

Nature-based Solutions as a Tool for Mitigating "Slow Disasters" in Marginalized Urban Heritage

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INTRODUCTION & AIM

This research addresses the challenge of "slow disasters"—the chronic, incremental degradation of urban ecosystems and social fabrics—within marginalized residential areas. While Nature-based Solutions (NbS) are often applied to new developments, their role in rehabilitating early 20th-century urban heritage remains under-explored. This study examines how NbS can be integrated with cultural memory to foster resilience in the specific contexts of Budapest and Bucharest.

METHOD

The study employs a multi-disciplinary approach combining circular economy principles with digital humanities. I utilize StoryMaps as a phenomenological mapping tool to overlay technical environmental data with narrative storytelling. This "Architecture of Convalescence" methodology treats the city as a recovering organism, using heritage documentation to identify sites where green interventions can repair both ecological and psychological "mental maps."

Bucharest

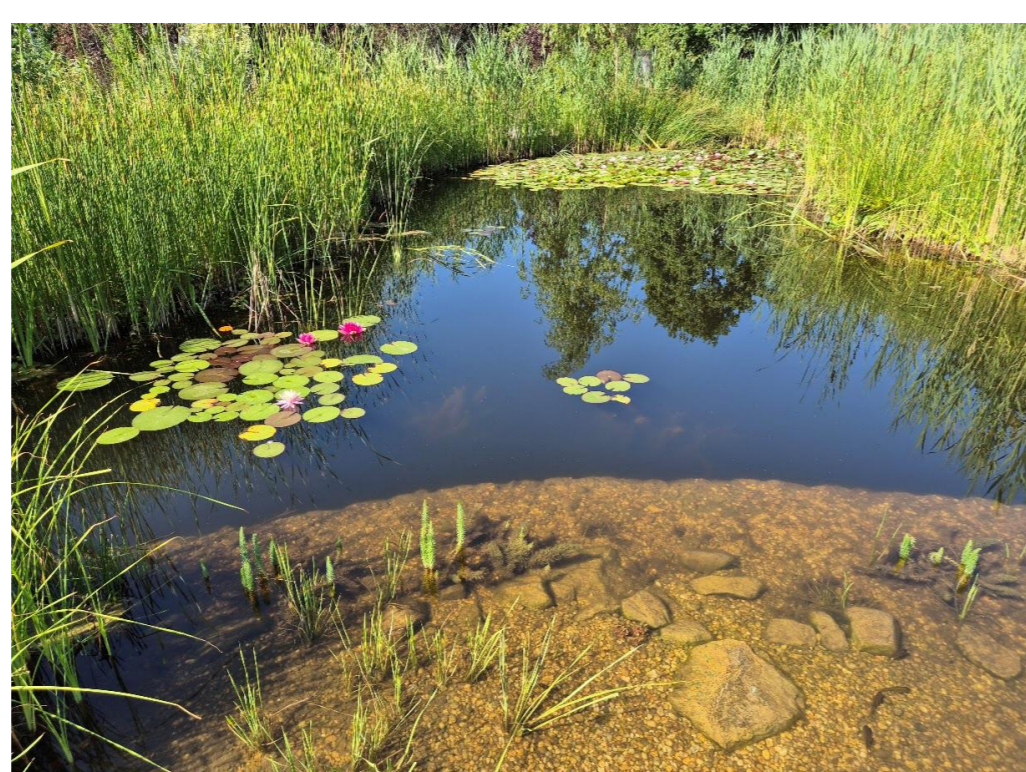
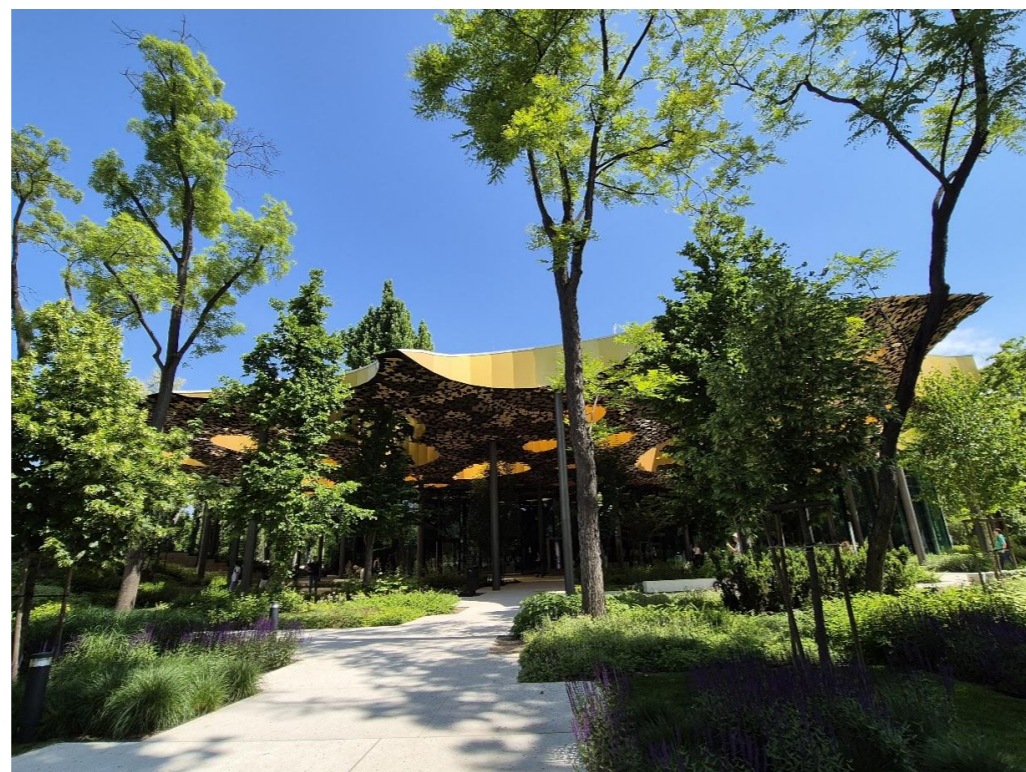
<https://uploads.knightlab.com/storymapjs/49284be7dd69a3ff5cff0e7d6a768b51/bucharest-green/index.html>

For a full description see the article in Buildings in references.

Budapest

- Pentecostal Baths Park
- City Park
- Japanese gardens
- Cemeteries
- Pine Tree Garden
- Pocket parks

<https://uploads.knightlab.com/storymapjs/49284be7dd69a3ff5cff0e7d6a768b51/budapest-green/index.html>



RESULTS & DISCUSSION

The findings indicate that rehabilitating existing residential heritage through NbS (such as green courtyards and permeable surfaces) is more carbon-efficient than reconstruction. In the Budapest-Bucharest axis, marginalized spaces often coincide with high-density 20th-century housing. My mapping reveals that integrating "slow tourism" and cultural routes into these areas transforms them from isolated hazard zones into resilient, productive landscapes that mitigate urban heat and improve inhabitant well-being.



CONCLUSION

The research concludes that NbS are most effective when grounded in the "spirit of the place." By linking ecological restoration with cultural sustainability, cities can move beyond temporary fixes to long-term systemic resilience. This holistic framework provides a scalable model for Central and Eastern European cities to address the dual pressures of climate change and heritage decay.

FUTURE WORK / REFERENCES

All photos by the author 2024/25: City Park/Városliget, Pentecostal Baths Park, Buda Arboretum to be integrated in the Budapest map.

[Budapest - NbS for climate resilience and pollution control | Oppla](#)
<https://doi.org/10.3390/buildings14071920>

[LNI-Landscape-Forum-Bucharest-2015-Report-EN](#)

[Landscape Forum 2025 Budapest and Danube Bend | LE:NOTRE](#)

[DANUrB - UAUIM](#)

[Fóoldal - Budai Arborétum - MATE](#)

[A Liget egykor \(Budapest, 2021\) | Könyvtár | Hungaricana](#)

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