

Paludi Pellets for Sustainable Substrates

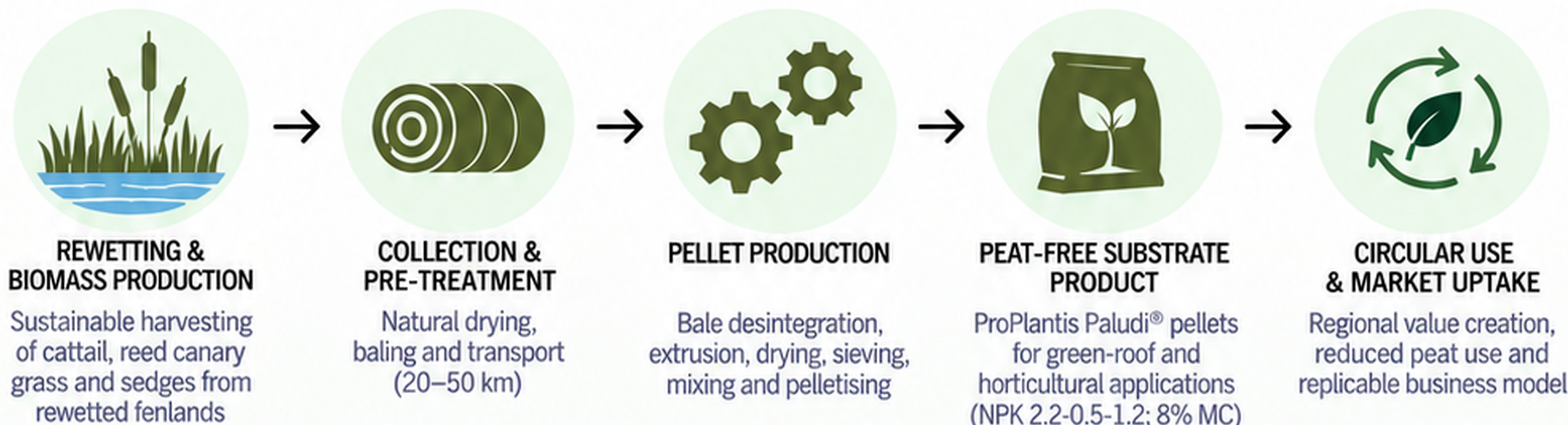
Rewetting land. Creating bio-based value. Supporting climate and nature.

OBJECTIVE

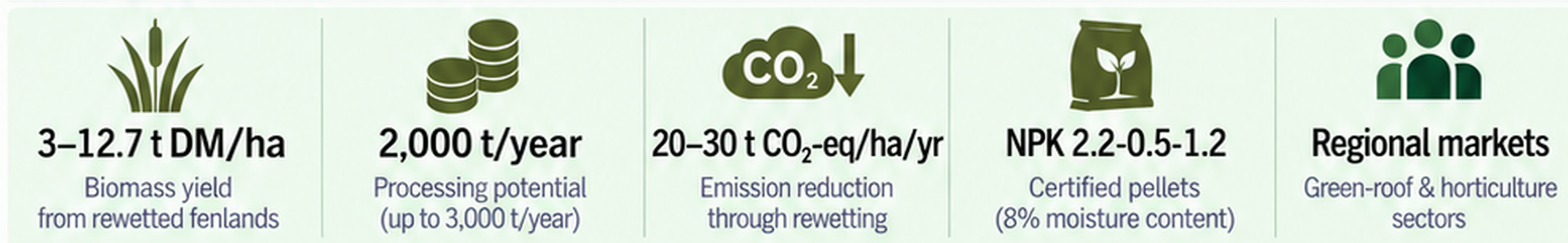


Valorise biomass from rewetted fenlands in Brandenburg into ProPlantis Paludi® pellets certified as peat-free substrate additive for green-roof and horticultural applications, linking wetland restoration with sustainable circular bioeconomy markets.

THE VALUE CHAIN



KEY FIGURES (2023–2025)



KEY GOALS & ACTIVITIES

- 1 Establish feedstock supply from rewetted fenlands**
 - Harvest cattail, reed canary grass and sedges (3–12.7 t DM/ha)
 - Natural drying, bale and transport (20–50 km)
 - Ensure stable and traceable supply
- 2 Develop and certify paludi-based substrate pellets**
 - Optimise production process (drying, extrusion, pelletising)
 - Compliance with DüMV (2019) and FLL (2018)
 - Launch ProPlantis Paludi®
- 3 Optimise production efficiency and quality**
 - Improve energy performance
 - Implement QA/QM
 - Assess cost structure
- 4 Strengthen market uptake and regional value creation**
 - Engage with green-roof, substrate and landscaping sectors
 - Demonstrate environmental and economic co-benefits
 - Explore regional procurement and investment opportunities
- 5 Replication and long-term impact**
 - Document and disseminate results
 - Develop transferable business and technical models
 - Support national replication

TRL PROGRESSION

- TRL 5 → TRL 7**
Biomass production and pellet formulation
- TRL 6 → TRL 7**
Quality assurance and standardisation

LOCATION

Brandenburg, Germany (Havelländisches Luch and Rhinluch)

GEOGRAPHICAL SCOPE

Regional pilot with potential for national replication

LEAD BENEFICIARY

ATB – Leibniz-Institut für Agrartechnik und Bioökonomie

MAIN RESULTS & STATUS

- Harvesting – Operational (M10–M14)
- Pellet production – Market entry achieved (2024)
- Market Conformity (DüMV & FLL) – Completed (June 2024)
- Energy and process optimisation – Ongoing (M18–M48)
- Regional outreach & scaling – Ongoing (M18–M48)

ENVIRONMENTAL IMPACT & BIODIVERSITY

 Feeding habitat for birds Grus grus; Vanellus vanellus; Acrocephalus schoenobaenus; Alauda arvensis; Gallinago gallinago; Lanius collurio. Higher habitat value on rewetted fenlands compared with abandonment and mining areas.	 Pollination service Supports pollinators such as the common carder bee (<i>Bombus pascuorum</i>). Higher activity on rewetted areas compared with mining areas.	 Carbon sequestration Increased soil organic carbon and root biomass on rewetted fenlands compared with mining areas, contributing to significant climate change mitigation (20–30 t CO ₂ -eq/ha/yr).
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Project partners (German use case)



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