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.

DETALHES

ORIGEM DA MADEIRA

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TIPO DE MADEIRA

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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

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FACILIDADE DE IMPLEMENTAçãO

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FACILIDADE DE IMPLEMENTAçãO

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PRE-REQUISITOS CHAVE

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TIPO DE EVENTO EM QUE ESTE BPI TEM SIDO APRESENTADO

Visita de estudo (T2.3)

IMPACTE NO EMPREGO

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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

Gestão florestal, silvicultura, serviços do ecosistema, resiliencia

Investigação e desenvilvimento

TIPO DE SOLUçãO

Modelação, sistemas de apoio à decisão, simulaçã, optimização

PALAVRAS-CHAVE

remote sensing techniques; carbon sequestration; forestry

SOLUçãO DIGITAL

Sim

INOVAçãO

Sim

PAíS DE ORIGEM

Polónia

ESCALA DE APLICAçãO

Nacional

ANO DE INíCIO E FIM

2015 - 2018

DADOS DE CONTACTO

PROPRIETáRIO OU AUTOR

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REPóRTER

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REFERENCES AND RESOURCES

WEBSITE PRINCIPAL

http://rembiofor.pl/en/

RECURSOS

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 DO PROJETO

http://rembiofor.pl/en/

REFERêNCIA AO PROJETO

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

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

12 Ago 2021

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Link to Rosewood 4.0

A TOOL FROM ROSEWOOD 4.0, DESIGNED AND DEVELOPED BY