

SCERIN Seminar Open to ALL GOFC-GOLD RINs

Title: Bark Beetle Damage in the SCERIN domain

Hosts: Jon Padgham and Clay Oboth; START

*Organizers: Petya Campbell, Jana Albrechtova, Lucie Kupkova,
Petr Lukes and Mihai Nita; SCERIN*

Link to slide with discussion topics

https://drive.google.com/file/d/1cXY_XQtPELxZuo_xAf3h6mTrYH-jXf66/view?usp=sharing

Link to folder with presentations

https://drive.google.com/drive/folders/1CUXHE3_Te0kbdAWL1H2eLZrW5v9qQXIZ?usp=sharing

Link to presenter's information and talks summaries

https://docs.google.com/document/d/1U6GWP6P1O8Y5NgG_-Lw_hCzc_T5L5AGVxeK9f9v5jNU/edit?usp=sharing



Logistics

Seminar Virtual Control

Clay Oboth

Day 1 – 4 min warning

Day 2 – 10 min warning

Non-speakers muted

- Use CHAT to ALL

for questions

- Private chats OK

Speaker Introduction

Jana Albrechtova

Q&A in the CHAT

Petya Campbell and

Lucie Kupkova

DAY1: January 21, 2021 (14:00-16:30 CET; 8-10:30 EST)			
Topics: SCERIN background; Beetle damage status, detection and monitoring in SCERIN Summaries by country (5<7 min.). Please place questions in the chat addressed to all.			
Country		Presenter(s)	Association (e-mail)
Opening - Jon Padgham, START; SCERIN background - Petya Campbell; Introductions - Jana Albrechtova Questions in the Chat- Lucie Kupkova & Petya Campbell			
1	Bulgaria	Lachezar Filtchev	Space Research and Technology Institute, Bulgarian Academy of Sciences, Sofia, BG (lachezarhf@gmail.com)
2	Czechia	Filip Hájek	Photogrammetry and Remote Sensing, Forest Management Institute, Brandys and Labem, CZ (filip.hajek@uhul.cz)
3	Croatia	Ivan Pilas	Croatian Forest Research Institute, Jastrebarsko, Croatia (ivanp@sumins.hr)
4	Greece	Asterios Tselepis & Ioannis Gitas	School of Forestry and Natural Environment, Aristotle University, Thessaloniki, Greece (atselepis27@gmail.com; igitas@for.auth.gr)
5	Poland	Piotr Wezyk	Dept. of Forest Resources, University of Agriculture in Krakow, Poland (wezyk.piotr@gmail.com)
Discussion - Questions from Chat (15 min.) + break (5 min.) + PICTURE			
6	Romania	Marius Paraschiv & Mihai Nita	National Institute for R&D in Forestry (marius_par@yahoo.com); Transylvania University, Brasov, (nita.mihai.daniel@gmail.com)
7	Serbia	Minučer Mesaroš and Dejan Stojanović	Faculty of Sciences, University of Novi Sad, Novi Sad, Serbia (minucher@gmail.com)
8	Slovenia	Mitja Skudnik and Tatjana Veljanovski	Forestry Institute and Znanstveno Raziskovalni Center, Slovenia (mitja.skudnik@gozdis.si; tatjana.veljanovski@zrc-sazu.si)
9	Ukraine	Oleh Chaskov & Serhii Havryliuk	National Forestry University, Ukraine (oleh.chaskov@googlemail.com; serhiy_havrylyuk@ntu.edu.ua)
Discussion - Questions from the Chat (10 min.); SCERIN joint activities (30 min.)			

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Closing remarks

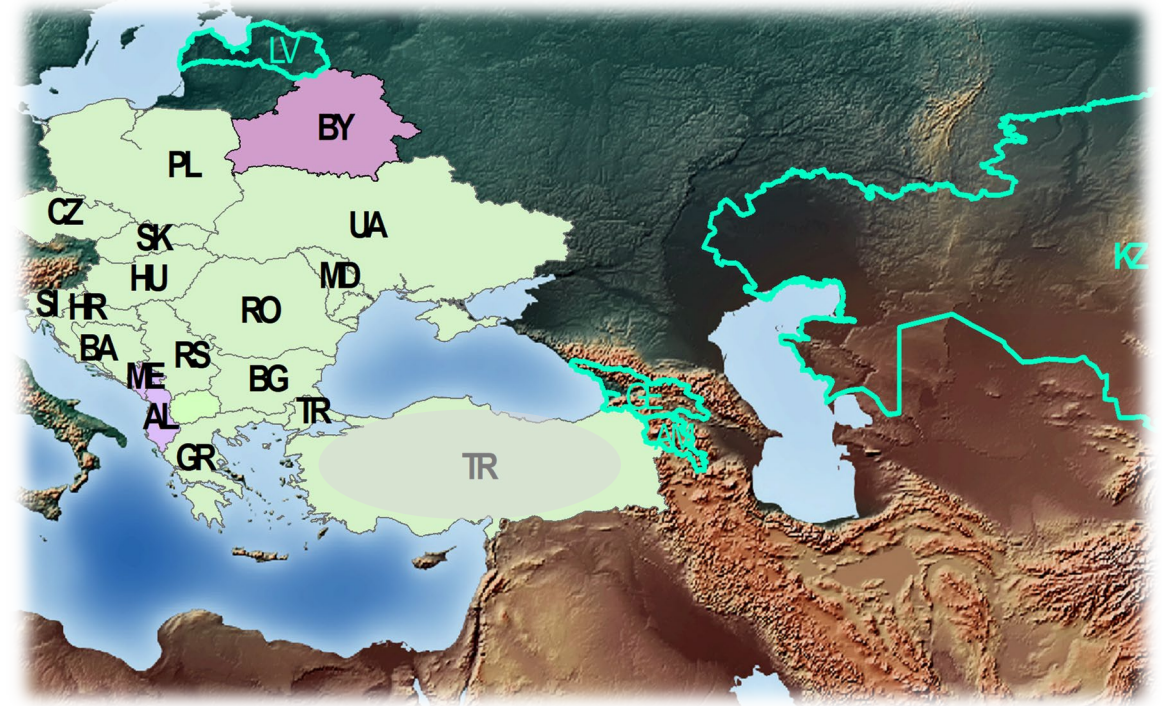
Jon/Clay, Jana, Lucie,
and
Petya (outcomes and
SCERIN actions)

DAY2: January 22, 2021 (14:00-16:30 CET; 8:00-10:30 EST)		
Topics: Remote sensing for beetle damage detection, monitoring and predictive modeling Presentations (10<15 min.). Please place questions in the chat addressed to all.		
Title		Presenter; Association (e-mail)
Introductions - Jana Albrechtova, Questions and Discussion - Petya Campbell & Lucie Kupkova		
1	Early detection of beetle infestations using dense time series of Sentinel-2 data	Petr Lukes; Global change research institute, Brno, CZ (luke.p@czechglobe.cz)
2	Bark beetle damage detection from UAV	Mihai Nita and Marius Paraschiv; Transylvania University, Brasov, (nita.mihai.daniel@gmail.com); National Institute for R&D in Forestry (marius_par@yahoo.com)
3	Scaling bark beetle damage from the country- to regional- and local levels	Andrej Kobler and Nikica Ogris; Slovenian Forestry Institute, Slovenia (andrej.kobler@gozdis.si; nikica.ogris@gozdis.si)
4	Spruce decline monitoring using hyperspectral airborne data	Olga Brovkina; Global change research institute, Brno, CZ (brovkina.o@czechglobe.cz)
Discussion - Questions from the Chat (10 min.) + break (5 min.) + PICTURE		
5	Predictive modeling of the first bark-beetle outbreaks and links to remote sensing	Maarten de Groot and Nikica Ogris; Slovenian Forestry Institute, Slovenia (maarten.degroot@gozdis.si; nikica.ogris@gozdis.si)
6	Using LiDAR and photogrammetry approach for bark beetle infestations detection	Piotr Wezyk, Dept. of Forest Resources; University of Agriculture in Krakow, Poland (piotr.wezyk@urk.edu.pl)
7	A comparison of WV2 and L-8 classification of bark beetle outbreaks using a SVM and a NNs in the Sumava mountains	Premysl Stych; Charles University, Prague, CZ (stych@natur.cuni.cz)
8	Using Sentinel-2 data for bark beetle detection in Europe, focus on SCERIN	Ángel Fernández; Remote Sensing and Geospatial Analytics Division, GMV, Spain; H2020 (aafernandez@gmv.com)
Discussion - Questions from the Chat (10 min.); SCERIN future activities and venues (30 min.) Closing Remarks (START, SCERIN)		

SCERIN

South, Central and East European RIN

Petya Campbell¹, Jana Albrechtová² and Lucie
Kupková²



¹University of Maryland Baltimore County and NASA Goddard Space Flight Center, Greenbelt, Maryland, USA

²Charles University in Prague, Faculty of Science, Prague, Czech Republic



SCERIN Goals



Goals

- ✓ Provide a platform for collaboration among remote sensing experts in SCE², *through collaborative activities*
- ✓ Facilitate progress and consistent implementation of remote sensing and LCLUC methodology, *in the region*
- ✓ Foster regional collaboration for monitoring the dynamics, stability, and vulnerability of the major ecosystems
- ✓ Promote effective sustainable management and preservation, *on the local, regional and pan-European level*
- ✓ SCERIN **contributes to GOFC-GOLD, linkages with other REGIONAL and GOFC-GOLD networks**, like MedRIN

Key Regional Issues

- ✓ Changes in forest composition, age, structure and function
- ✓ Changes in ecosystem diversity
- ✓ Increasing urbanization
- ✓ Imbalanced water regime (floods/droughts)
- ✓ Extreme Events increase (floods, droughts and fires)
- ✓ Climate Change (exaggerating all above)

SCERIN Structure: Focus Groups (FG)

FG1: Forest biomass production; decline, disturbance and driving forces

FG2: Land Cover Changes: climate change, agricultural land abandonment, urban expansion

FG3: Validation/verification network for support of current and future satellite missions [*e.g. NASA's LDCM and Sustainable Land Imaging (SLI), and ESA's GMES program*]

FG4: Watersheds, catchments, dams – LCLUC water management and ENVIRONMENT



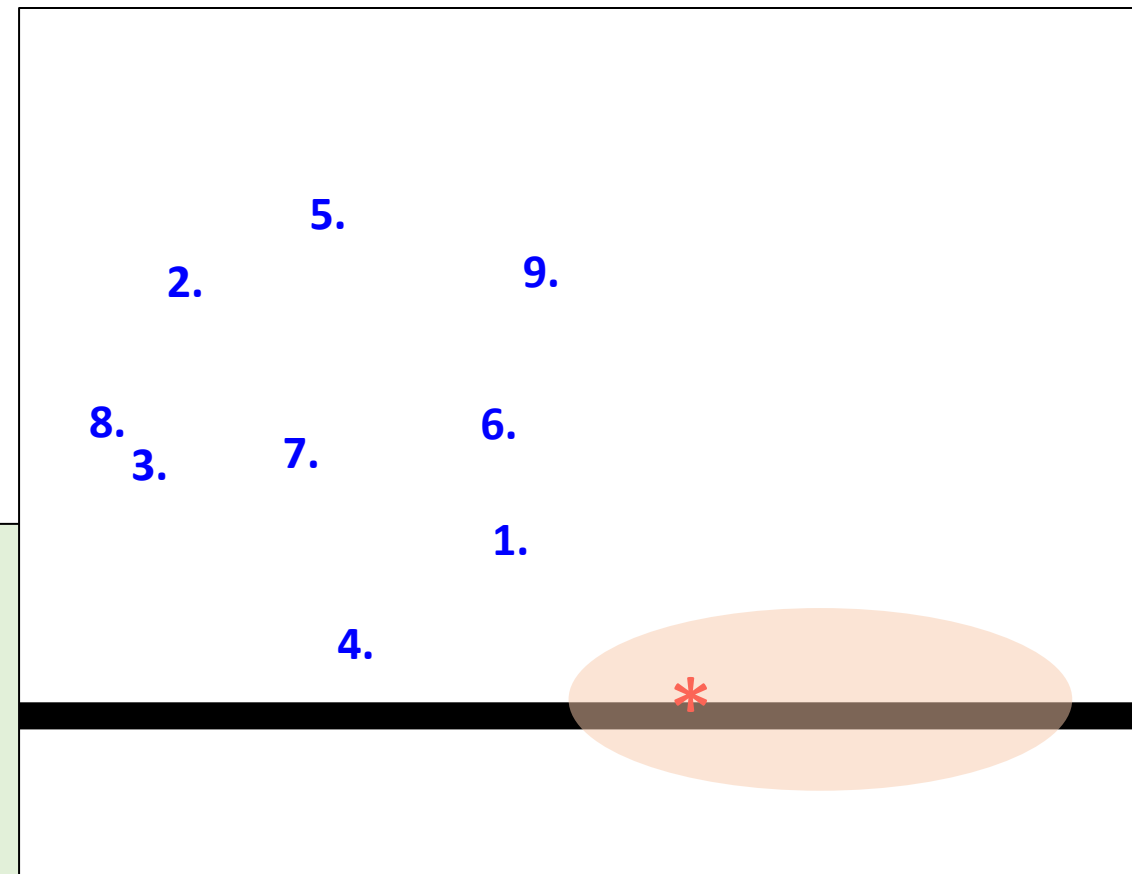
Geographic Domain



Central & South Eastern Europe, the Danube Watershed & Western Black Sea coast

Participating Countries

- Permanent: BG, CZ, GR, HR, HU, PL, RO, RS, SK, SL, UA (11); **TR former now MedRIN**
- New/Returning: Bosnia and Herzegovina, Northern Macedonia, Moldova
- To reach: Albania (AL), Montenegro (ME), Belarus(BY)



Global Forest Resources Assessment 2020, FAO, UN

2000-2017 **annual forest net gain/loss by country** for SCERIN domain are reported **not significant** (< 50 thousands of hectares/year).

Turkey* exception, with severe forest decline due to droughts and urbanization.

➤ **SEMINAR GOALS: 1) OUTLINE THE REAL SITUATION IN SCERIN, AND 2) DECIDE ON JOINT SCERIN ACTIONS**

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Network Activities



- Joint proposals and projects
- Networking for exchange of information, knowledge, data and technology
- Data product validation
- Joint papers
- Continuous interactions (in 2022 we could celebrate 10 yrs. from the start)
- Annual workshops (7th Novi Sad, SR). The 8th organized jointly with MedRIN for mid June 2021!
- Educational component
 - Informal: exchange of teaching tools and curriculum, student and faculty visits
 - Trans-Atlantic Training (ESA-NASA sponsored) coupled with the SCERIN workshops

Premysl Stych , Charles University Prague

Francesco Sarti, ESA Garik Gutman, NASA

Discussions GOAL: outline SCERIN actions to address bark beetle damage, considering causes and consequences. Please provide suggestions and inputs in the CHAT or by e-mail to petva@umbc.edu.

2019 SCERIN-7, Novi Sad, SR



SCERIN-7, 24th - 27th June 2019
Novi Sad, Serbia



Joint SCERIN and MedRIN Workshop

Hosted by the MedRIN's Coordinators Ioannis Gitas, Diofantos Hadjimitsis, George Zalidis and Vince Ambrosia, in Thessaloniki, Greece

Postponed from June 15-18, 2020 for mid June 2021
Forthcoming Dates, Duration (3, 4, 5 days), Format (virtual vs. blended),
associated with training (TAT)

Please help decide by placing your suggestions in the CHAT!



😊 **Hope to see you all at the workshop!**

Next venue(s)

TBD: SCERIN VIRTUAL Science Fest

- Showcase of your favorite research flash talks + discussion
- **Earth Day** (April 22, 2021, Th) **or to have at the Joint Workshop? Please place your suggestions in the CHAT.**