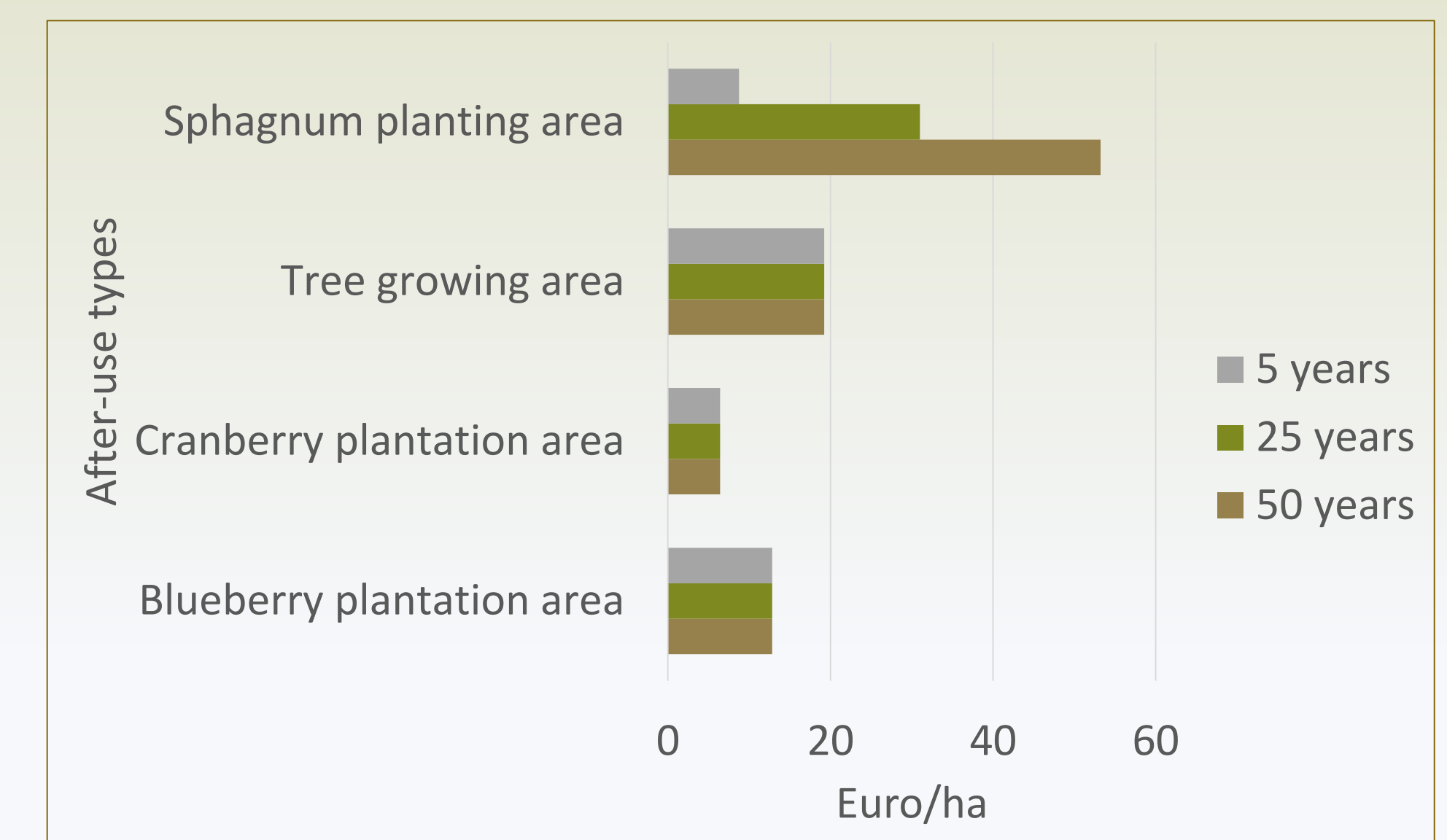
ECONOMIC VALUES OF ES OF AFTER-USE TYPES IMPLEMENTED BY THE PROJECT



PROVISIONING ES



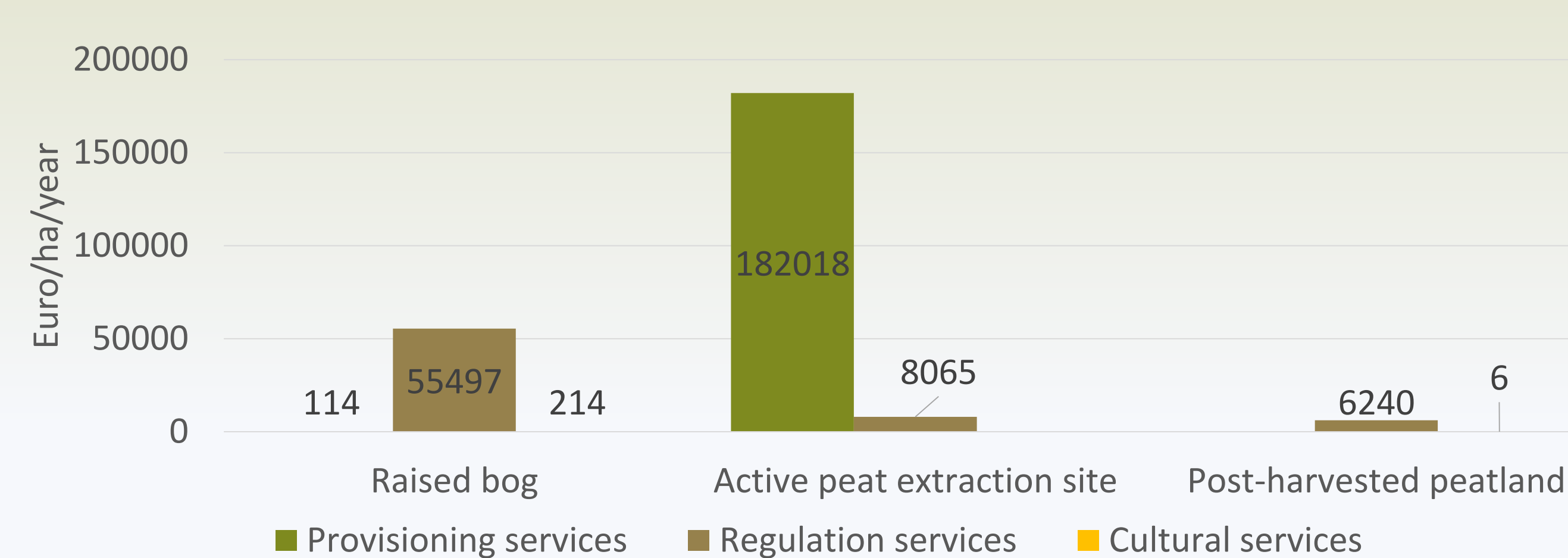
REGULATING ES



CULTURAL ES

ECONOMIC VALUES OF ES OF RAISED BOG, ACTIVE PEAT EXTRACTION SITE AND POST-HARVESTED PEATLAND

The results of the evaluation allowed comparing the economic values of ecosystem services of raised bog, the active peat extraction site and post-extracted peatland. Benefits provided by these differing areas are various – different benefits are provided by natural or slightly disturbed mire, by peat extraction, and after the completion of peat extraction.



The results show that existing peat extraction fields provide high economic value in the form of provisioning ES, while on the other hand they provide very low regulation and cultural ES. Natural bog territories provide high regulating ES and comparatively higher cultural ES. The economic value of degraded peatlands is low in all groups of ecosystem services.

CONCLUSIONS

Economic assessment of ES allows to compare different land use management scenarios from different perspectives – their ability to provide supply of products and materials, ability to regulate viability of ecosystems and climate, as well as to deliver cultural services. Within five, 25 and 50 years, the highest value of ES will be provided by afforestation as regulating services. Afforestation is also seen as the most effective after-use type for global climate change mitigation.

Sustainable management of degraded peatlands has a particular potential to make an important contribution to climate change mitigation and both economic and environmental benefits to society.



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The poster reflects only LIFE REstore project beneficiaries' view and the European Commission's Executive Agency for Small and Medium-sized Enterprises is not responsible for any use that may be made of the information it contains.