FORESTCARBOVISION: vision, objectives, and expected results

Evgeny Lopatin,
Natural Resources Institute Finland

Interreg
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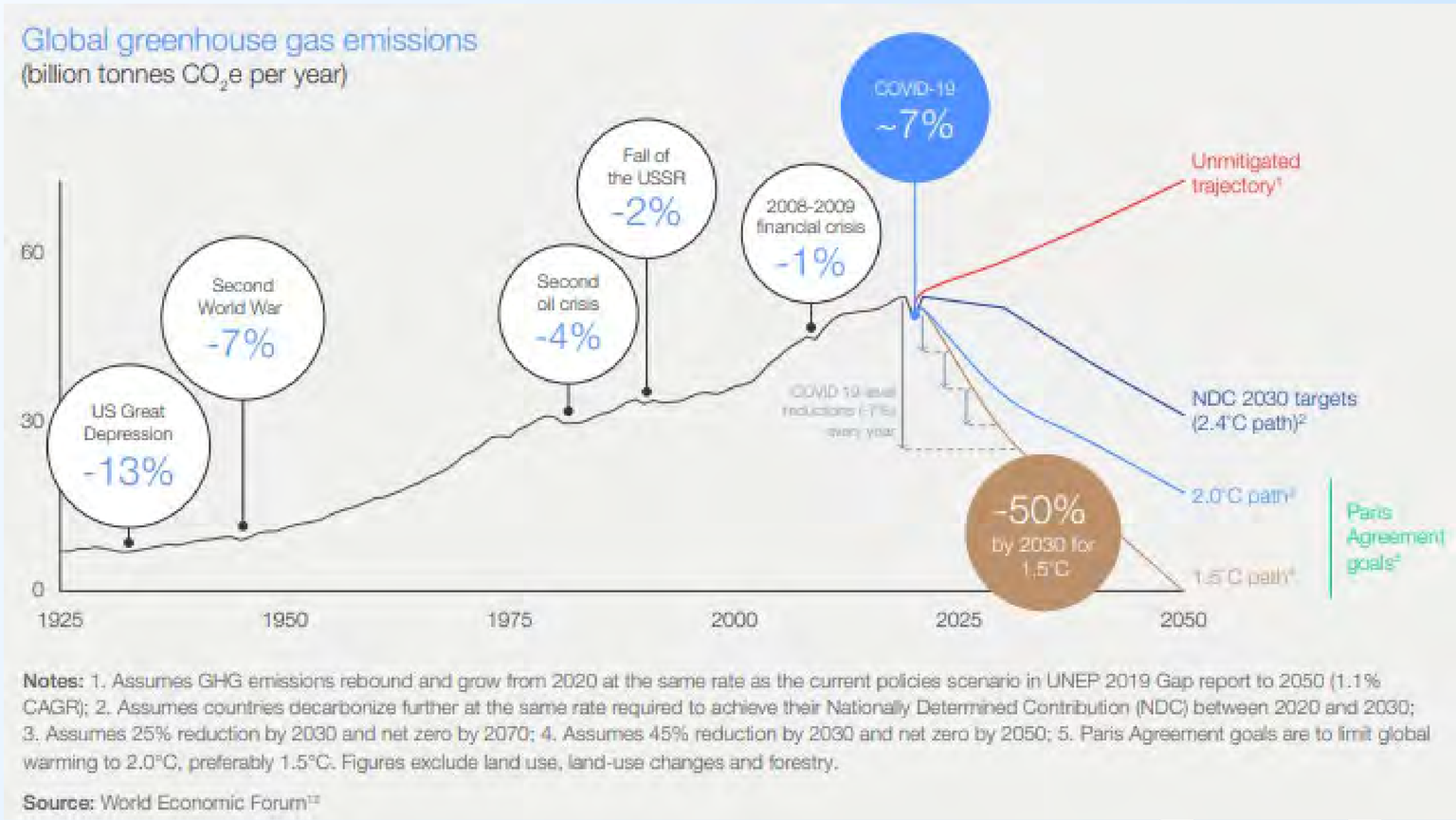
Problems



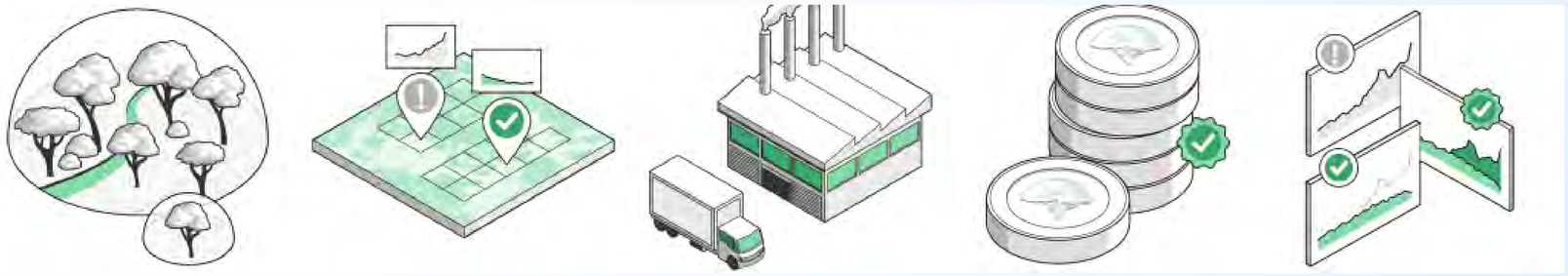
Notes: 1. Assumes GHG emissions rebound and grow from 2020 at the same rate as the current policies scenario in UNEP 2019 Gap report to 2050 (1.1% CAGR); 2. Assumes countries decarbonize further at the same rate required to achieve their Nationally Determined Contribution (NDC) between 2020 and 2030; 3. Assumes 25% reduction by 2030 and net zero by 2070; 4. Assumes 45% reduction by 2030 and net zero by 2050; 5. Paris Agreement goals are to limit global warming to 2.0°C, preferably 1.5°C. Figures exclude land use, land-use changes and forestry.

Source: World Economic Forum[12]

- 🌡️ **Climate change:** Remote communities in the NPA region are highly vulnerable to climate change impacts. Forests face increasing stress, threatening both biodiversity and local livelihoods.

- 🌍 **Global emissions vs. targets:** Worldwide greenhouse gas emissions are still rising despite climate goals. Paris Agreement requires not only cutting emissions 40-60% by 2030 but also removing up to ~10 Gt CO_2/year by 2050 – **a huge challenge that forests can help tackle**.

Potential solution: carbon credits



- Companies are searching for carbon credits to make climate-neutrality claims
- Voluntary carbon credits – great idea with high potential to combat climate change

Key problems associated with carbon credits:

- 🔍 Lack of transparency
- 🎯 Measurement inaccuracies
- 🔒 Limited accessibility
- 🔄 Risk of double counting, $900 million offsets are invalid
- 🌴→🌲 **Tropical Offsets Dominant:** Current reliance on tropical forests faces verification and governance challenges—northern forests offer a transparent, verifiable alternative

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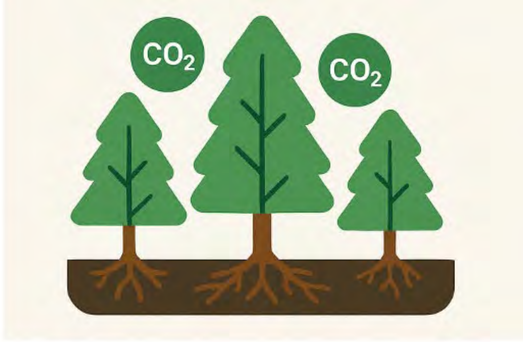
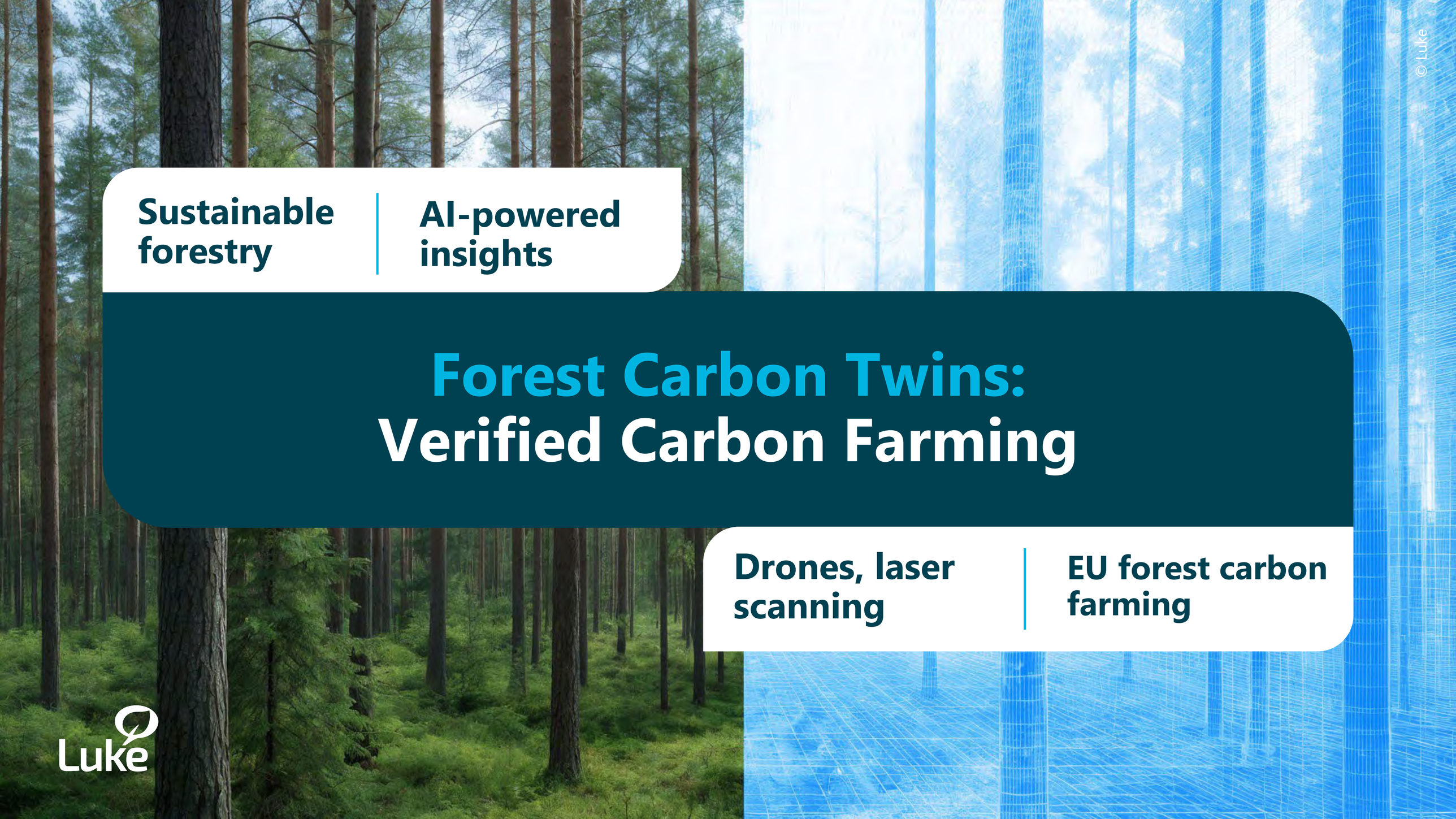
Opportunities

- 🌍 Empowering remote communities
- 🌳 Long-term CO_2 storage
- 🤖 Digital innovation in forestry
- EU EU carbon farming momentum



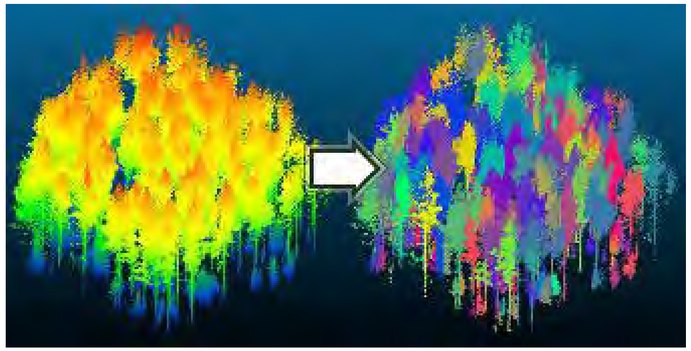
GAMECHANGER:
Ability to measure reality without sampling and extrapolation

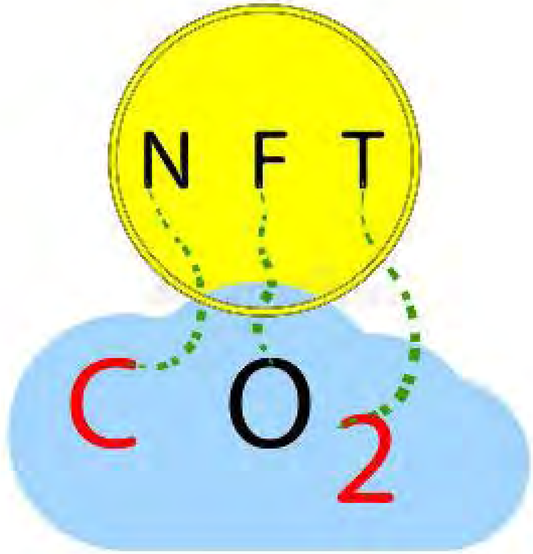

Sustainable forestry
AI-powered insights
Forest Carbon Twins:
Verified Carbon Farming
Drones, laser scanning
EU forest carbon farming
Luke

Tree-wise carbon accumulation: 2 digital forest twins

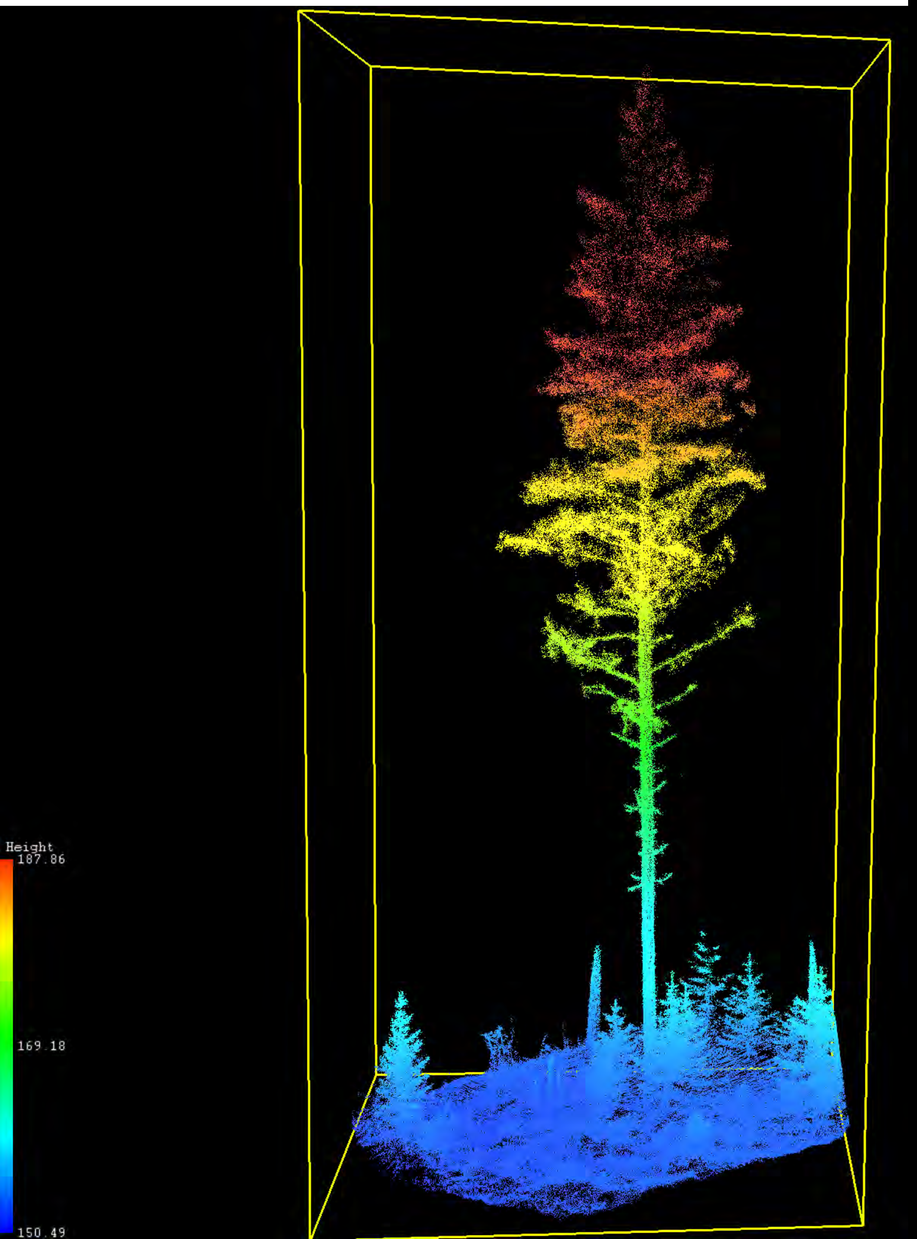
April

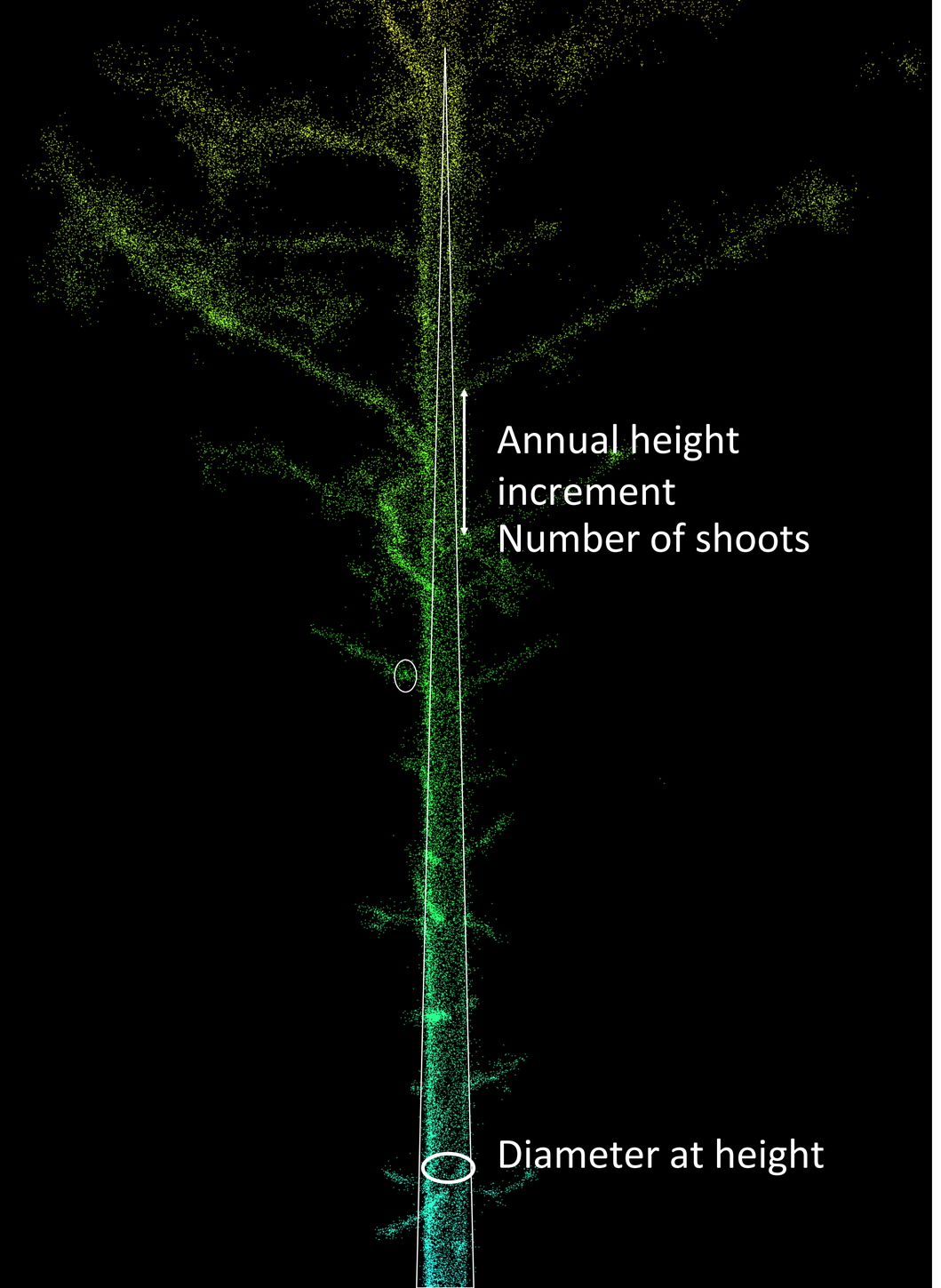
September



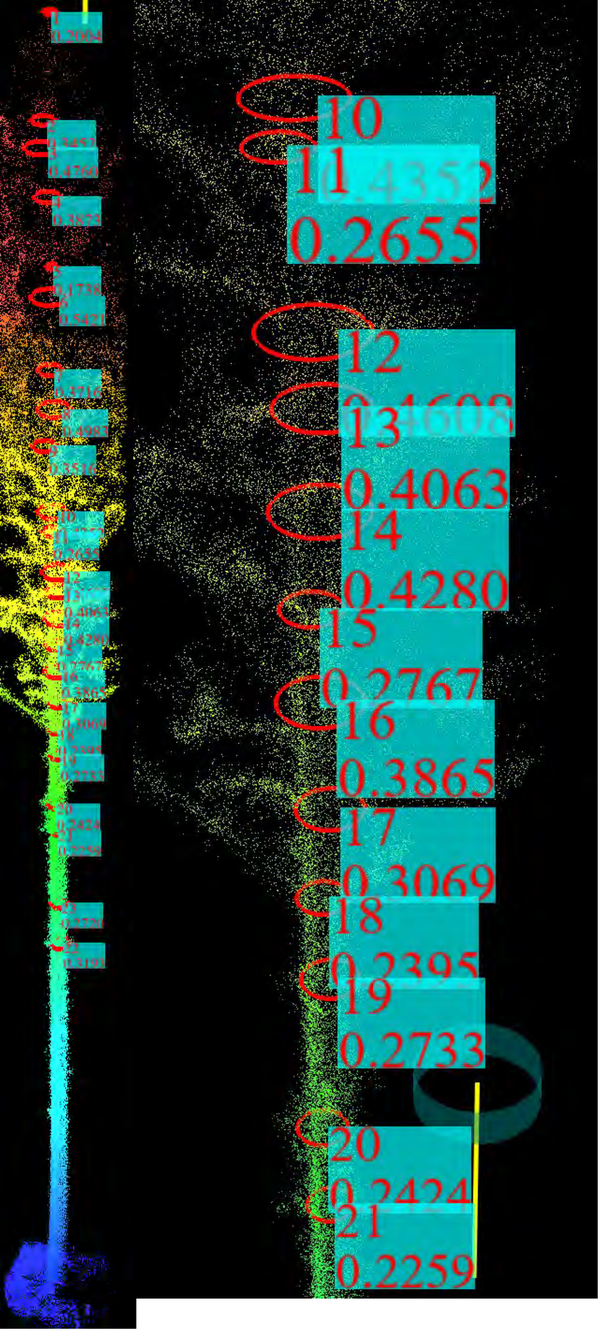


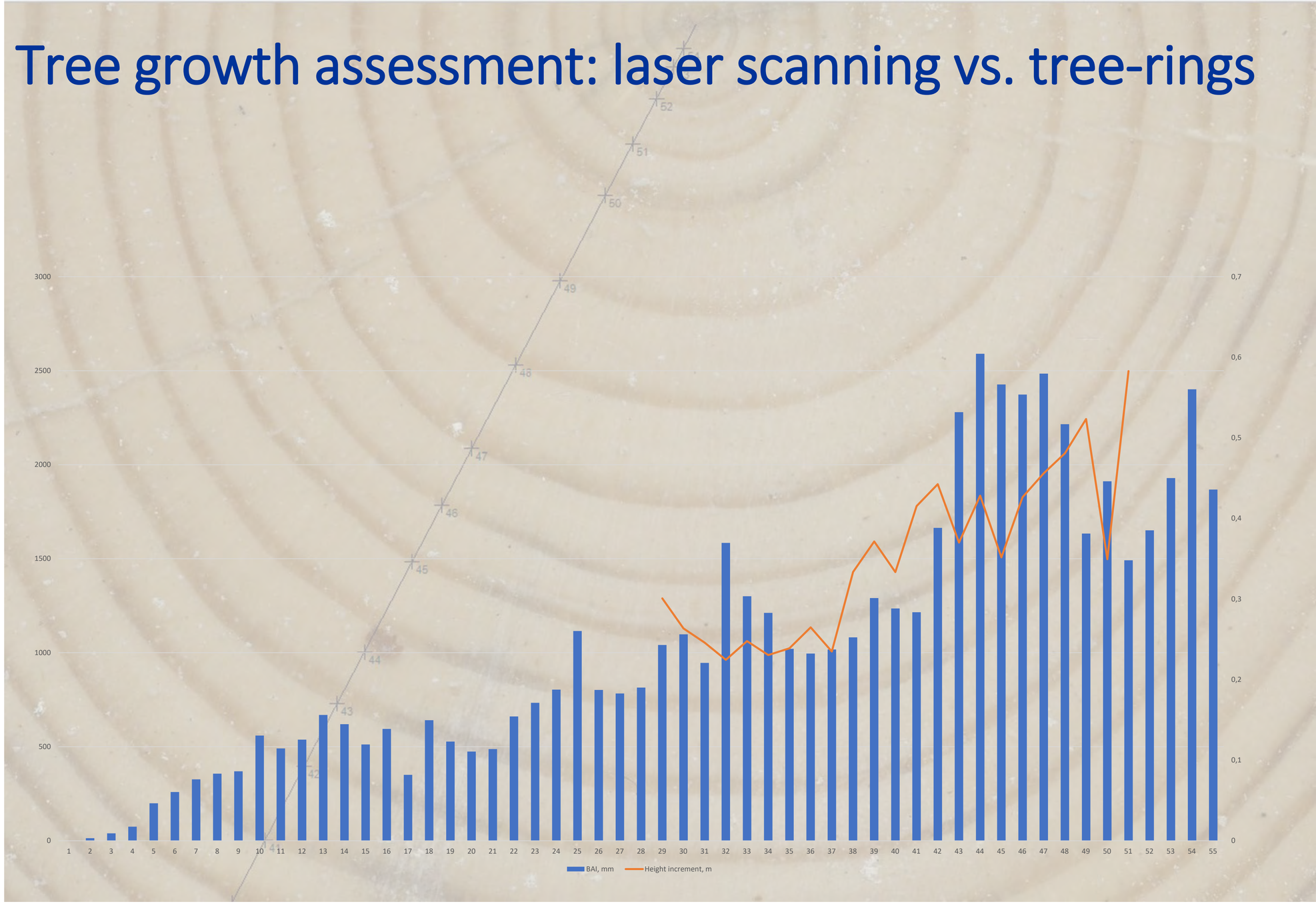
Measuring heigh increment from digital twins



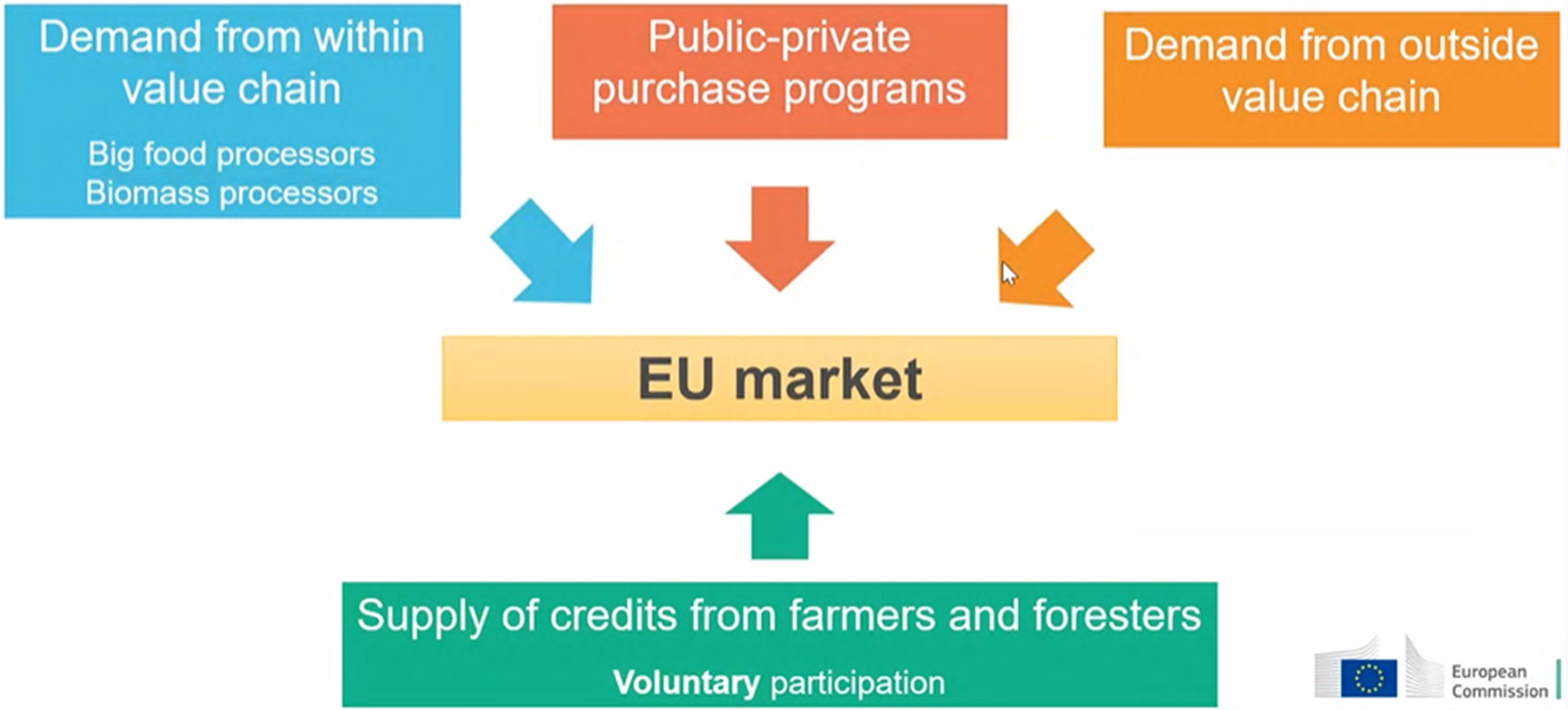


Tree growth assessment: laser scanning vs. tree-rings





EU market for carbon farming credits



European Commission

Financing

Regulatory frameworks for marketing carbon farming credits

Corporate Sustainability Reporting Directive

- Sustainable Reporting Standards on Climate

Green Claims

- Commission proposal from March 2023
- Co-decision process ongoing

Studies on market-based approaches for agri-food and forestry value chains

European Commission

Next steps

2024
- Entry into force of CRCF Regulation - EU - 2024/3012 - EN - EUR-Lex

2025
- Proposal of first certification methodologies
- Proposal on certification schemes, registries, and verification by independent third parties

2026
- Recognition of certification schemes and (possibly) first issuance of certified units
- Proposal of next certification methodologies, including Sustainable Forest Management and Carbon Storage in Buildings

2028
- Start of EU registry

European Commission

Example: When and how can additionality be achieved in Finnish forest management?

1. Afforestation of abandoned lands

2. Soil management and agroforestry

3. Increase planting/seeding density

4. Biochar

5. Smart young stands management aimed to maximize carbon capture, species mix optimization

6. Smart thinning operation aimed to maximize carbon capture, species mix optimization

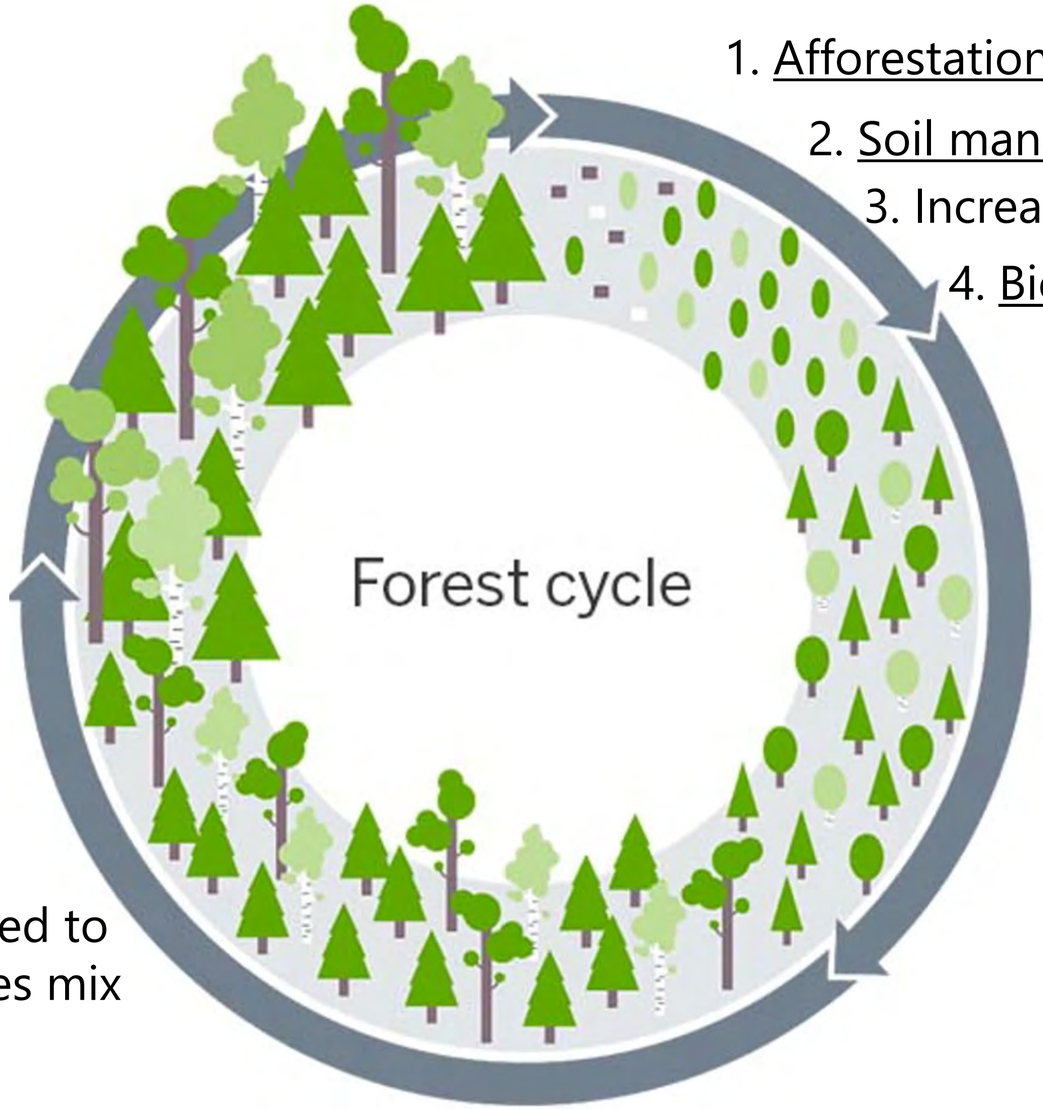
7. Fertilization

8. Continuous cover forestry:

- Natural regeneration
- Without soil disturbance
- Without soil preparation
- Soil carbon preservation

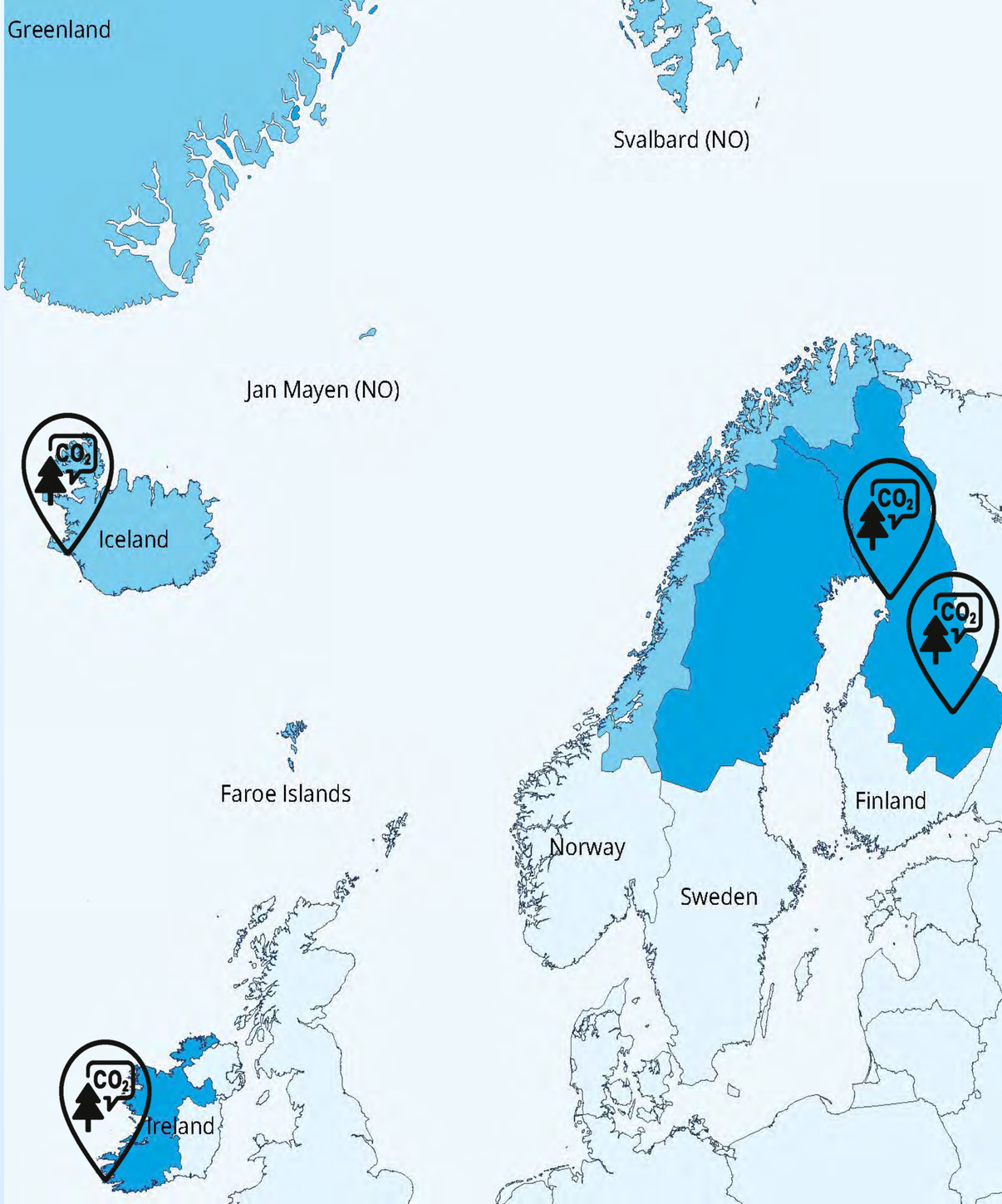
9. Extending rotation cycle

10. Rewetting of peatlands



Project’s Vision

- 🌱 Climate-resilient communities
- 🛠️ Innovation meets tradition
- 🌍 Transnational impact



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Objectives

- 🌲 Boost carbon sequestration on demonstration sites
- 🧮 Develop accurate carbon accounting tools
- 🚀 Pilot and validate solutions on the ground
- 🤝 Engage stakeholders & build capacity
- 📄 Inform policy and create a roadmap

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Partners

Natural Resources Institute Finland

Green Skibbereen (Ireland)

Agricultural University of Iceland

Oulu University of Applied Sciences (Finland)

Associated partners

University of Eastern Finland

Finnish Forestry Center

Brim (Iceland)

Land and Forest Iceland

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Duration and Budget

- ⏳ Duration: 36 months (2025-2028): 01.05.2025 – 30.04.2028
- 💰 Total budget: ~€975,000
- 💶 Interreg NPA funding (ERDF): ~€634,000 (65%)
- 🤝 Partner co-funding: ~€341,000 (35% match)

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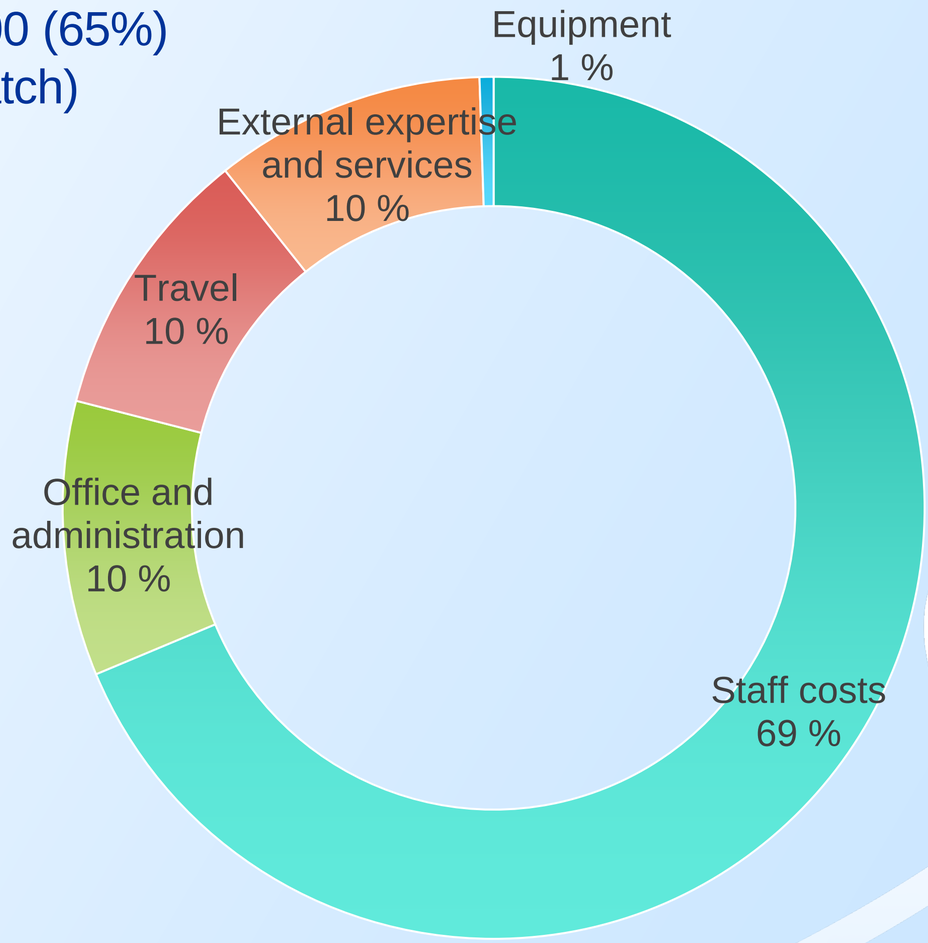

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Timeline

📅 2025: Project Launch & Planning

- 🧪 WP1: Living Labs for Climate Change Adaptation, Biodiversity, and Forest Carbon Accounting
- 🗺️ Establish demonstration sites
- 🧬 Create baseline digital twins
- 🧮 Calculate initial carbon amounts

🌱 2026: Implementation & Pilot Actions

- 🛠️ WP2: Demonstration Sites for Climate Resilience, Carbon Accounting, and Nature Restoration
- 🧪 Implement forest interventions at pilot sites
- 🧭 Create second digital twin to monitor changes

📜 2027: Evaluation & Refinement

- 🧩 WP3: Building Local Capacity for Climate-Resilient Forestry and Carbon Farming
- 📊 Analyze pilot results and refine toolkit
- 🎓 Train stakeholders and forest owners

📣 2028: Finalization & Dissemination

- 📘 Finalize toolkit and policy recommendations
- 🌍 Disseminate results across NPA region and EU
- 🤝 Plan for sustainability and follow-up actions

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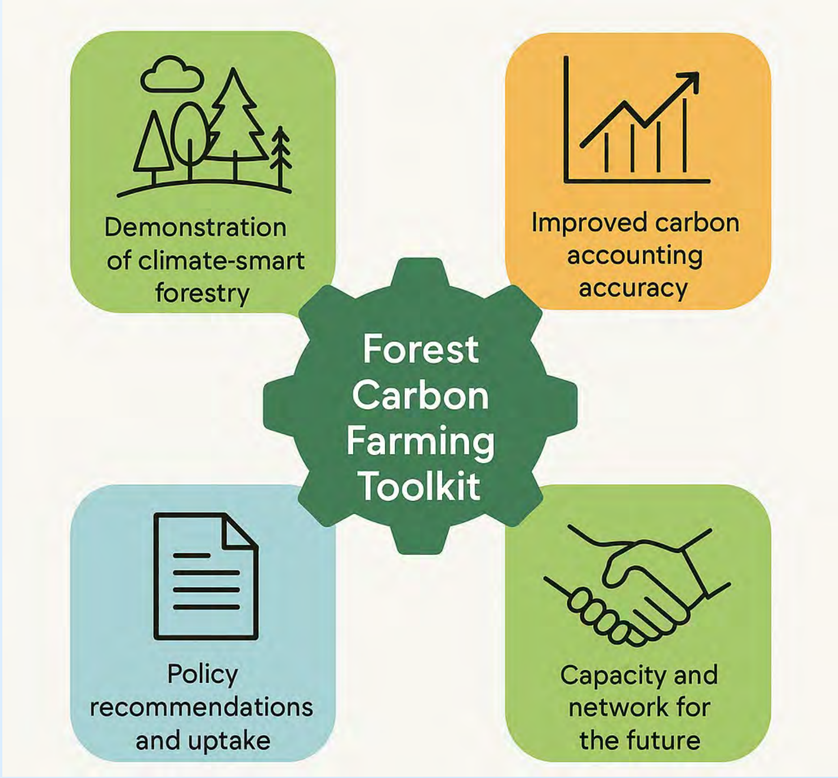
Expected results

- 🤝 **8 organizations cooperating across borders** to enhance transnational knowledge and implementation
- 🛠️ **Forest Carbon Farming Toolkit** integrating drones, AI, blockchain, and biodiversity indicators
- 🌲 **Toolkit tested at demonstration sites**, providing practical tools for local communities to implement climate-resilient forestry.
- 📄 **Policy recommendations** developed to support forest carbon farming and climate-resilient forestry practices.



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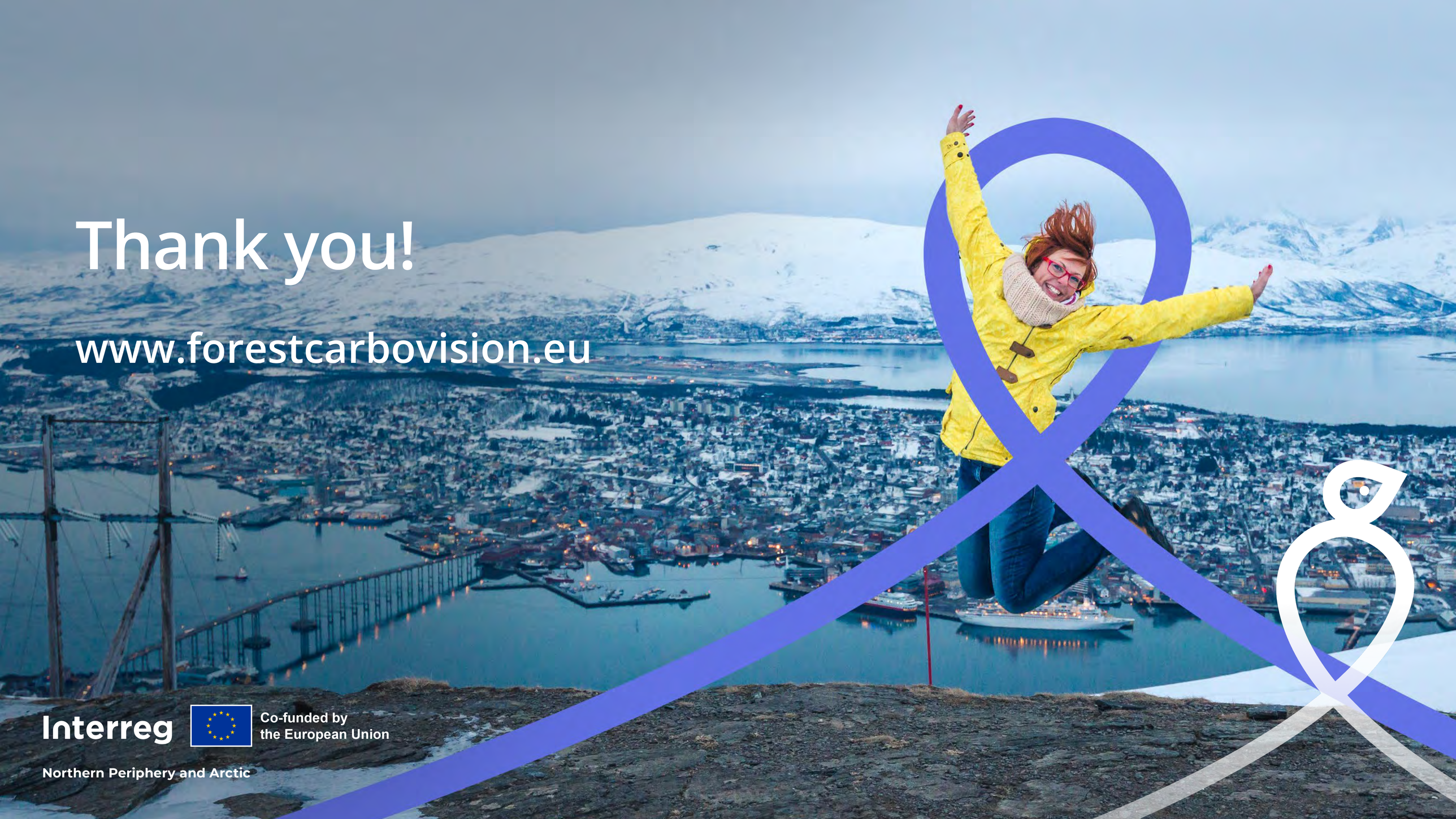
Thank you!
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