



Institute of Environmental Engineering
Warsaw university of Life Sciences

2nd International seminar and workshop on geoinformatics, remote sensing and engineering in spatial planning and environmental science. Warsaw, Poland 27-28.09.2021

Dear Colleagues!

We are very happy to invite you to participate in the second seminar on spatial planning, geoinformation, geoinformatics and remote sensing in environmental research. This year, we propose two parallel sessions: 1) the role of informal greenery in the provision of ecosystem services by urban greenery 2) geoinformatics as a tool in spatial planning and research on the natural environment.



Urban green spaces (UGS) have long been appreciated for their provisioning of multiple ecosystem services and their role in improving residents' health and well-being. However, in expanding cities, public parks and forests often remain underprovided; therefore, the role of other forms of green spaces, which would allow the citizens access and direct contact with nature, increases. Additionally, more attention has been given to the high cost of traditional UGS maintenance, e.g., frequent lawn mowing and its negative effects on biodiversity. Therefore, there is a need to promote more cost-efficient and environmentally friendly solutions to UGS that would allow decision-makers to expand the city's green infrastructure, ensure UGS availability to residents, and boost ecosystem services provisioning by those areas.

We are interested in the functioning of natural ecosystems in urban systems, particularly focusing on various neglected UGS, such as brownfields, wastelands, vacant lots, and other areas where natural succession processes in cities occur.

We invite scientists, designers and students of fields related to environmental engineering, architecture, construction, landscape architecture and spatial planning to participate in the seminar.

We accept presentations fitting into the following topics:

- Analysis of the perception of informal UGS in a social environment (studies of aesthetic preferences and assessment of the impact of the surroundings on the emotional well-being of users);
- Pollution removal, in particular, the role of spontaneous vegetation in the absorption and removal of particulate matter;
- Research identifying qualities that determine the recreation potential of informal UGS;
- Examples and models of bottom-up initiatives (co-designing of space) of informal UGS into well-functioning community spaces;
- The phytoremediation of heavy metal contamination by spontaneous vegetation (copper Cu, zinc Zn, lead Pb, cadmium Cd, chromium Ce, and nickel Ni);
- Carbon dioxide absorption and related oxygen production in comparison to reference areas;
- Ecological potential of informal UGS (biodiversity mapping and bioindicators, including ground beetles, bumblebees and birds, flora and plant communities, etc.);
- The impact of invasive species on the delivery of ecosystem services;
- The role of informal UGS in adaptation of urban areas to climate change.

The seminar will be held in hybrid mode. Place of the meeting: Room 37, building 13, Campus WULS-SGGW in Warsaw Nowoursynowska 166 and online MS Teams platform.

Participation in the seminar is free of charge.

The best works that fit thematically will be published in the special issues of following journals:

1. Remote Sensing/MDPI (100 pkt) https://www.mdpi.com/journal/remotesensing/special_issues/Environ_Stress
2. Sustainability/MDPI (70 pkt) https://www.mdpi.com/journal/sustainability/special_issues/green_spaces
3. Journal of Water and Land Development (JWLD (itp.edu.pl)) (40 pkt)
4. Acta Scientiarum Polonorum – Architectura (20 pkt). <http://www.architectura.actapol.net/>
5. Scientific Review Engineering and Environmental Sciences (20 pkt) http://iks_pn.sggw.pl/sr_pl.html

With Bests Greetings

Organising Committee



Institut Inżynierii Środowiska
Szkoła Główna Gospodarstwa Wiejskiego w Warszawie

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PROGRAM

27 September (Monday) Conference Day

Room 37, building 13

9:15 – 9:45 registration of participants Campus WULS-SGGW in Warsaw,
Nowoursynowska 166 building 13 and online MS Teams platform

9:30 – 10:00	Beginning of the conference, welcome adresses dr hab. Jarosław Chormański, prof. SGGW, dr hab. Beata J. Gawryszewska
10:00-10:30	Prof dr hab. Axel Schwerk <i>Natural resources assessment and evaluation</i>
10:30 – 12:30	Session I Beyond the Parks – Exploring the Potential of Informal Green Spaces for Ecosystem Services Provisioning (The role of informal greenery in the provision of ecosystem services by urban greenery) Chairmen: Prof dr hab. Axcel Schwerk, dr hab. Beata Gawryszewska, prof. SGGW

	<p>Beata J. Gawryszewska <i>The need for an undesigned landscape. Possibility of wilderness aesthetics research</i></p> <p>Olha Shevchuk: <i>Features of rainwater drainage from urban areas: the Rivne example</i></p> <p>Adrian Hoppa, Daria Sikorska, Piotr Sikorski <i>Evaluating the role of vegetation in improving air quality during children's school commute.</i></p> <p>Daria Sikorska, Adrian Hoppa, Piotr Sikorski <i>The role of cultural heritage sites in mitigating deficiency of urban green spaces.</i></p> <p>Piotr Sikorski, Melon Marta, Daria Sikorska, Piotr Zaniewski, Ewa Zaniewska, Archiciński Piotr, Arkadiusz Przybysz, Marzena Wińska-Krysiak <i>The importance of urban biodiversity refuges for the city residents seeking contact with nature</i></p> <p>Marzena Suchocka, Joanna Adamczyk, Magdalena Błaszczuk, Zbigniew Szkop, Agnieszka Gawłowska, Magdalena Wojnowska-Heciak, Karolina Kais, Joanna Kosno-Jończy, Joanna Orzińska <i>How much does a tree earn? Assessment and valuation of ecosystem services in the selected area of Warsaw</i></p> <p>Izabela Myszka, Anna Wilczyńska <i>Participatory mapping as a method of landscape research. The example of the blue infrastructure in Warsaw.</i></p> <p>Jarosław Chormański, Marta Księżniak <i>Flood risk assessment in urbanised catchment with use of GIS and remote sensing – Wołomin case study</i></p>	
12:30 – 12:45	Discussion	
12:45 – 14:00	Lunch	

14:00 – 15:45	<p>Session II Geoinformatics for environmental science (Geoinformatics as a tool in spatial planning and research on the natural environment)</p> <p>Chairmen: dr hab. Jarosław Chormański, prof. SGGW dr inż. Oleh Lahodniuk,</p> <p>Małgorzata Korczak-Abshire, Anna Zmarz, Mirosław Rodzewicz, Maciej Dąbski, Katarzyna J. Chwedorzewska <i>Application of remote sensing data for multi-faceted analysis of polar regions.</i></p> <p>Jarosław Chormański, Barbara Nowicka, Jacek Józwiak <i>Coupling of Green LiDAR and sonar for inland lakes shore zone investigation</i></p> <p>Korbutiak Vasyl, <i>River bed deformations of Ukrainian Carpathians rivers</i></p> <p>Grzegorz Wierzbicki Luca Demarchi Jarosław Chormański <i>Morphodynamics of the Vistula river channel downstream from Warsaw – assumptions, conditions and initial results</i></p> <p>Jacek Józwiak, Joanna Rotnicka-Dłużewska, Maciej Dłużewski Jarosław Chormański – <i>Application of LiDAR UAV for monitoring of eolian processes dynamics – Bałtyk sea beach case study</i></p> <p>Małgorzata Słapińska, Magdalena Frąk Jarosław Chormański <i>Remote sensing for inland lakes water quality assessment</i></p> <p>Ciężkowski W., Sikorska D., Chormański J., Sikorski P. <i>Sentinel-2 images for urban green spaces management practices detection</i></p>	
15:45 – 16:00	Discussion	
16:30 – 19.30	Welcome to Warsaw – city tour	
<p>28th September (Tuesday) Workshop (UAV equipment and application)</p> <p>Water Centre and Water Park</p>		
10:00 – 12:00	Practical UAV remote sensing application for environmental science	