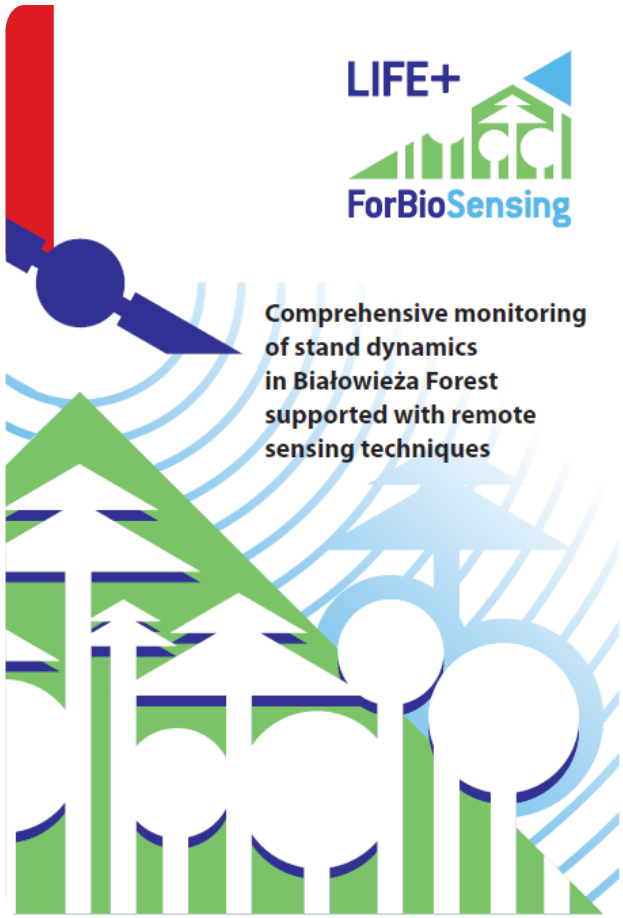
ForBioSensing | Comprehensive monitoring of stand dynamics in Białowieża Forest supported with remote sensing techniques



Comprehensive monitoring method of a large forest area with the use of innovative techniques and data.

Project activities were focused on a comprehensive representation of changes in forest stands and their dynamics (using different time series of remote sensing data) and the transition from spot monitoring (field measurements on sample plots) to large-scale monitoring. This will improve the efficiency of forest ecosystem protection and management measures. Project results have been presented in the form of publications and maps showing specific changes over the years. In addition, radio and television broadcasts, meetings, brochures and promotional films were used to inform the general public.

The main objectives of the project were:

- Monitoring of stand dynamics in Białowieża Forest (including analysis of tree species composition, monitoring of changes in the forest stand caused,

among others, by tree death)

- Analysis of natural forest regeneration and rejuvenation, including the role of gaps,
- Establishment/determination of the combination of different remote sensing techniques and data sets that are optimal for forest monitoring,
- Characteristics of the microclimate of the Białowieża Forest,
- Promotion of Białowieża Forest through the use of multimedia.

The main expected results of the project:

- Detailed analysis and maps showing in subsequent years, following information about the Białowieża Forest: Forest stand characteristics (growing stock and biomass, tree height, DBH, canopy cover and its diversity, forest diversity, tree species composition, vertical structure, biomass, etc.), location and size of dead trees, location and size of gaps, dynamics of natural forest regeneration and amount of lying dead wood.
- Map of plant communities with identification of different tree species;
- Development of monitoring methods for the dynamics of the Białowieża Forest using a small number of sample plots and additional remote sensing data covering the entire study area;
- Master tree ring chronology of the selected tree species in the Białowieża Forest;
- A unique geoportal containing created spatial data on the Białowieża Forest.

DETTAGLI

ORIGINE DEL LEGNO

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TIPO DI LEGNO

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TIPO DI LEGNO IN QUESTIONE

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IMPATTO SULL'AMBIENTE E LA BIODIVERSITà

--

EFFETTO SUL REDDITO

--

POTENZIALE DI SFRUTTAMENTO

--

HUB

Polo Centro-Est

IMPATTO ECONOMICO

--

CONOSCENZE SPECIFICHE NECESSARIE

--

POTENZIALE DI MOBILITAZIONE

--

POTENZIALE SOSTENIBILITà - VALORE

--

FACILITà DI IMPLEMENTAZIONE

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FACILITà DI IMPLEMENTAZIONE - VALUTAZIONE

--

PREREQUISITI CHIAVE

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TIPO DI EVENTO IN CUI QUESTO BPI è STATO PRESENTATO

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EFFETTO SUL LAVORO

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I COSTI DI ATTUAZIONE (EURO - €)

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Più DETTAGLI

SFIDA RISOLTA

1. Migliorare la resilienza delle foreste e l'adattamento ai cambiamenti climatici

DOMINIO

Inventario, la valutazione, il monitoraggio

TIPO DI SOLUZIONE

piattaforme di dati, hub di dati, dati aperti

PAROLE CHIAVE

stand dynamics monitoring; forestry; remote sensing; biodiversity

SOLUZIONE DIGITALE

Sì

INNOVAZIONE

Sì

PAESE D'ORIGINE

Polonia

SCALA DI APPLICAZIONE

Nazionale

INIZIO E FINE ANNO

2014 - 2022

CONTATTI

PROPRIETARIO O AUTORE

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REFERENCES AND RESOURCES

SITO PRINCIPALE

http://www.forbiosensing.pl/home

RISORSE

Stereńczak K., Mielcarek M., Modzelewska A., Kraszawski B., Fassnacht F.E., Hilszczański J. 2019. Intra-annual Ips typographus outbreak monitoring using a multi-temporal GIS analysis based on hyperspectral and ALS data in the Białowieża Forests. Forest Ecology and Management, 442: 105–116.

SITO WEB DEL PROGETTO

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PROGETTO DI RIFERIMENTO

ForBioSensing project is co-funded by the European Commission under European Union financial instrument LIFE+ and by the National Fund for Environmental Protection and Water Management

LOGO DELLE MIGLIORI PRATICHE

LOGO DELLA PRINCIPALE ORGANIZZAZIONE

PROGETTO NELL'AMBITO DEL QUALE QUESTA SCHEDA è STATA CREATA

Rosewood 4.0

DATA DI INSERIMENTO

21 Dic 2021

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Link to Rosewood 4.0

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