

# SCERIN-6 Capacity Building Workshop on Earth System Observations

11<sup>th</sup>-14<sup>th</sup> June 2018 Zagreb, Croatia

*“Land Cover Dynamics Precursors of Land Cover Change in SCERIN”*



*in coordination with Trans-Atlantic Training (TAT, 8-10 June)*




**SCERIN-6 Focus: Land Cover Dynamics and Precursors of Land Cover Change in SCERIN**

The objectives of SCERIN-6 CBW are:

- 1) to inform the participants about major ongoing scientific efforts and projects, as well as possible contribution and follow-up activities of the SCERIN participants,
- 2) outline progress on the SCERIN validation activities, and
- 3) foster new ideas for joint papers by participants. The program at a glance is outlined in the table below.

SCERIN-6 is being held in coordination with a Trans-Atlantic Training (TAT-6).

**SCERIN-6 Capacity Building Workshop – “Agenda at a Glance”**



Day	Sun	Mon	Tue	Wed	Thu	Fri
Date	10-Jun	11-Jun	12-Jun	13-Jun	14-Jun	15-Jun
Event	<i>SCERIN Arrival</i>	<b>SCERIN-6 CBW</b>				<i>SCERIN Departure</i>
		<b>day 1</b>	<b>day 2</b>	<b>day 3*</b>	<b>day 4</b>	
	<i>TAT 7-9 &amp; 11</i>					

\* field trip

**SCERIN Focus Groups (FG):**

- FG1: Forest monitoring - disturbances, health and biomass [Leads: F. Zemek/ J. Albrechtová]
- FG2: Land cover changes – agricultural abandonment, urban expansion [Leads: G. Taff/ L. Kupková/ P. Stych/ L. Genc]
- FG3: Validation/verification network [Leads: A. Halabuk/ L. Filchev/ P. Campbell]
- FG4: Water management and LC impacts (river watersheds, catchments, dams, Leads: V. Starodubtsev/ I. Pilas]

**Instructions for oral presentations:** Your oral presentation should be designed to use only 75% of your allocated time. 25% of your time should be left for discussion and questions. (i.e. if your presentation is scheduled to last 10 mins, plan for it to take 7 min to allow for 3 minutes of questions and discussion – THANKS!).

**Instructions for SCERIN Project Inventory Panel – one slide listing for your institution:**

Project/Program	Sponsor	Duration	Support (funding level)
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During the panel you will tell us the objectives, and how they relate to SCERIN.

**Host Organizers:**

- Faculty of Geodesy, University of Zagreb
- Croatian Forest Research Institute
- Faculty of Forestry, University of Zagreb

**Supported by:**

- Croatian Science Foundation (projects “Advanced Forest Environmental Services Assessment” - AFORENSA and “Geospatial Monitoring of green Infrastructure by means of terrestrial, airborne and satellite Imagery” - GEMINI)

Time	6/11/2018 Monday - Location: Rectorate 'Aula' University of Zagreb, Trg Republike Hrvatske 14	
	SCERIN-6 Day 1	Name (First Family)
8:30	<i>Registration &amp; Logistics</i>	
	<b>Plenary Session</b> ( <i>Session Chair: Jana Albrechtova and Lucie Kupkova, Records: Petya Campbell</i> )	
9:00	SCERIN Status and Updates, SCERIN-6 Goals and Agenda	SCERIN coordinators: <i>Petya Campbell, Jana Albrechtova and Lucie Kupkova</i>
9:30	Welcome Address and Host Remarks (Hosts: I. Pilas, D. Medak)	Damir Boras, Rector, University of Zagreb; Tome Anticic, State Secretary, Ministry of Science & Education; Envoy of the president of Croatia
10:00	The NASA LCLUC-SCERIN Interactions: Update, Focus on Europe	Garik Gutman, NASA/HQ
10:30	<i>Coffee Break and Picture (25 min)</i>	
11:00	<b>Plenary Session - continuing</b>	
11:00	Changing Snow Cover Seasonality Can Affect Land Surface Phenology and Land Use in SCERIN	Geoff Henebry, SDSU
11:30	Copernicus program: focus on Pan-European monitoring	Zoltan Santoi, JRC
12:00	Satellite Earth Observation: from imagery to services	Julia Yagüe, GMV Aerospace and Defense
12:30	<i>Working Lunch (1hr, sponsors START)</i>	
13:30	<b>Research Highlights Croatia</b> ( <i>Session Chair: Ivan Pilas, Records: Petya Campbell</i> )	
13:30	Geospatial Monitoring of Green Infrastructure by Means of Terrestrial, Airborne and Satellite Imagery (GEMINI)	Damir Medak, Faculty of Geodesy, Geoinformatics Dept. - GEOF
13:50	<u>Space Weather Research and Earth interactions</u>	Roman Brajša, GEOF, Hvar Observatory
14:10	Social and Climatic Precursors of Land Cover Changes in Croatia	Ivan Pilaš, Croatian Forest Research Institute - CFRI
14:30	Applying the methods of remote sensing in forestry, urban forestry, nature protection and environment	Renata Pernar, Forestry Faculty
15:00	<i>Questions &amp; Discussion</i>	
15:15	<i>Coffee Break (15 min)</i>	
15:30	Research highlights from SCERIN - POSTERS 'flash talks' (2-3 min, Leads: FG1 F. Zemek, FG2 L. Kupková, FG3 L. Filchev, FG4 I. Pilas; timing: Petya Campbell)	
	<i>Questions and Discussion</i>	
16:30	<i>Adjourn</i>	
17:00	<i>visit to the Zagreb Observatory</i>	
20:00	<b>Networking Reception and Posters</b> ( <i>Faculty of Geodesy, Kaciceva 26, sponsored by the Hosts</i> )	

**SCERIN Research Highlights - POSTERS ‘flash talks’ (2-3 min)**

**Leads: FG1 F. Zemek, FG2 L. Kupková, FG3 L. Filchev, FG4 I. Pilas** (timing: Petya Campbell)

<b>FG</b>	<b>Research Highlight Title</b>	<b>Presenter</b>	
	<b><u>F. Zemek lead</u></b>		
FG1	Forest Cover Change in the Ukrainian Carpathians	Oleh	Chaskovskyy
FG1	Forest cover and disturbance changes and their driving forces	Lucie	Kupková
FG1	Linking remote sensing products to forest management processes	Mihai Daniel	Nita
FG1	Evaluation of forest disturbances in Czechia and Slovakia using remote sensing time series	Premysl	Stych
	<b><u>L. Kupková lead</u></b>		
FG2	Assessing spatial accuracy of satellite imagery for green infrastructure monitoring	Dino	Dobrinic
FG2	Urban green infrastructure detection and monitoring	Mateo	Gašparović
FG2	Changes in agricultural land in Slovakia after breakdown of socialism	Juraj	Lieskovský
FG2	Urban vegetation monitoring using microsattellites	Luka	Rumora
FG2	Land cover trend analysis in Livanjsko polje karst field (Bosnia and Herzegovina)	Vladimir	Stupar
	<b><u>L. Filchev lead</u></b>		
FG3	Sentinel-2 and PROBA-V 100 Crop Maps For The Territory of Bulgaria	Lachezar	Filchev
FG3	Solar Energy Potential in Croatia, GIS-based application	Iva	Gašparović
FG3	Sentinel-1 based interferometric results from Hungary	István Péter	Kovács
FG3	EO Product Prototypes for Vegetation Function	Petya	Campbell
	<b><u>I. Pilas lead</u></b>		
FG4	Detecting Land Use Changes in the Azov Sea Basin: A Google Earth Engine Case Study	Sara	Pruckner
FG4	Analysis of snow cover seasonality changes in SCERIN using MODIS snow cover products	Monika	Tomaszewska
FG4	Dams and Land Cover Dynamics in the Black Sea Basin	Vladimir	Starodubtsev
FG4	Drought and excess water monitoring in northern Serbia	Minučer	Mesaroš

Time	6/12/2018 Tuesday – <i>Location: Faculty of Geodesy, Kacicva 26</i>	
	SCERIN-6 Day 2	Presenter's Name
<b>Working Sessions (WS) of the SCERIN Focus groups and joint papers:</b> detailed overview by leaders, discussion topics, schedule for paper finishing ( <i>Session chair: Petya Campbell, Records: Leaders of WS1-3</i> )		
9:00	WS1 Global/ Continental land cover products validation and inter-comparison in the SCERIN area	Manakos (lead)
9:30	WS2 Water management and ENVIRONMENT [substantial river watersheds, catchments, dams (FG4)]	V. Starodubtsev, I. Pilas, L. Filchev, G. Taff (leads)
10:00	WS3 status of GIMMS NDVI analysis in SCERIN	Pilas (lead)
<i>10:30</i>	<i>Coffee Break and Posters (30 min)</i>	
11:00	WS4 Using expert knowledge to explain land use changes from CORINE/LCC	Taff, Lieskovsky, Stych (leads)
<b>SCERIN Future Activities</b>		
11:40	SCERIN <b>future activities and milestones:</b> charge for discussions by Focus Groups ( <i>Petya Campbell</i> )	
11:50	<i>Questions &amp; Discussion</i>	
<b>SCERIN Future Activities – Case Studies, focus on potential for SCERIN collaboration</b>		
12:00	The Earth Observation Data for Ecosystem Monitoring system and its SCERIN application	Ioannis Manakos
12:10	Assessing ecosystem function from earth observations of vegetation traits (Collaboration between US, Czech, Cyprus <i>&amp; others?</i> )	Jana Albrechtova
<i>12:20</i>	<i>Lunch (1hr, sponsors START)</i>	
13:30	Correlating radial growth of European beech to remotely sensed indices, precipitation and temperature across SCERIN/Europe	Dejan Stojanović
13:40	Integrated, timely relevant application of Sentinel data fusion in the agricultural sector	Levente Ronczyk
13:50	Global Classification approach based on Sentinel-2 (S2GLC/ESA)	Ewa Kukawska
14:00	Landsat and Sentinel analysis of vegetation trends and vegetation classification: <i>case study Livanjsko Polje, Bosnia and Herzegovina</i>	Vladimir Stupar
14:10	Automatic image processing for LC mapping and drought monitoring – relevance to SCERIN	Tatjana Veljanovski
14:20	Vegetation cover change and carbon storage estimated from airborne hyperspectral and LiDAR data: <i>spec. example for mining dumps</i>	Miroslav Píkl
14:30	<b>SCERIN Future Activities - Discussion &amp; inputs from YOU (by FGs)</b>	
	FG (1-4) Future Milestones - Discussions in parallel working sessions	2/4 rooms, records will be assured by the FG lead
<i>15:45</i>	<i>Coffee Break (15 min)</i>	
16:00	<b>SCERIN Countries and Programs Inventory Panel</b> ( <i>Session Chair: Jana Albrechtova, 2-3 minutes by institution, please supply 1 slide to Jana Albrechtova</i> )	
17:00	<i>Questions &amp; Discussion</i>	
<i>17:30</i>	<i>Adjourn</i>	
<b>20:00</b>	<b>SCERIN-6 Dinner Social (Location TBD)</b>	

6/13/2018 Wednesday - Starting Location: Hotel Zagreb, ulica Damira Tomljanovića 5 (SCERIN-6 hotel)

SCERIN-6 Day 3

**Regional LCLUC - Field Trip**

*Scientific Field Trip: 'Forest Carbon and Water Dynamics - Research sites of Croatian Forest Research Institute'*

*Goals:* learn about the typical regional drivers/examples of Land Cover Change and dynamics, and provide time for informal discussions, and foster further the SCERIN network collaborations.

8:00 Gathering in front of Faculty of Geodesy

9:00	visit to Croatian Forest Research Institute Jastrebarsko
10:30	visit to the Jastrebarski lugovi Eddy covariance tower and Forest Inventory study
12:30	City of Vrbovec – Museum and Forest office
14:00	Česma lowland forest – riparian forest restoration area (lunch)
19:00	Return to Zagreb

*How to dress:* sport gear, walking shoes, hats, water, sunscreen





Time	6/14/2018 Thursday - Location: Faculty of Geodesy, Kacicera 26
	SCERIN-6 Day 4
9:00	FG (1-4) Future Milestones – outcome from discussions on day 2 (10 min summary by FG leads)
10:00	<i>Questions &amp; Discussion</i>
10:30	<i>Coffee Break and Posters (30 min)</i>
11:00	WS 4 Outcomes - Taff (lead) – summary and short discussion
11:30	SCERIN network proposed collaborative activities (examples, 3 talks)
12:00	<i>Working Lunch</i>
13:30	<b>SCERIN Future Activities</b>
14:30	SCERIN Future Venue(s) proposals, in 2019 for Novi Sad, Serbia
15:00	<i>Coffee Break, Posters are removed (30 min)</i>
15:30	<b>SCERIN-6 Workshop outcomes, actions and deadlines, summary and conclusions</b>
	<i>Chairs: Jana and Lucie, Records: Petya</i>
16:00	<b>Meeting Closing, Host Concluding Remarks</b> (Ivan Pilas)
16:30	<i>SCERIN-6 Adjourn</i>

## SCERIN-6 ORGANIZERS AND SCIENTIFIC COMMITTEE

### Croatian Scientific Committee

- Damir Medak** ([dmedak@geof.hr](mailto:dmedak@geof.hr)) – University of Zagreb, Faculty of Geodesy
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### SCERIN-6 Host and Sponsors:

- **Croatian Host Partners**
  - Faculty of Geodesy, Zagreb
  - Croatian Forest Research Institute, Jastrebarsko
  - Faculty of Forestry, Zagreb
- **International Sponsors**
  - GOFC-GOLD Program
  - LCLUC Program of NASA
  - START Program
- **Host Sponsors**
  - University of Zagreb
  - Croatian Science Foundation
  - GMV Aerospace and Defense
  - Croatian Forests Ltd.
  - State Geodetic Administration

**SCERIN-6 is being held under the auspices of the  
President of the Republic of Croatia, Mrs. Kolinda Grabar-Kitarović**



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