DECISION SUPPORT SYSTEMS FOR ECOSYSTEM SERVICES

DSS4ES
DECISION SUPPORT SYSTEMS FOR ECOSYSTEM SERVICES

COST Action CA22141: Integrated DSS for delivery of ecosystem services based on EU forest policies

Convener: Harald Vacik

Co-conveners: Janina Kleemann, Ulrike Hiltner

Thu, 07 May, 08:30–10:15 (CEST) Room -2.62

BOKU UNIVERSITY

ETH zürich

MARTIN-LUTHER-UNIVERSITÄT HALLE-WITTENBERG

GLOBAL LAND PROGRAMME

cost EUROPEAN COOPERATION IN SCIENCE & TECHNOLOGY

Funded by the European Union

Objectives of DSS4ES Cost Action

REVIEW AND EXPLORE SOLUTIONS FOR INTEGRATED FORESTED LANDSCAPE MANAGEMENT

- screening, evaluating, and proposing models and methods considering spatial forest information and approaches from different rural and land use knowledge domains
- harmonizing concepts, data sources, and approaches of different decision-support tools
- Identifying gaps of current solutions and search for alternative future options
- Proposing a framework for decision-support systems (DSS) that considers the temporal and spatial aspects of forest landscape planning
- Supporting capacity building, training and networking among researchers, practioners, stakeholders and IT specialists

Join the Action!

participation in working groups & country representative

- Duration: 09/2023 – 09/2027
- Network consists of 48 MC participants (30 COST members represented, 20 ITC countries)
- 184 members are active in 5 working groups
- Geographical spread: 136/184 from ITC
- Career stage: 78/184 young researchers
- Gender balance: 72 female, 112 male

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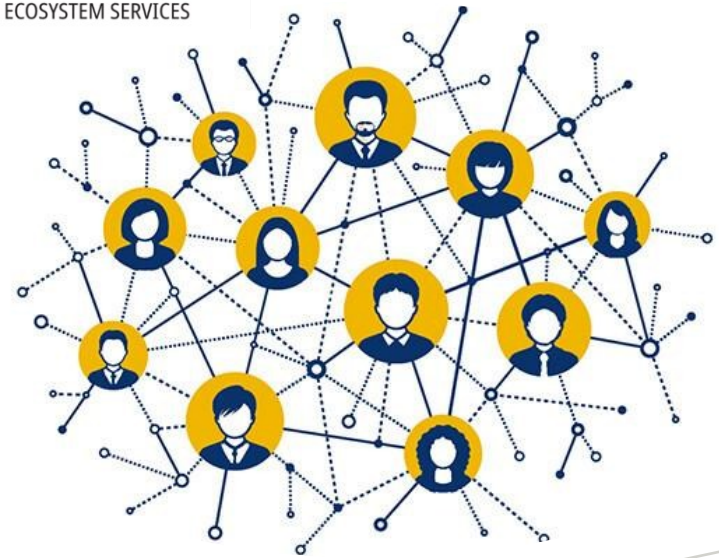

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Session topics at EGU26 GENERAL ASSEMBLY

oral presentations Thu, 7 May, 08:30–10:15

- **Overview on Forest Decision Support Systems**
- **Innovative Approaches and New Technologies**
- **Decision Support for Natural Resource Management**

poster presentations Thu, 7 May, 14:00–18:00

- **Decision Support Applications**
- **Innovative DSS Approaches**

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Oral presentations

Overview on Forest Decision Support Systems

08:35–08:45 | EGU26-1346

Development of Decision Support Systems for Integrative Forest Management: Insights from a Eurasian and North American survey

Adriano Mazziotta, Mikko Kurttila, and Harald Vacik

08:45–08:55 | EGU26-7922

Tree-Level Decision Support Systems for Forest Management: a Systematic Review

Nial Perry, Janine Schweier, Leo Gallus Bont, Sunni Kanta Prasad Kushwaha, Heli Peltola, Kyle Eyvindson, Rasmus Astrup, Melissa Chapman, and Clemens Blattert

08:55–09:05 | EGU26-12626

Proposing an Ontology for the Innovative Design of Future-Ready Forest Decision Support Systems

Sina Reuter, Verena C. Griess, Adriano Mazziotta, Christian Rosset, Harald Vacik, Ivo Vinogradovs, and Olalla Díaz-Yáñez

Oral presentations

Innovative Approaches and New Technologies

09:05–09:15 | EGU26-21362

SiTree - A framework to implement single-tree simulators and its potential as a decision support system for ecosystem services

Ignacio Sevillano and Clara Antón-Fernández

09:15–09:25 | EGU26-7233

Cross-scale integration of ecosystem services into forest planning: structural tensions in developing an integrated DSS

Anita Skudra, **Ivo Vinogradovs**, and Linards Sisenis

09:25–09:35 | EGU26-13424

The costs of providing tomorrow's forest ecosystem services: A framework for assessing harvesting methods and management costs under future forest dynamics

Simon Mutterer, Janine Schweier, Golo Stadelmann, Jasper M. Fuchs, Roman Flury, Verena C. Griess, Esther Thürig, and Leo G. Bont

09:35–09:45 | EGU26-6691

Timber Production and Landscape-Scale Decision Support: Evidence from a Nationwide Assessment of Italian Wood Markets

Joelle Jabre and Francesco Carbone

Oral presentations

Decision Support for Natural Resource Management

09:45–09:55 | EGU26-20611

NEXSOL: A WEFE Nexus Decision Support System for Climate-Resilient Agroforestry Planning in TRANS-SAHARA Living Labs

Ekaterina Chuprikova, Michele Berlanda, Nikolaus Fröhlich, Eleanor Gardner, Kwadwo Yeboah Asamoah, Roberto Monsorno, Sana Bouguerra, and Daphne Keilmann-Gondhalekar

09:55–10:05 | EGU26-4144

AI-Augmented Decision Support System for Evidence-Based Climate Adaptation in Regional Victoria

Rachna Gampa

10:05–10:15 | EGU26-14268

Context-Driven Optimization of Ecological and Socioeconomic Bene□ts through Urban Forest Expansion

Alyssa Smolensky and Samniqueka Halsey

Poster presentations

Decision Support Applications

X4.55 | EGU26-13666
Role of DSS to support carbon farming at the level of private forest estate
Ina Bikuvienė and Viktorija Narmontiene

X4.56 | EGU26-19890
Decision Support for a low-carbon climate resilient future in Europe
Harald Vacik, Razvan Purcarea, Florin Crihan, Antonia Lindau, Stefanie Linser, Mathias Neumann, Nicu Constantin, and Sorin Cheval

X4.57 | EGU26-8090
A Tool to Assess the Impact of Forest Land Expansion on Greenhouse Gas Sequestration and Emissions
Viktorija Narmontienė

X4.58 | EGU26-12742
A GIS-Based Decision Support System for Environmental Siting Consulting of Onshore Wind Projects
Young Jae Yi, Taeyun Kim, and Dohyeong Kim

X4.59 | EGU26-2601
A decision support system for geosystem services
Hannelore Peeters, Brent Bleys, and **Tine Compernolle**

Poster presentations

Innovative DSS Approaches

X4.61 | EGU26-18387

From point clouds to forest management: Quantifying the sensitivity of a decision support framework to initialization data using close-range remote sensing

Justus Nögel, Clemens Blattert, **Simon Mutterer**, Markus Karppinen, Ulrike Hiltner, Julian Frey, Sunni Kanta Prasad Kushwaha, Cédric de Crousaz, Raphael Zürcher, Iga Pepek, Thomas Seifert, and Janine Schweier

X4.62 | EGU26-8045

A Stand-Element Increment Modelling Framework for Forest Decision Support Systems

Martynas Narmontas

X4.63 | EGU26-2420

Research on a Symbolic Regression-Based Model for Valuing China's Population-Ecosystem Service Demand

Jingheng Wang and Meichen Fu

X4.64 | EGU26-1009

Forest Degradation Assessment Framework based on Level-2 Ecosystem Integrity Concept

Jainet Pallipadan Johny, Athira Pavizham, and Sudheer Kulamulla Parambath