Remote sensing based assessment of woody biomass and carbon storage in forests

RemBioFor

R&D project, which aim is to work out the complex method of defining selected forest stand descriptions as well as aboveground biomass and carbon sequestration, based on the use of remote sensing for the purposes of forest management planning.

The aim of the project was to work out the complex method of defining selected forest stand descriptions as well as aboveground biomass and carbon sequestration, based on the use of remote sensing for the purposes of forest management planning.

Among main goals were:

- acquisition and processing of remote sensing, laboratory and field data,
- determining the amount of biomass and carbon in the forest based on radar data,
- development of methods for the inventory of selected stand descriptions, growing stock and biomass with the use of active remote sensing techniques,
- local correction of dendrometric volume equations based on terrestrial laser scanning data (TLS),
- development of the merchantable volume conversion factors into biomass and carbon.

Results of the project allow to: reduce time needed to carry out the work of the forest management, especially inventory of growing stock; obtain higher accuracy of the CO_2 balance, biomass and annual allowable cut calculations; determine growing stock for any forest area; reduce cost of field work in forest management.

DETALII

SURSA DE LEMN

--

TIPUL DE LEMN

--

TIPUL DE LEMN îN CAUZă

--

IMPACTUL ASUPRA MEDIULUI șI BIODIVERSITățII

--

EFECT ASUPRA VENITURILOR

--

POTENțIAL DE EXPLOATARE

--

HUB

Hub central-est

IMPACT ECONOMIC

--

CUNOșTINțE SPECIFICE NECESARE

--

POTENțIALUL DE MOBILIZARE

--

POTENțIAL DE SUSTENABILITATE - VALOARE

--

FACILITATEA DE IMPLEMENTARE

--

FACILITATEA DE IMPLEMENTARE - EVALUARE

--

CONDIțII CHEIE PREALABILE

--

TIPUL DE EVENIMENT LA CARE A FOST PREZENTAT ACEST IPB

Vizita de studiu (T2.3)

EFECT ASUPRA LOCURILOR DE MUNCă

--

COSTURI PENTRU IMPLEMENTARE (EURO - €)

--

MAI MULTE DETALII

PROVOCARE ABORDATă

1. Îmbunătățirea rezilienței pădurilor și adaptarea la schimbările climatice

DOMAIN

Inventariere, evaluare, monitorizare

Managementul pădurilor, silvicultura, servicii ecosistemice, reziliență

Cercetare și dezvoltare

TIP DE SOLUțIE

Modelare, DSS, simulare, optimizare

CUVINTE CHEIE

remote sensing techniques; carbon sequestration; forestry

SOLUțIE DIGITALă

Da

INOVAțIE

Da

ȚARA DE ORIGINE

Polonia

SCARA DE APLICARE

Național

ANUL DE îNCEPUT șI DE SFâRșIT

2015 - 2018

DATE DE CONTACT

PROPRIETAR SAU AUTOR

Instytut Badawczy Leśnictwa

Krzysztof Stereńczak

K.Sterenczak@ibles.waw.pl

https://www.ibles.pl/

REPORTER

Łukasiewicz Research Network - Wood Technology Institute (ITD)

Dobrochna Augustyniak-Wysocka

dobrochna.augustyniak@itd.lukasiewicz.gov.pl

REFERENCES AND RESOURCES

PAGINă WEB

http://rembiofor.pl/en/

RESURSE

Parkitna K., Krok G., Lisańczuk M., Mitelsztedt K., Ukalski K., Magnussen S., Markiewicz A., Miścicki S., Stereńczak K. 2021. Modelling growing stock volume of forest stands with the use of selected LiDAR Area Based Approaches in various predictive models. Forestry: An International Journal of Forest Research

WEBSITE PROJECT

http://rembiofor.pl/en/

REFERINță PROIECT

Remote sensing based assessment of woody biomass and carbon storage in forests (REMBIOFOR), National Centre for Research and Development within the program „Natural environment, agriculture and forestry” BIOSTRATEG, agreement no. BIOSTRATEG1/267755/4/NCBR/2015

DESPRE EXEMPLUL DE BUNă PRACTICă

A PRINCIPALEI ORGANIZAțII

PROIECTUL îN CADRUL CăRUIA A FOST CREATă ACEASTă FIșă INFORMATIVă

Rosewood 4.0

DATA POSTăRII

12 Aug 2021

This project has received funding from the European Union's Horizon 2020 research and innovation programme under grant agreement No. 862681

A TOOL FROM ROSEWOOD 4.0, DESIGNED AND DEVELOPED BY