From River Banks in City to Forest Canopies

Waterfront and SWIFTT Project Experience

Interreg Europe
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SATSDIFACTION

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SWIFTT

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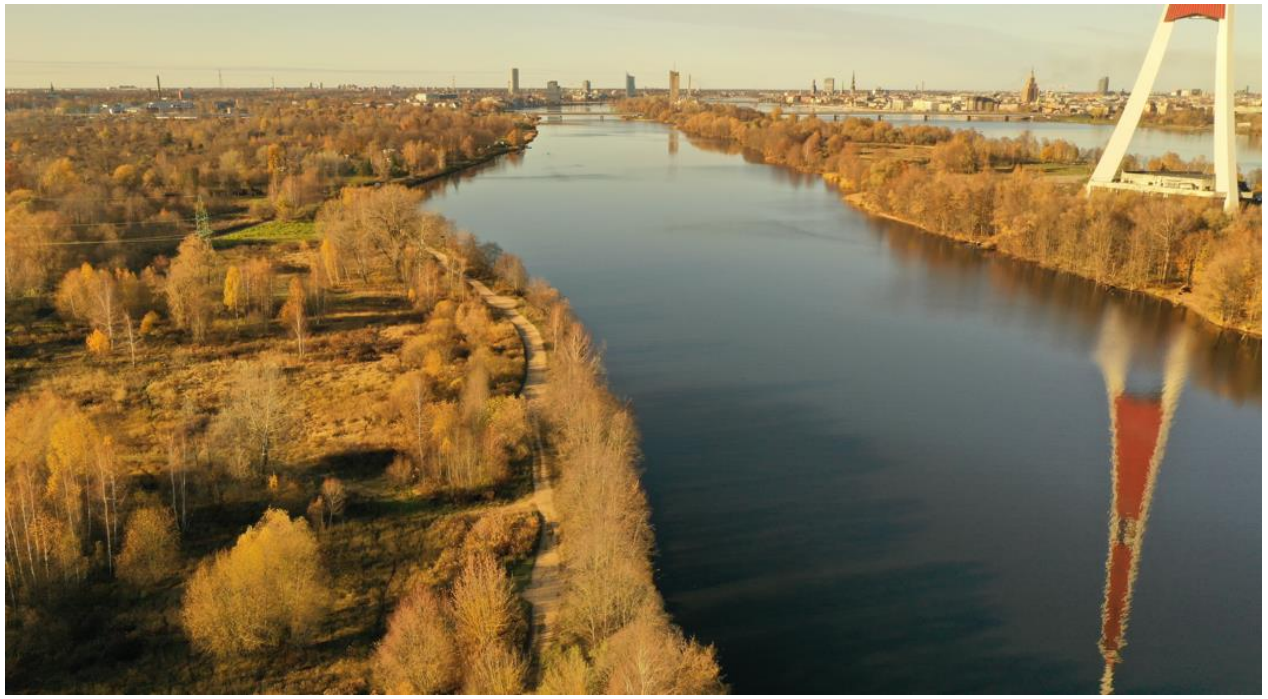
Introduction

- Riga’s green and blue areas as the backbone of urban livability
- Linking riverbanks, forests, and urban tree canopies
- SWIFTT project as a knowledge source



The Need for Remote Sensing

- Broader and more precise perspective
- Access to challenging , difficult-to-reach natural areas
- Time series data for long-term monitoring – today, past and future

Drones and Data

- High-resolution data from UAVs
- Challenge: data abundance, but lack of ready and open solutions
- Artificial intelligence for processing and interpretation

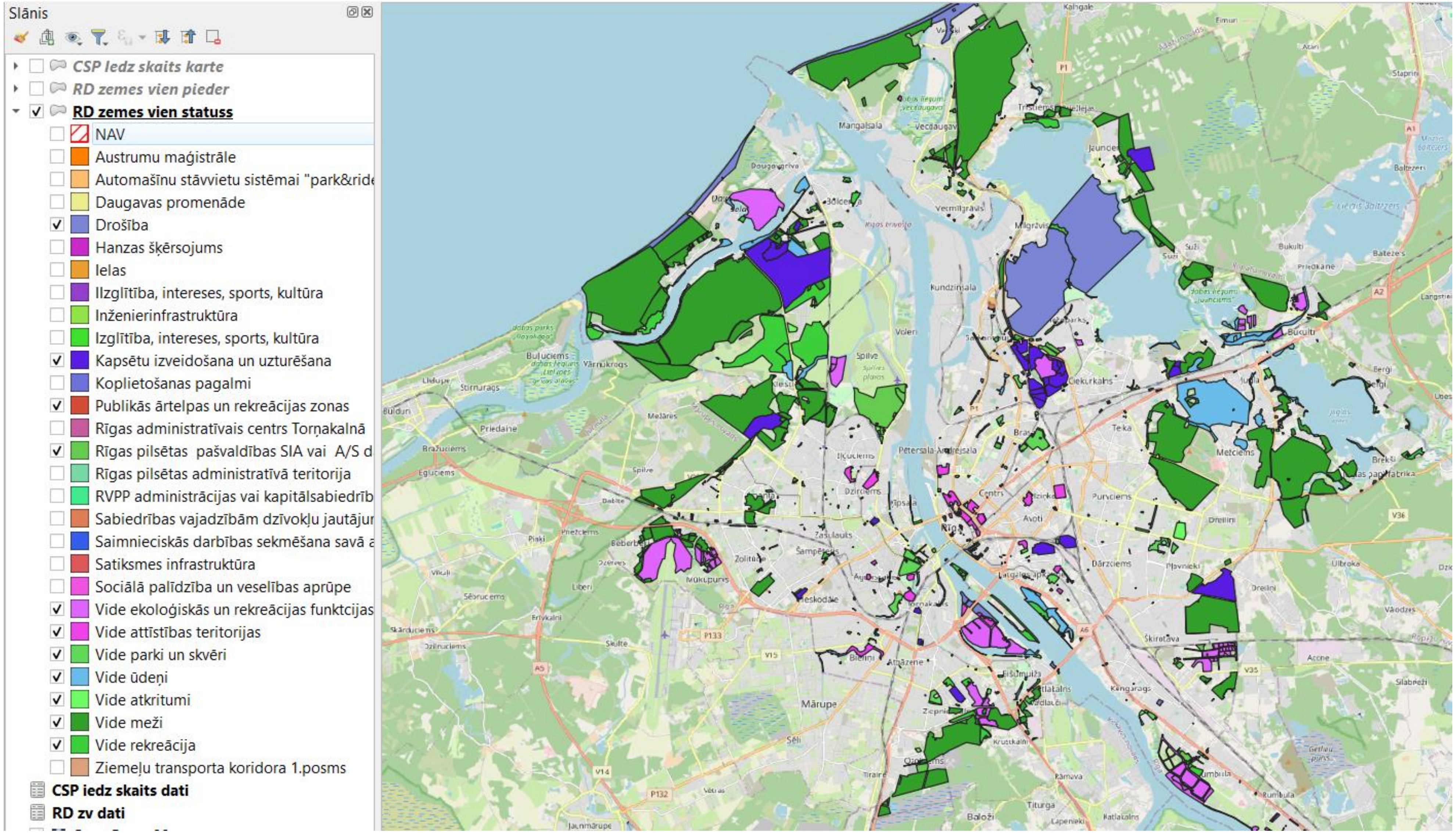
Big Forests and Urban Trees

- Monitoring and inventory
- Forest and tree health assessment
- Multilayer data approach (LiDAR, multispectral, drones)

Waterfront Challenges

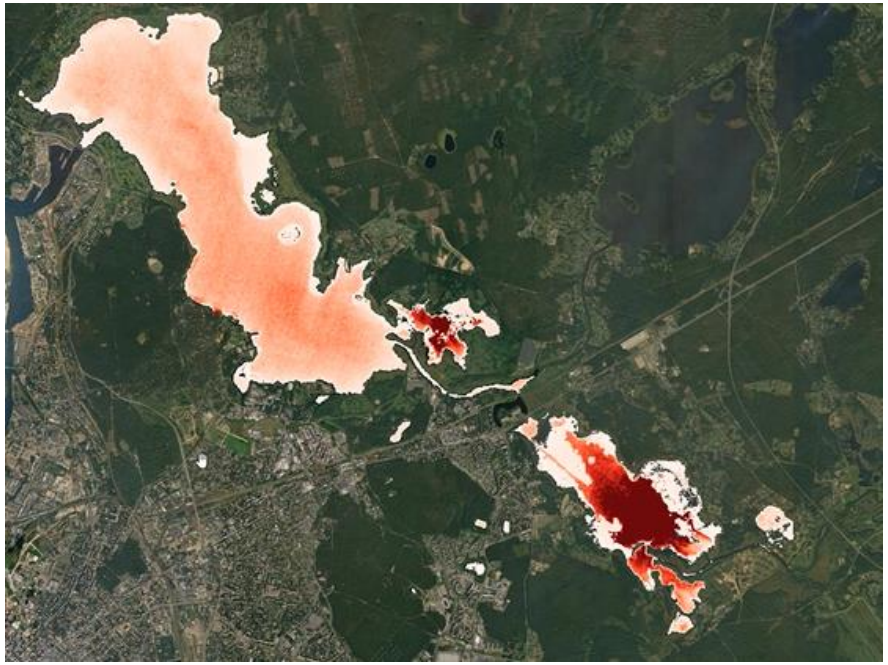
- **Only ~1/2 of Riga's green areas have sufficient information and green/blue areas even less.**
- Lack of monitoring solutions
- Importance of green/blue corridors for sustainable development

Riga Municipality land parcels



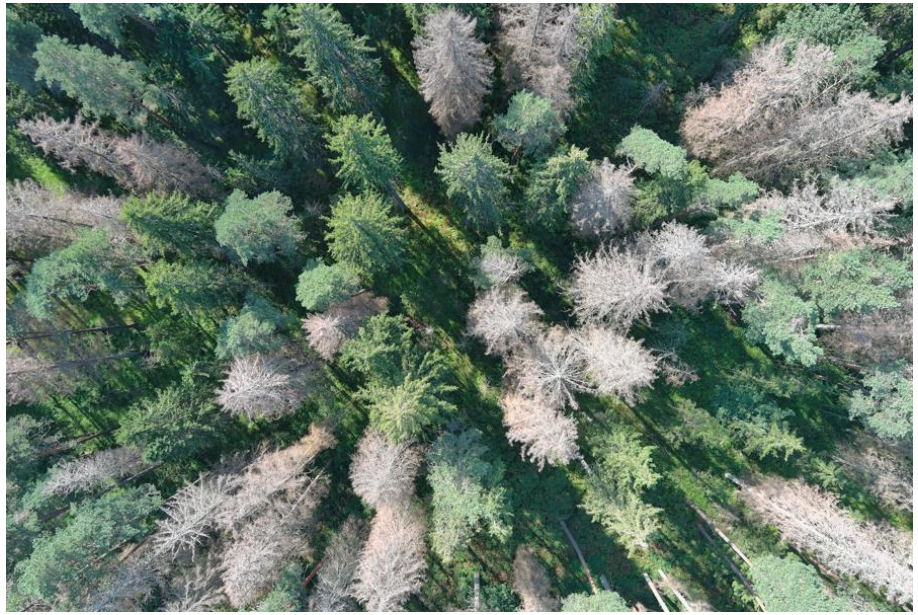
Riparian Forests and Water Health

- Direct impact on citizens' wellbeing
- Reducing emissions and balancing city carbon footprint
- Potential for developing recreation areas



SWIFTT Experience

- Forest health monitoring (e.g., bark beetle detection)
- Need for rapid volume estimation
- Combining foresters' knowledge with remote sensing technologies



Conclusions and Future Directions

- Remote sensing and drones as tools for forest and urban management
- AI + open data = scalable solutions
- Riga’s waterfront and SWIFTT project as testbeds for innovation

Thank You!