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AFTER-USE TRAJECTORIES OF PEATLANDS UNDER ALTERNATIVE POLICY PATHWAYS IN LATVIA

Normunds Stivrins

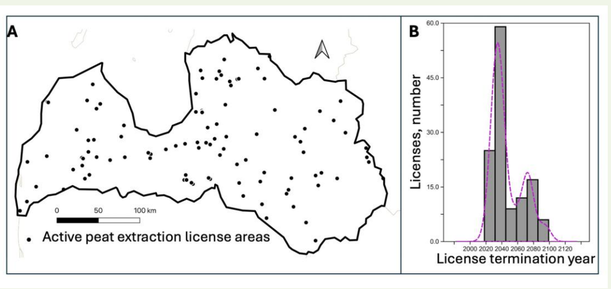
Latvia University of Life Sciences and Technologies

PEATLAND RECULTIVATION SCENARIO ANALYSIS

KEY RESULT

Latvia faces a recultivation obligation of about 50,000-52,000 ha. The licence-expiry baseline requires roughly 1500 ha yr-1 and reaches completion only around 2100. Completion by 2050 requires a sustained rate of about 2000 ha yr-1.

LATVIAN PEATLAND CONTEXT



Active extraction licences remain distributed across Latvia, with many termination dates extending beyond 2050.

0.64 M ha	**PEATLAND AREA IN LATVIA**
10%	**SHARE OF NATIONAL TERRITORY**
130	**VALID PEAT MINING LICENCES**
2038	**MEDIAN LICENCE TERMINATION YEAR**

DEGRADED LAND STATUS

HISTORICAL	**26,232 ha**	Extraction sites without active licences.
LICENCED	**25,731 ha**	Area within current peat extraction licences.
ACTIVE	**15,008 ha**	Area currently used for extraction.
UNUSED	**10,723 ha**	Licenced area not currently exploited.

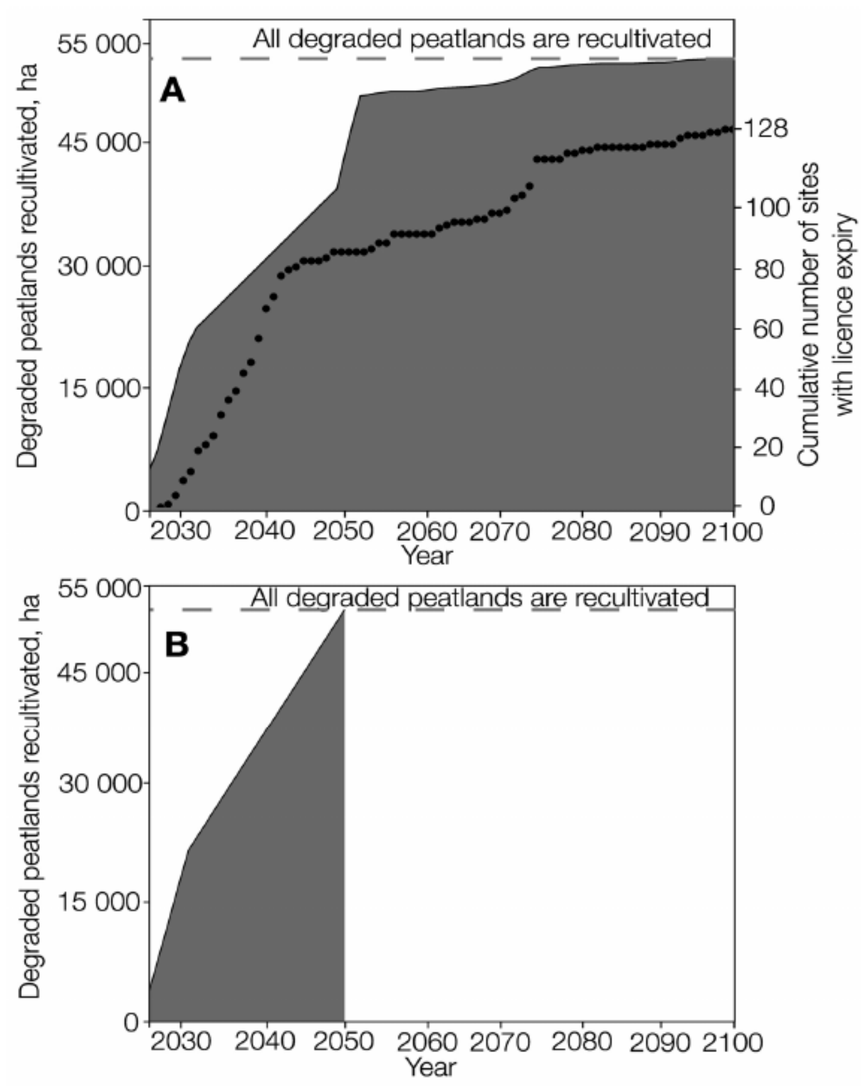
AFTER-USE OPTIONS

Ecological restoration and rewetting
Paludiculture on rewetted peat soils
Afforestation or agricultural use
Open water bodies
Renewable energy developments

DEFINITION BOUNDARY

Recultivation covers the full range of legally required after-use options. Restoration has a narrower ecological meaning and aims to re-establish peatland hydrology, vegetation and ecosystem functions. Formal recultivation does not automatically demonstrate ecological recovery.

RECULTIVATION TRAJECTORIES



A shows the licence-expiry baseline. B shows the immediate-stop pathway with full recultivation by 2050.

ANNUAL EFFORT BY POLICY PATHWAY

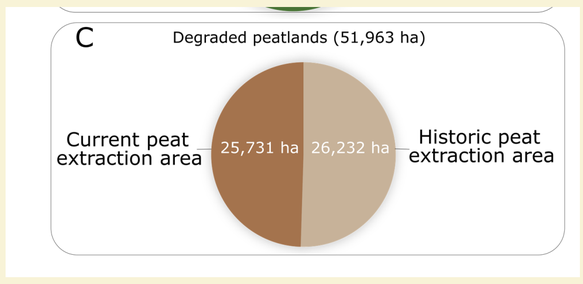
ABOUT 1500
ha yr-1 under the licence-expiry baseline

ABOUT 2000
ha yr-1 for sustained completion by 2050

THREE RECULTIVATION WAVES

1	**BY 2030**	Historical extraction sites, active projects and potentially self-regenerating areas bring the modelled total to about 29,500 ha.
2	**2030-2050**	Unused licenced areas enter recultivation as licences approach expiry, raising the cumulative area to about 45,000 ha.
3	**AFTER 2050**	Active fields become available after extraction ends. Under current licences, full completion occurs only around 2100.

NATIONAL AREA BALANCE



The national estimate varies slightly by inventory and reporting source. The study therefore reports a range of about 50,000-52,000 ha.

CURRENT PROGRESS

17,000 ha

Estimated area already restored, under restoration, or showing natural regeneration.

8,000-9,000 ha	EU-funded projects and corporate initiatives
ABOUT 8,000 ha	Possible natural regeneration subject to formal assessment

IMPLEMENTATION PATHWAY

A phased strategy linked to licence expiry offers the most realistic route under current conditions. Historical extraction areas and sites already showing recovery should receive early assessment. More complex active sites require tailored after-use decisions based on hydrology, land ownership and future economic use.

ECOLOGICAL RECOVERY

Administrative closure alone does not guarantee climate or biodiversity benefits. Verification should track water levels, vegetation development and greenhouse gas dynamics over the long term because ecosystem recovery can take decades.

PLANNING NEEDS

INVENTORIES	Harmonise spatial data and definitions across institutions.
HYDROLOGY	Use site assessment and modelling to test feasible after-use pathways.
CAPACITY	Maintain stable funding, trained personnel and coordinated governance.

The 2050 pathway requires sustained implementation capacity, not only a policy target.

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