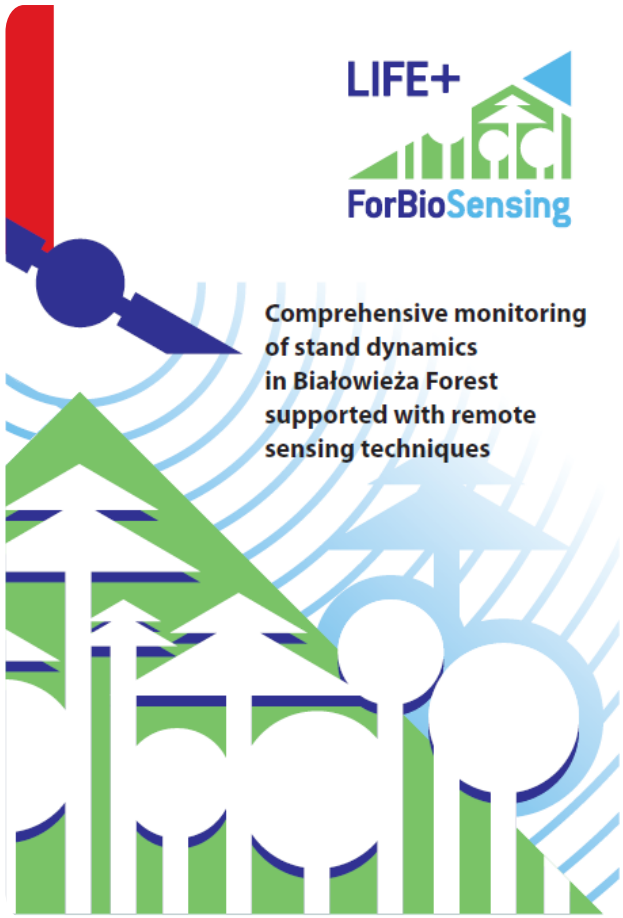
ForBioSensing | Comprehensive monitoring of stand dynamics in Białowieża Forest supported with remote sensing techniques



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.

DETALHES

ORIGEM DA MADEIRA

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TIPO DE MADEIRA

--

TIPO DE MADEIRA EM CAUSA

--

IMPACTE NO AMBIENTE E BIODIVERSIDADE

--

IMPACTE NAS RECEITAS

--

POTENCIAL DE EXPLORAçãO

--

HUB

Centro-Oriente Hub

IMPACTE ECONOMICO

--

CONHECIMENTOS ESPECIFICOS NECESSáRIOS

--

POTENCIAL DE MOBILIZAçãO

--

SUSTENTABILIDADE POTENCIAL - VALOR

--

FACILIDADE DE IMPLEMENTAçãO

--

FACILIDADE DE IMPLEMENTAçãO

--

PRE-REQUISITOS CHAVE

--

TIPO DE EVENTO EM QUE ESTE BPI TEM SIDO APRESENTADO

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IMPACTE NO EMPREGO

--

CUSTOS DE IMPLEMENTAçãO (EURO - EUR)

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MAIS DETALHES

DESAFIO ABORDADO

1. Melhorar a resiliência e adaptação das florestas às alterações climáticas

DOMíNIO

Inventário, avaliação e monitorização

TIPO DE SOLUçãO

Plataformas de dados, centros de dados, partilha de dados

PALAVRAS-CHAVE

stand dynamics monitoring; forestry; remote sensing; biodiversity

SOLUçãO DIGITAL

Sim

INOVAçãO

Sim

PAíS DE ORIGEM

Polónia

ESCALA DE APLICAçãO

Nacional

ANO DE INíCIO E FIM

2014 - 2022

DADOS DE CONTACTO

PROPRIETáRIO OU AUTOR

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REFERENCES AND RESOURCES

WEBSITE PRINCIPAL

http://www.forbiosensing.pl/home

RECURSOS

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.

WEBSITE DO PROJETO

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REFERêNCIA AO PROJETO

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

LOGOTIPO DA BOA PRáTICA

LOGOTIPO DA ORGANIZAçãO PRINCIPAL

PROJETO NO âMBITO DO QUAL A FOLHA DE DIVULGAçãO FOI CRIADA

Rosewood 4.0

DATA DE ENTRADA

21 Dez 2021

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A TOOL FROM ROSEWOOD 4.0, DESIGNED AND DEVELOPED BY