Future EU Regulation on Forest Monitoring – Integrate Network as a potential actor

Main objectives and features for forest biodiversity monitoring

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Why is the Future EU Regulation on Forest Monitoring Needed?

nature

Article | Published: 01 July 2020

Abrupt increase in harvested forest area over Europe after 2015

Guido Ceccherini, Gregory Duveiller, Giacomo Grassi, Guido Lemoine, Valerio Avitabile, Roberto Pilli & Alessandro Cescatti

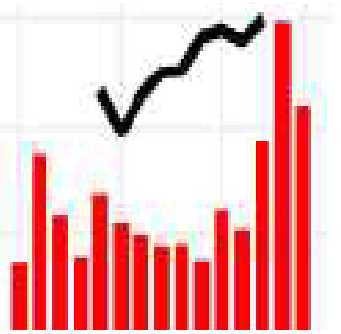
Nature **583**, 72–77 (2020) | Cite this article

Matters Arising | Published: 28 April 2021

Concerns about reported harvests in European forests

Marc Palahí, Rubén Valbuena, Cornelius Senf, Nezha Acil, Thomas A. M. Pugh, Jonathan Sadler, Rupert Seidl, Peter Potapov, Barry Gardiner, Lauri Hetemäki, Gherardo Chirici, Saverio Francini, Tomáš Hlásny, Bas Jan Willem Lerink, Håkan Olsson, José Ramón González Olabarria, Davide Ascoli, Antti Asikainen, Jürgen Bauhus, Göran Berndes, Janis Donis, Jonas Fridman, Marc Hanewinkel, Hervé Jactel, ... Gert-Jan Nabuurs + Show authors

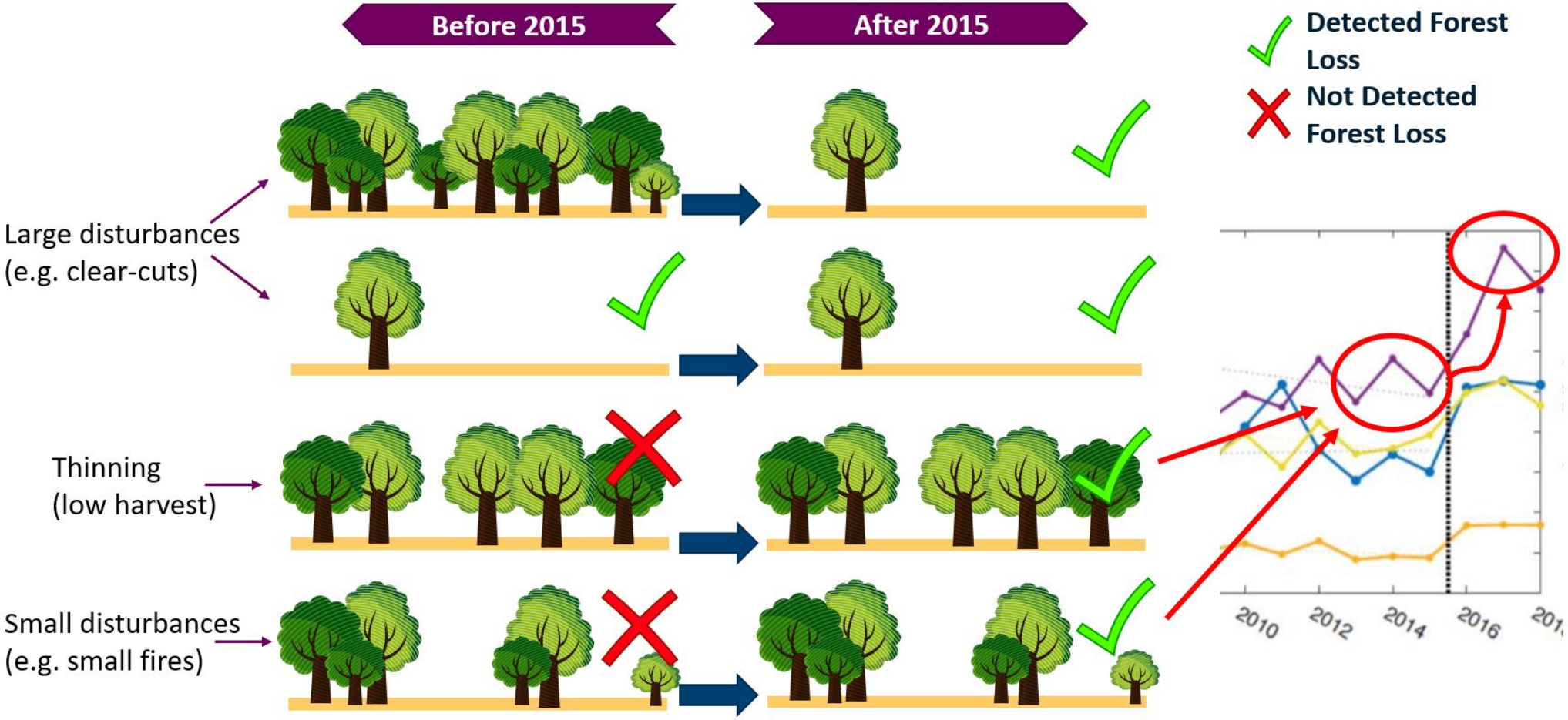
Nature **592**, E15–E17 (2021) | Cite this article



Sweden Finland

Why is the Future EU Regulation on Forest Monitoring Needed?

Omission of small forest disturbances in earlier years

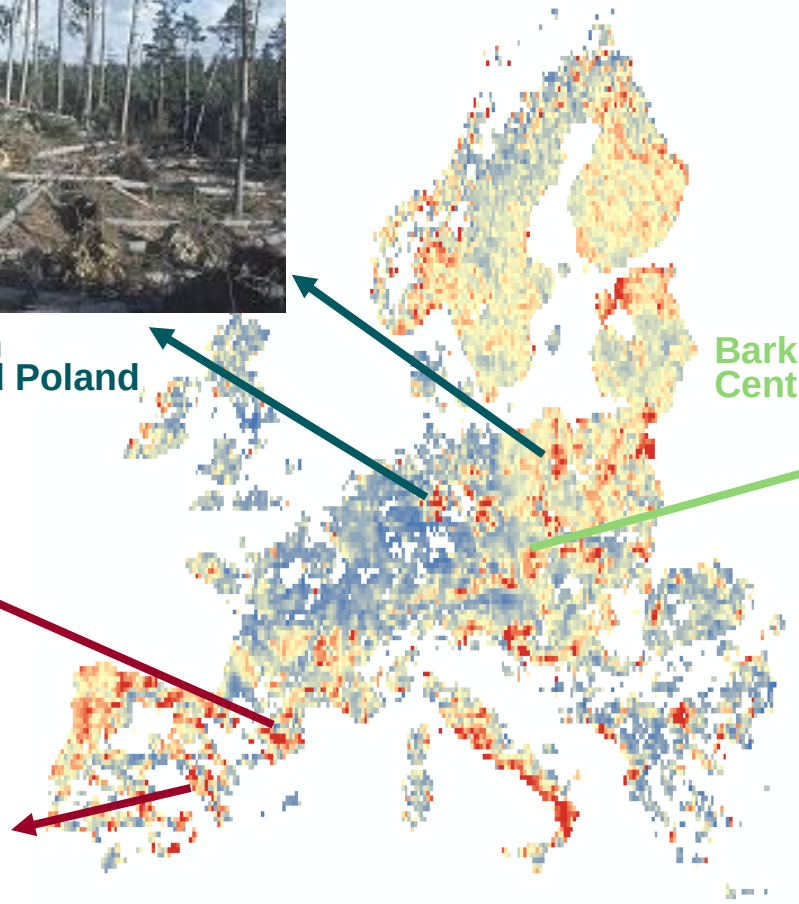


Why is the Future EU Regulation on Forest Monitoring Needed?

Misattribution of natural disturbances as being harvest

Windthrow in Germany and Poland

Processionary moth in Spain



Bark Beetle in Central Europe

Climate-Smart Forest Management

EFI

Research Network

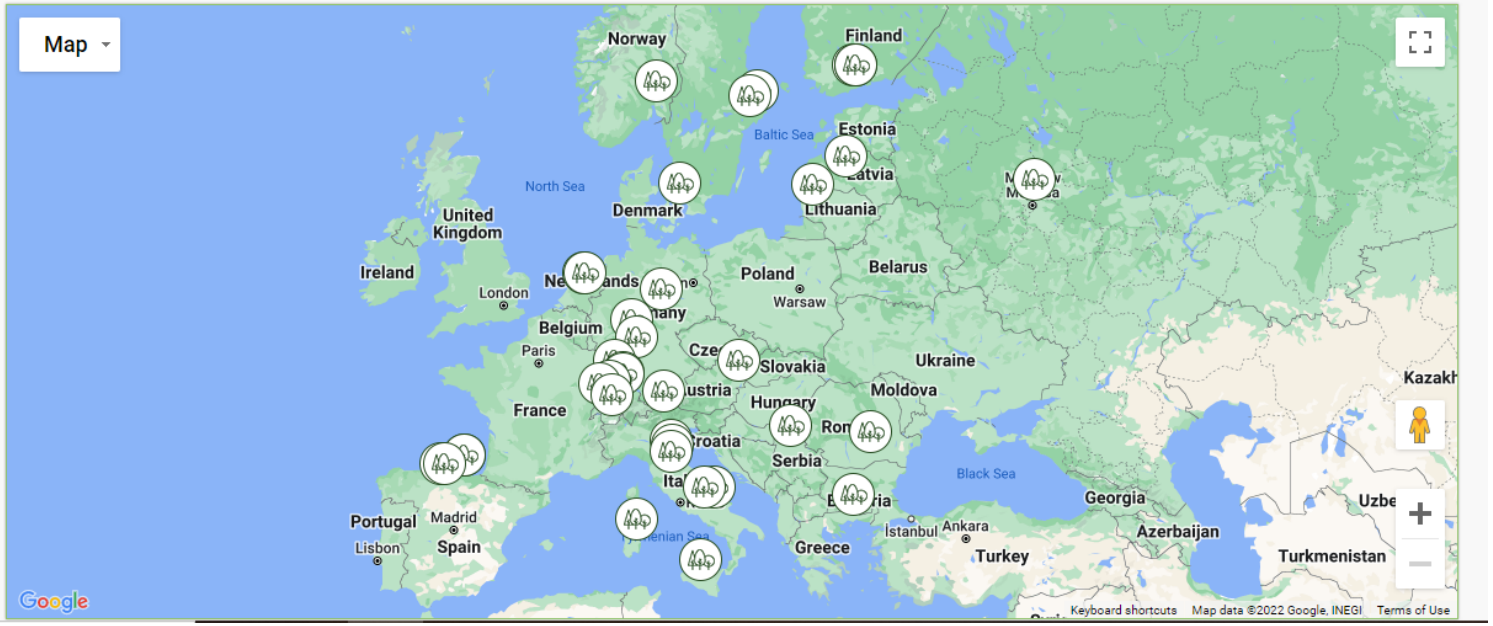
Climate Smart Forestry

WAGENINGEN UNIVERSITY & RESEARCH

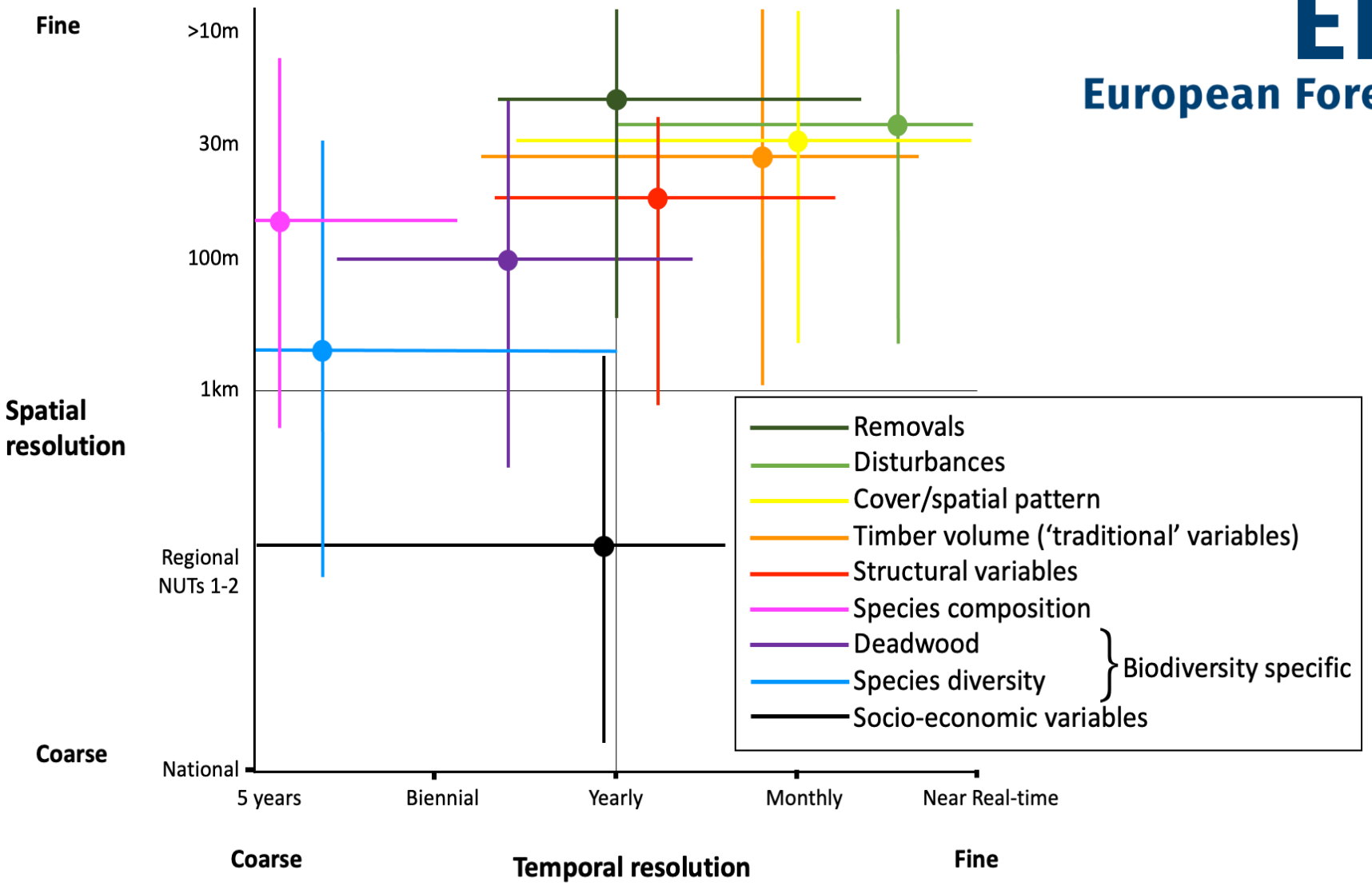
Europe's forests are being hit hard by climate change. At the same time we expect forests to fulfil their carbon sink function and maintain and provide many other functions. This is not only vital for the big forest countries, but also for the wood importing countries in Europe. Europe needs coordinated actions in this field. Climate-Smart Forestry (CSF) is a prominent way to deal with this and is urgently needed to connect mitigation with adaption measures, enhancing the resilience of forest resources and ecosystem services, and meet the needs of a growing population. The Netherlands has been the first country in Europe to establish CSF pilots to connect science to action and to demonstrate its potential. Several other countries have also started actions in recent years.

We believe that it is time to upscale the actions based on the experiences from CSF projects. In 2020, a European Network on Climate-Smart Forestry has started, with representatives from more than ten European countries (listed below). The network gathers information on CSF projects. The gathered information is presented on the interactive map on this webpage. In 2021, more information on projects will be added.

Overview of climate-smart forestry projects in Europe:



What should be the Main Objectives in Forest Monitoring?



EFINET
European Forest Information Network

Biodiversity Assessments

SUPERB
Upscaling Forest Restoration

Remote Sensing

Bioacoustics

DNA metabarcoding

Biodiversity Assessments

nature ecology & evolution

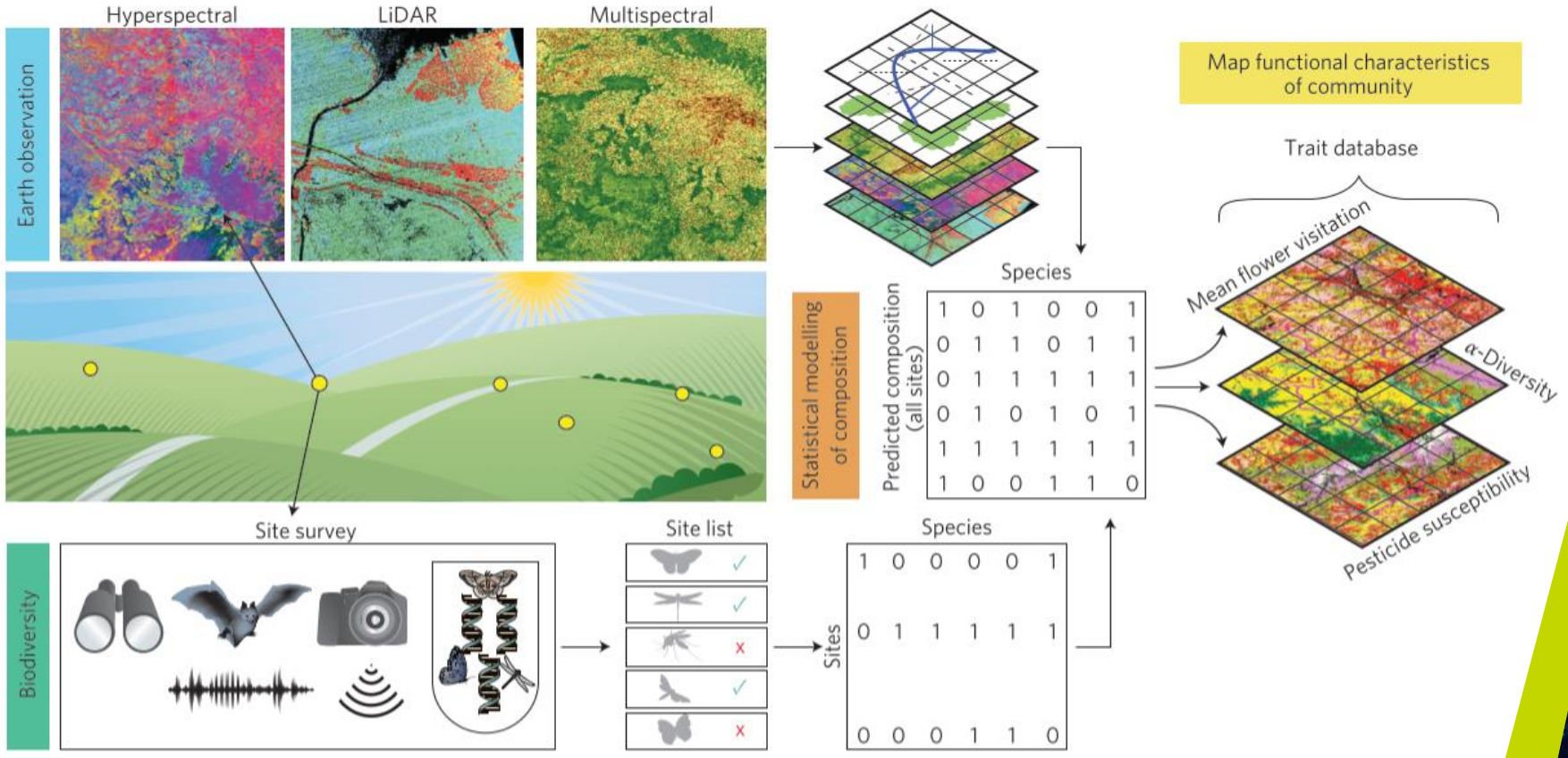
PERSPECTIVE

PUBLISHED: 22 JUNE 2017 | VOLUME: 1 | ARTICLE NUMBER: 0176

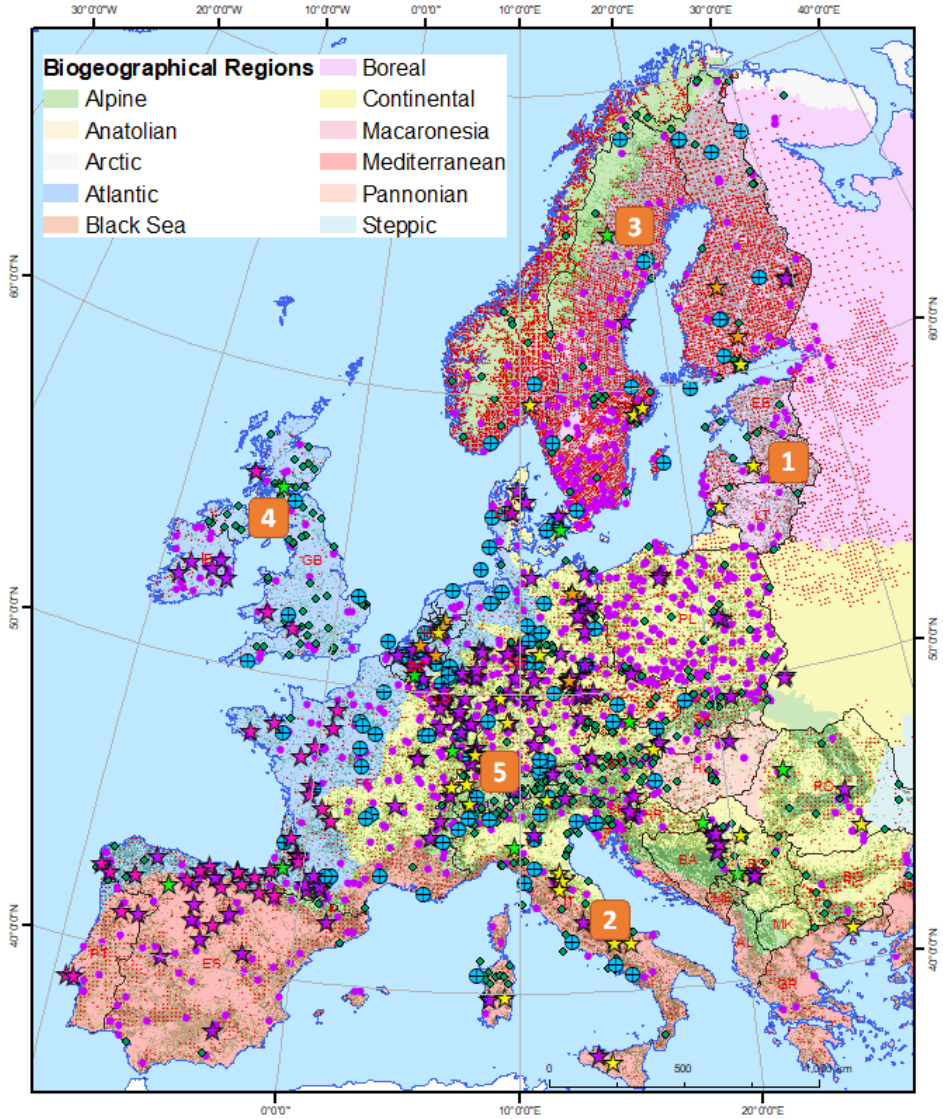
SUPERB
Upscaling Forest Restoration

Connecting Earth observation to high-throughput biodiversity data

Alex Bush[1,2,3], Rahel Sollmann[4], And



FORWARDS: The ForestWard Observatory
to Secure Resilience of European Forests



Existing Established Monitoring Networks

- ICP Forest level I & NFI
- ICP Forest level II
- LTER
- ICOS

Existing Established CSF & Restoration Networks

- EFI CSF Network
- SUPERB
- HOLISOILS
- INTEGRATE
- REINFFORCE

Network of FORWARDS Demo-sites

1. Peatland restoration and wind resistance in hemiboreal forests
2. Balancing Carbon & Biodiversity targets in mixed mediterranean forests
3. Landscape diversification & riparian boreal forests
4. Natural flood management & diversification of plantations in atlantic forests
5. Treeline ecotone restoration in alpine forests

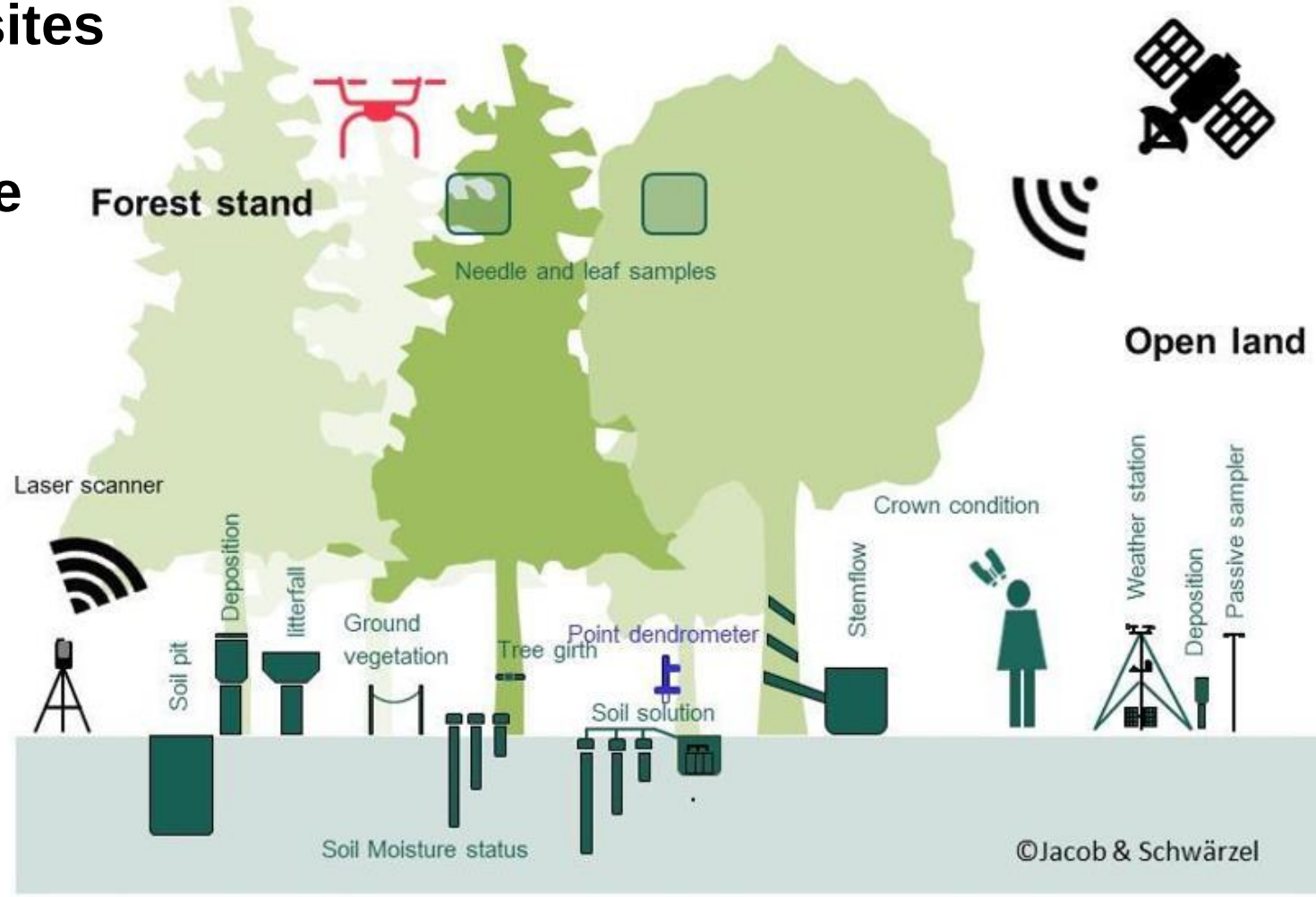
SLU Swedish University of Agricultural Sciences
European Forest Institute
Wageningen University & Research
WSL Swiss Federal Institute for Forest, Snow and Landscape Research WSL
Prifysgol Bangor University
Forest Research
Thünen
Silava
Luke Natural Resources Institute Finland
ESSRG Environmental Social Science Research Group
prospex institute
Università degli Studi del Molise
BOKU
Università degli Studi Firenze
GFZ Helmholtz-Zentrum Potsdam
ICONS
Instituut Natuur- en Bosonderzoek
Lunds Universitet

FORWARDS' three main components:

- 1) **Environmental monitoring of forests**: Using several different measurement methods in environmental monitoring, the project will investigate how European forests are affected by climate change;
- 2) **Guidance in forest management**: Develop science-based knowledge that provides guidance on how landowners manage their forests in a climate-smart way and also how ecosystems can be restored and biodiversity preserved;
- 3) **Consideration of societal perspectives**: Engage both forest stakeholders and the public in decision-making processes related to the forest.

Environmental monitoring of forests

- Network of **Supersites**
- Novel methods for **forest disturbance characterization**



Climate-smart forestry, ecosystem restoration, and biodiversity preservation (CSF & Restoration)

- Spatially explicit **projections on forests**
- Evaluate synergies and trade-offs of conversion and restoration activities
- **Good practice guidance** on effective CSF & Restoration management

Consideration of societal perspectives

- The ForestWard Observatory will be constructed under the principle of co-design
- Engage both forest stakeholders and the public in decision-making processes related to the forest

Grants to Third Parties

- 50 grants of €150k each
- Non-FORWARDS partners are eligible

Grant Theme	Supported activities	Approx. duration	Approx. launch
Pilot network of long-term climate impact forest monitoring sites	– Install new measurement equipment in existing monitoring plots. – Perform measurements and maintain equipment.	2 years	Month 12
Disturbance characterization	– Provide a Europe-wide, consistent, and statistically robust disturbance assessment for different project years (lot 1). – Provide detailed characterization of cause-effect relationships for disturbances in and around the CSF and restoration priority areas (lot 2).	3 years	Months 12, 24, 36
CSF and forest restoration pilots	– Establish new CSF and forest restoration trials. – Field measurements on newly established or already existing CSF and forest restoration trials. – Analyse the effectiveness of the practises considering indicators developed in FORWARDS.	2 years	Month 9
Citizen and stakeholder engagement in CSF and forest restoration	– Implement innovative social engagement activities. – Stakeholder surveys, workshops, or other interactive formats for knowledge exchange, joint vision development, collective learning, collaborative planning or co-creating solutions.	1 year	Month 18
Knowledge to practice	– Develop web applications that link to the ForestWard Observatory and rely on its datasets.	1 year	Month 36

Thank you for your attention

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