

OBEF-Accross2

Monitoring biodiversity from space:
exploring the potentials of ESA's
Copernicus and German national EO
missions

Javier Pacheco-Labrador

*Max Planck Institute for Biogeochemistry
Department of Biogeochemical Integration*



Max Planck Institut
for Biogeochemistry



Bundesministerium
für Bildung
und Forschung



1. oBEF-Across2

- **Funding body:** BMBF-DLR
- **P.I.s:** Migliavacca, M.; Ma, X.; Machecha, M.
- **Collaborators:** Christian Wirth; Andreas Huth et al.
- **Hands on:** Pacheco-Labrador; J., Kramer, G.
- **Duration:** 30-months

2. Objectives

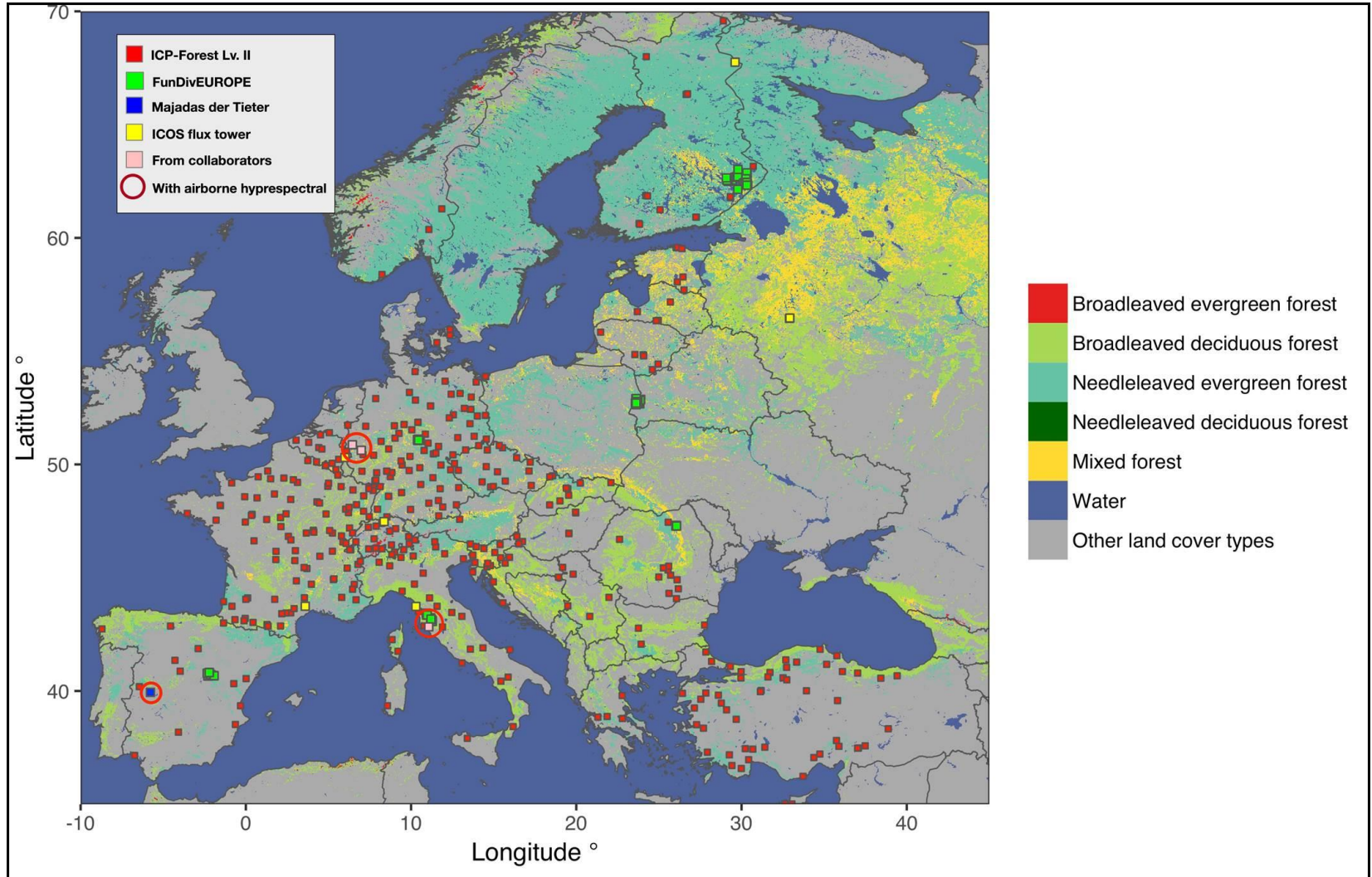
- 1. Develop innovative method** that can ingest **multi-sourced** satellite data (multispectral, hyperspectral, radar) to retrieve **forest taxonomic and functional diversities**;
- 2. Map TD and FD over European forests** by applying methods developed in 1);
- 3. Study biodiversity effect on ecosystem functioning and resilience** by integrating biodiversity maps from 2) and ecosystem functioning variables from the ICOS and ESA's ESDL.



3. The data

	Spaceborne				
	Sentinel-1	Sentinel-2	DESI	PRISMA	EnMAP
Space Agency	ESA	ESA	DLR	ASI	DLR
Instrument type	C-band SAR	multispectral (VNIR-SWIR)	hyperspectral (VNIR)	hyperspectral (VNIR-SWIR)	hyperspectral (VNIR-SWIR)
Launch date	April 2014 (S1-A) April 2016 (S1-B)	June 2015 (S2-A) March 2017 (S2-B)	June 2018	February 2019 (scheduled)	2020 (scheduled)
Spatial coverage	global	global	global	global	global
Temp. coverage	2014 -	2015 -	2019 -	2019 -	2020 -
Number of bands	4	13	235	240	232
Spatial resolution	10 m	10/20/60 m	30 m	30 m	30 m
Temp. resolution	6 days	5 days	3-5 days	6 days	4 days
Data availability	publically available	publically available	available from DLR for research use	available from ASI for research use	-

The data



Thanks for your attention

QUESTIONS AND REMARKS!

