

Potential components of a forest information system for the EU

Annemarie Bastrup-Birk / Workshop towards harmonised forest monitoring and reporting for the EU
/ Uppsala 1-2 Feb 2023



Brief overview

- Forest monitoring for policy implementation, actors, and instruments
- Possible components of forest monitoring
- Challenges, possible next steps

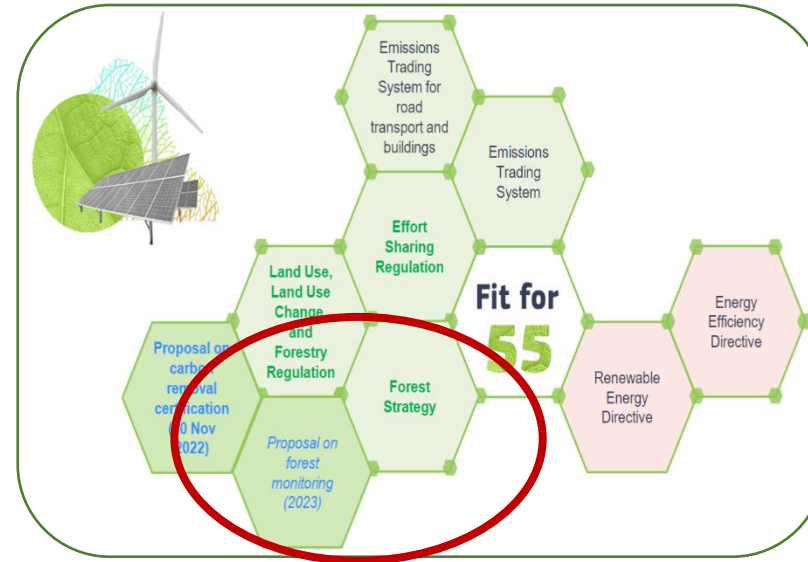


Forest monitoring discussion -recap

Europe's forests under pressure

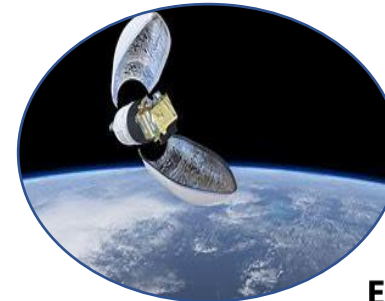


EU forest-related policies



WHAT'S
NEXT?

Monitoring approaches



SELECTION OF
INDICATORS

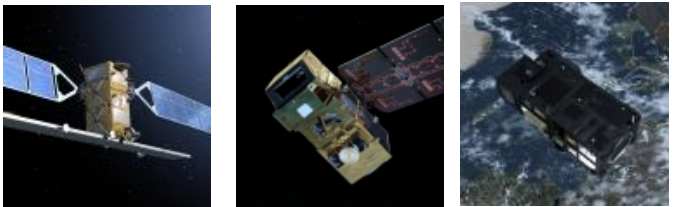
European Environment Agency



EU forest information: actors and instruments



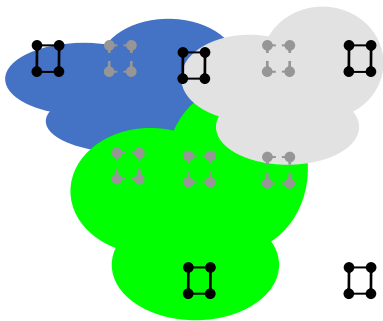
Sentinels 1-3



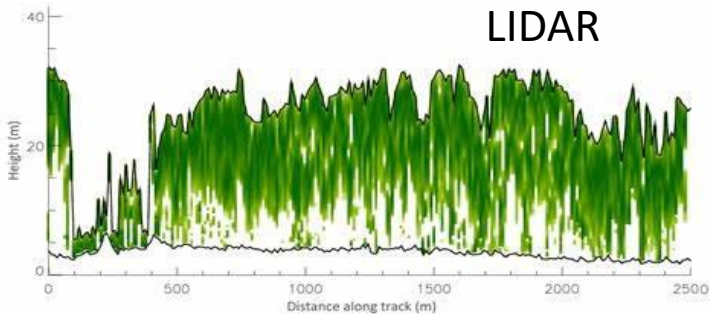
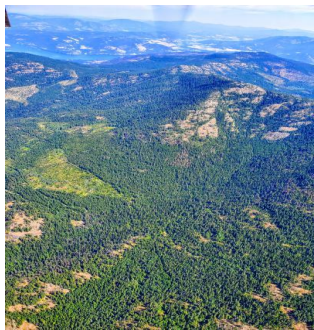
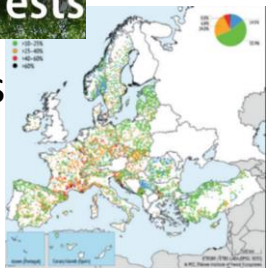
Statistics



NFIs ~ 500 000 plots



~ 8 000 plots
(Level I+II)



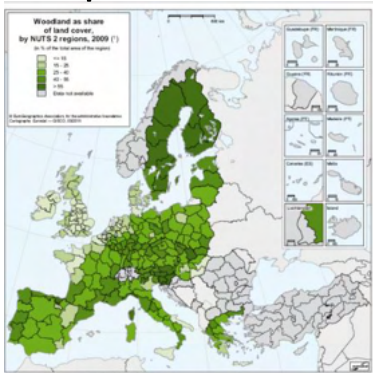
LIDAR



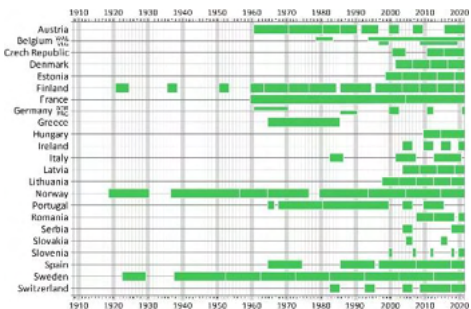
Forest ecosystem
condition



LUCAS woodland
~ 80 000 plots



European Environment Agency



Reporting processes

Forest Europe

FAO

EEA/EIONET FISE

UNECE

JRC

EUROSTAT

Forest data & information

Kyoto/LULUCF
UNFCCC
REDD, CBD
RED, EU
FRA, UNECE
Forest Europe

International
Agreements

Horizon
Europe
COST
Interreg

Research

EU Green
Deal

Environmental
acquis



European Environment Agency



“EU forest-related policies”

Modified with
permission from K.
Schadauer

National
research

JRC Forest
Research
Forest
Observatory



WORLD
RESOURCES
INSTITUTE

GLOBAL
FOREST
WATCH



esa



Global

European

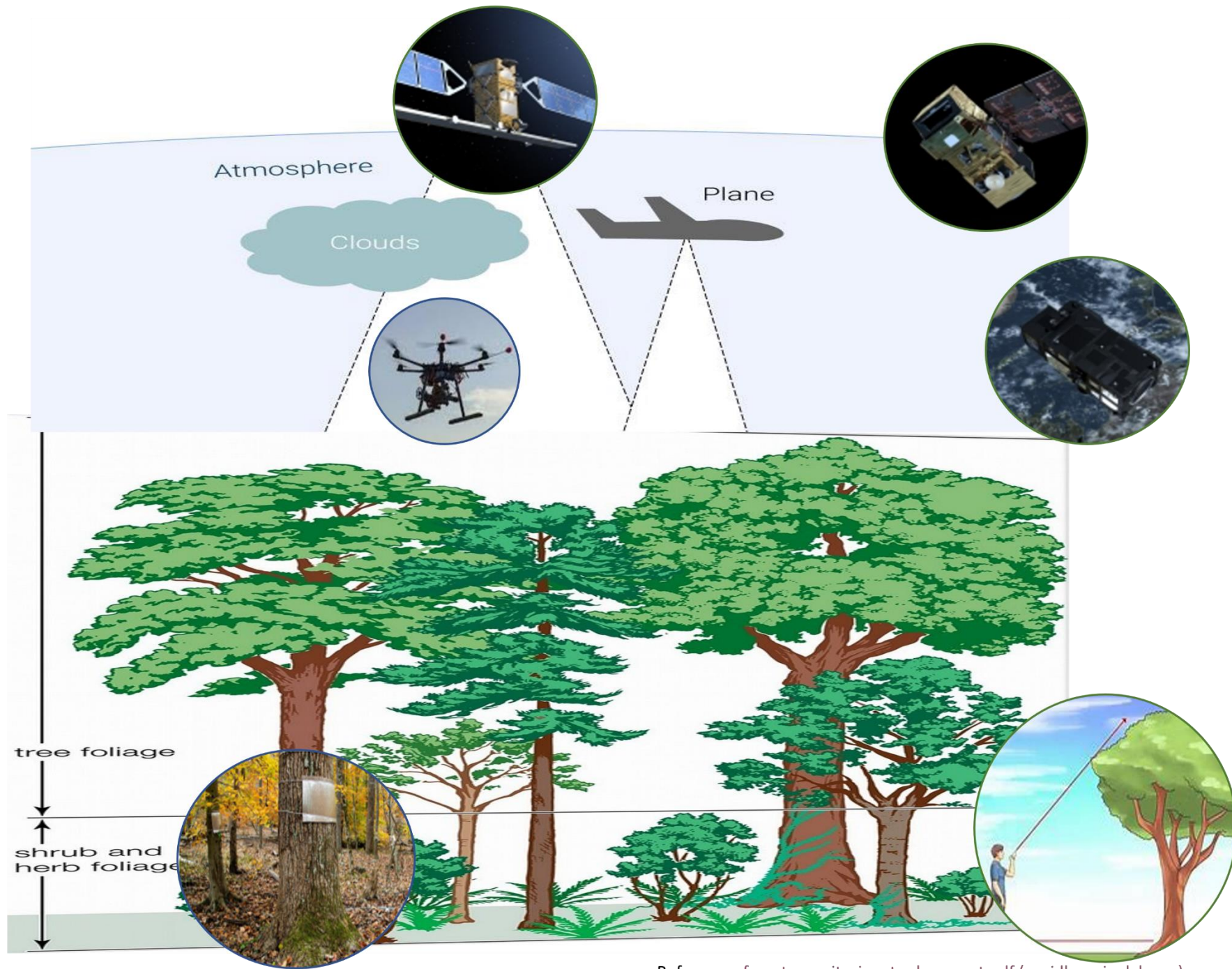
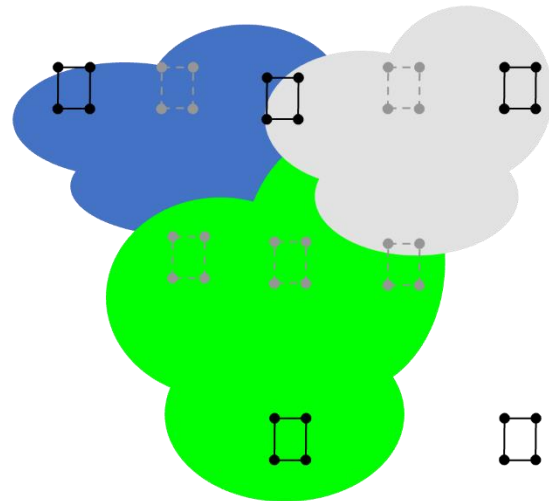
Local

PathFinder ForestPath
ForestNavigator SUPERB
ForWards
HoliSoils OptFor
NFI
ICP-Forest sites LTER

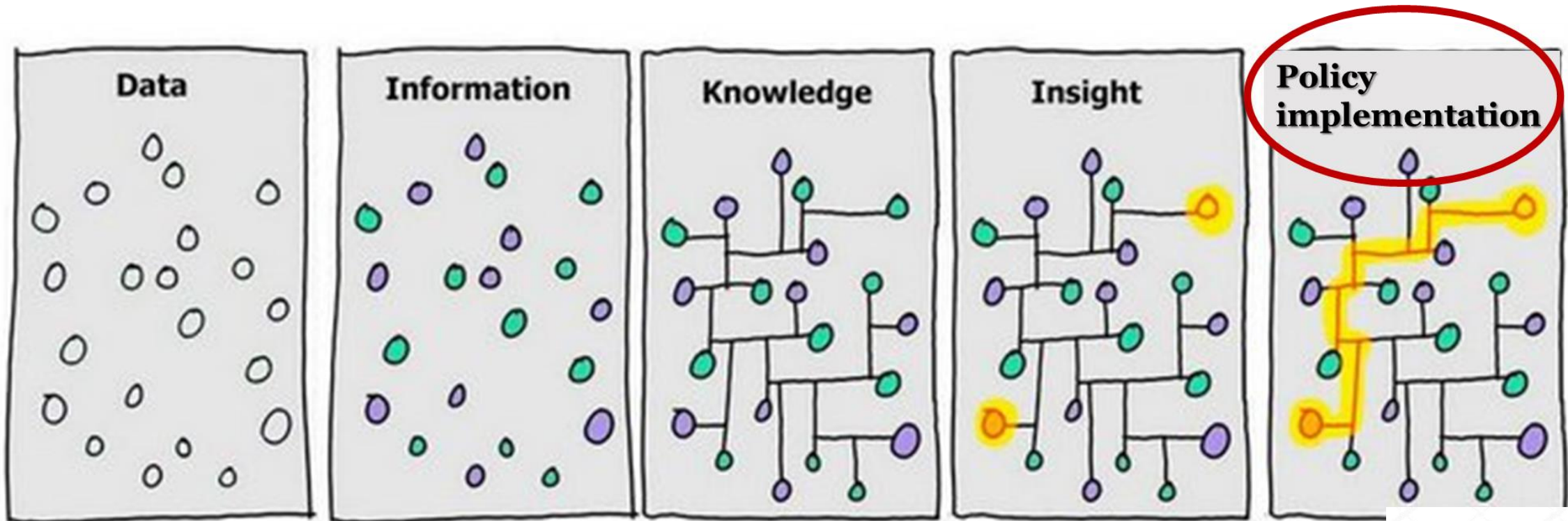


Interdependencies
research,
monitoring, policy

Interactive forest monitoring



Forest information for European policy implementation



WHAT'S
NEXT?

Possible components of a forest information system

EUROPEAN LEVEL

Welcome to FISE

Database

ReportNet
3.0 tool

QA/QC

MEMBER COUNTRIES

Upscaling to 50 x 50 km² / NUTS3 / other region /
national level

Harmonisation of variables towards internationally
agreed reference definition

Field data
(NFI, ICP, other)

Spatial explicit
information

Integrating field
and remote sensing
information

Other statistics

QA/QC

QA/QC

QA/QC

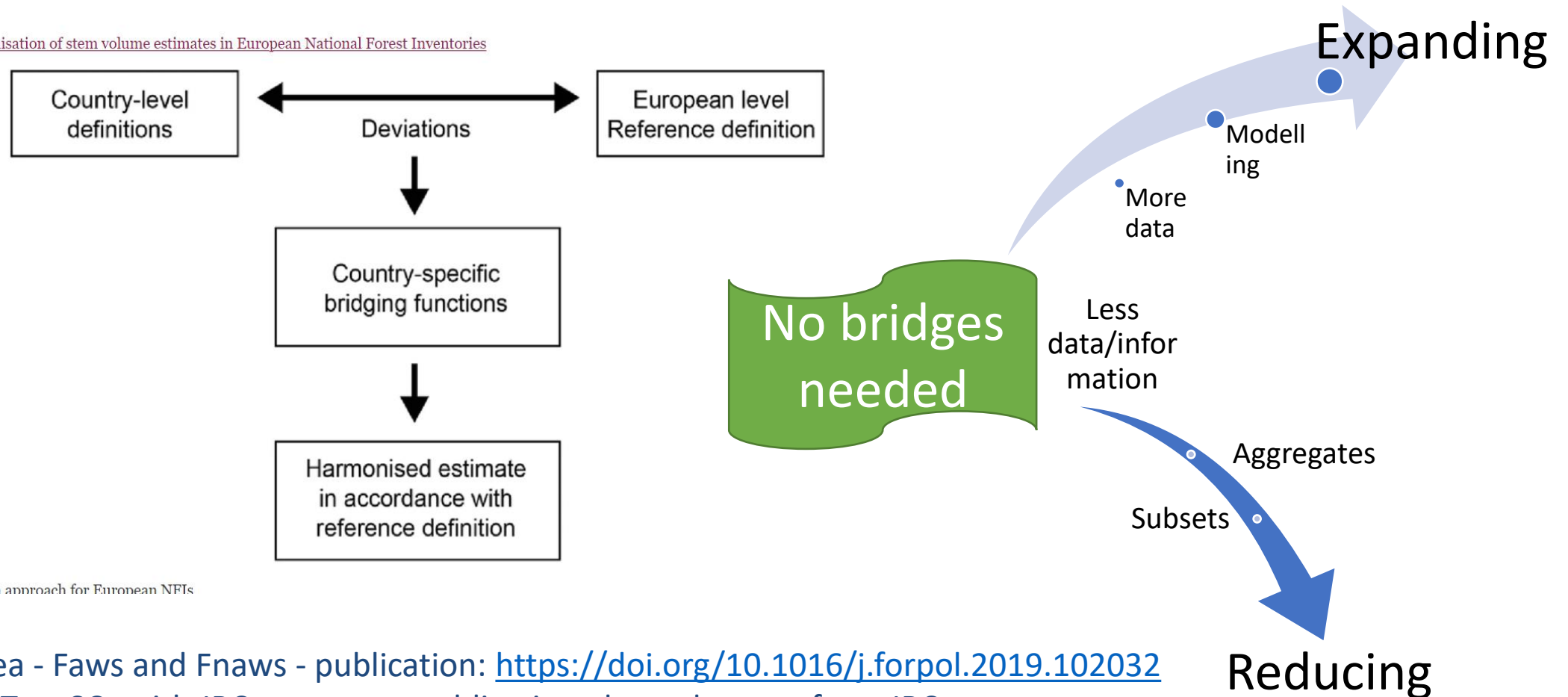
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Harmonisation procedures

Fig. 2

From: [Harmonisation of stem volume estimates in European National Forest Inventories](#)



Harmonisation approach for European NFIs

- Forest area - Faws and Fnaws - publication: <https://doi.org/10.1016/j.forpol.2019.102032>
- Biomass: Two SCs with JRC: reports, a publication about the map from JRC
- Volume: Diabolo – Publication: <https://doi.org/10.1016/j.foreco.2021.119868>
- Increment: Two SCs with JRC: reports, publication is starting



Operationalise upscaling procedures



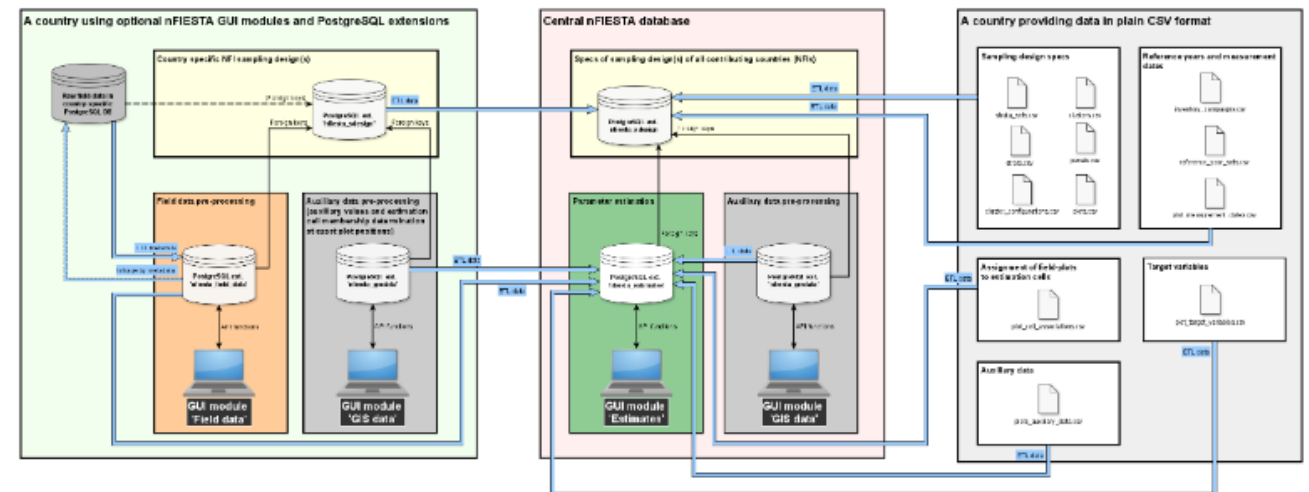
PathFinder ForestPath
SUPERB

ForestNavigator

HoliSoils ForWards

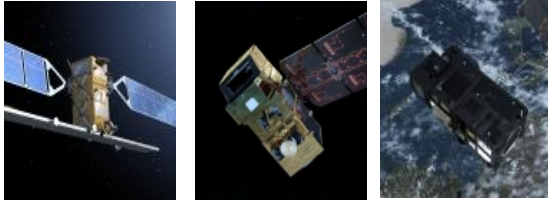
OptFor

The architecture of nFIESTA (PostgreSQL extensions, DBs and GUI modules)

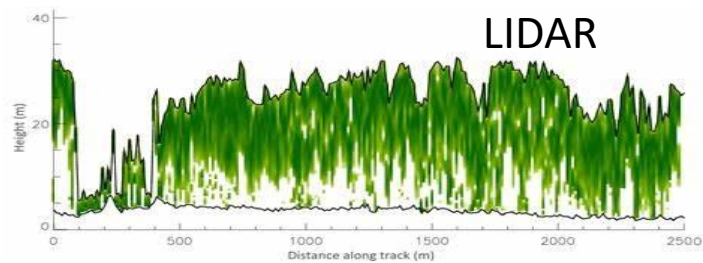


The Earth observation components

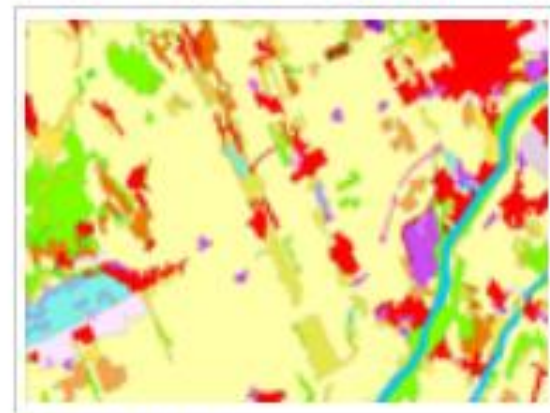
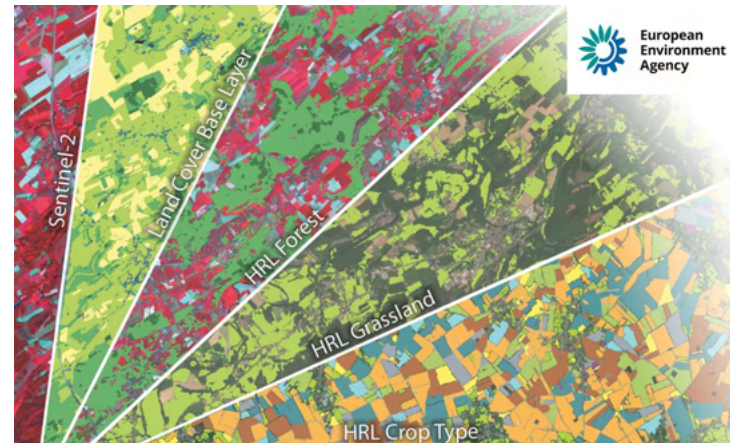
Sentinels 1-3



Aerial surveys



LIDAR



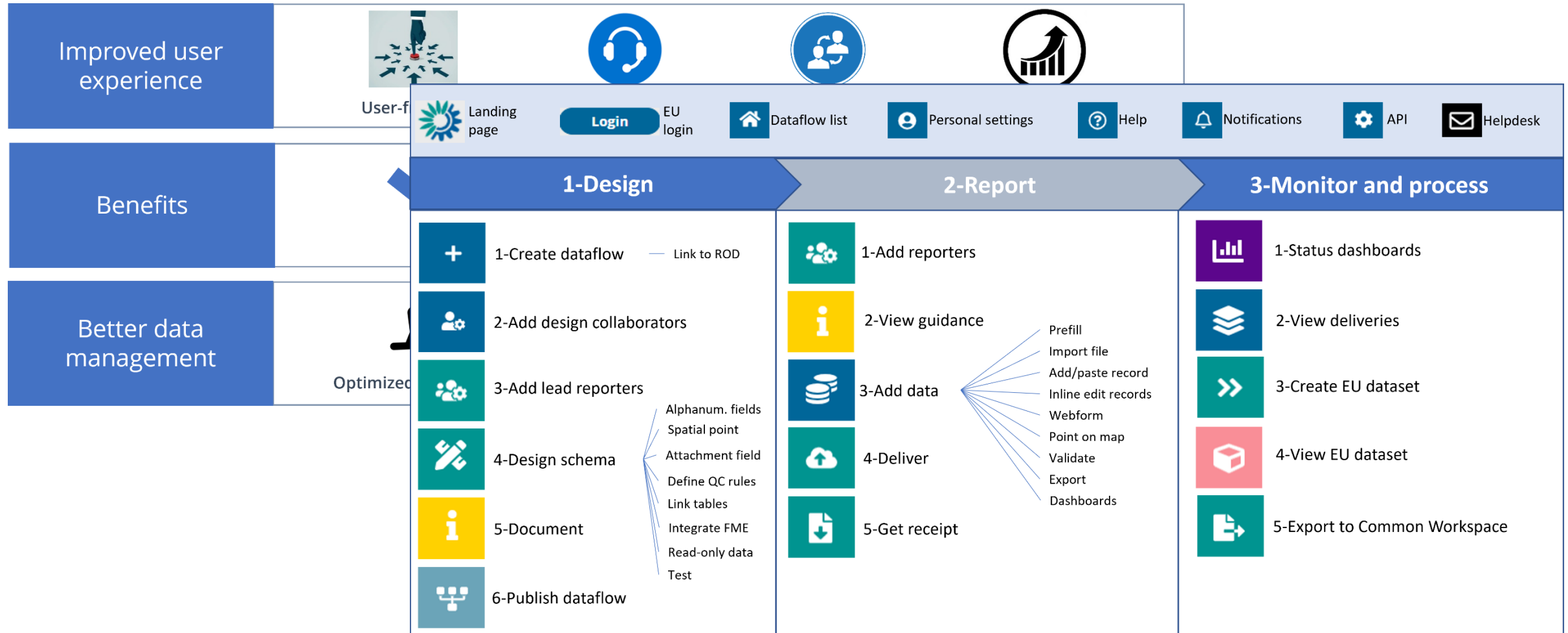
CLC 2018



- **Relation to other European and global forest reporting processes**
 - Reducing the reporting burden
 - Synchronising the reporting
 - Expand the reporting of harmonised upscaled forest information?
 - What about standardisation?
- **Technical and quality issues**
 - Assessing and reporting on accuracies, precision, consistency checks
 - Reducing and reporting on the biases
 - Reporting metadata information



ReportNet 3.0 forest indicators



Note: Functions are available according to user type and access rights

10 Actions to Streamline Environmental Reporting

➤ Action 3 - **Modernise eReporting** including through a more advanced Reportnet and making best use of the existing infrastructure



Discover Europe's Forests

Discover Europe's Forests

CO₂

Growing forests capture carbon
on trees and soils

Learn about forest and
climate change



Mixed forests harbor more
biodiversity than monocultures

Learn about forest
management



Natural disturbances like
drought, storms, and pests
decrease forest health and
resilience

Learn about forest vitality



THE 3 BILLION TREE PLANTING PLEDGE FOR 2030
[LEARN MORE AND JOIN THE PLEDGE](#)



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Welcome to FISE





Thank you

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