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**SEARCHING NEW TOOLS AND METHODS IN URBAN PLANNING CONCERNING
NATURE-BASED SOLUTIONS INTRODUCTION**

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Nowadays cities experience local flooding and heat stress, with projections for these issues to increase due to climate change and ongoing development. Working in complex, resource-constrained urban environments, the municipalities look for joined-up, cost-effective, smart solutions to address these and other urban challenges. Cities of the future will need to achieve more with fewer resources and deliver genuine sustainable development that realizes a broad range of social, economic and environmental objectives. The solution could be nature-based solutions introduction. But how to encourage cities, its citizens and investors to use solutions based on nature so green infrastructure could be treated in the same way as other infrastructure.

My goal is to focus on new solutions/tools in urban planning acts such as local plans and other resolutions that would introduce green infrastructure into urban planning. Look for the solutions in European countries, compare them to Polish solutions and propose new solutions in land-use plans and other local acts.

For example, in Wrocław the City Council has passed the resolution on tax decrease for residential buildings that include green vertical or horizontal surfaces. Extending this act is now being considered, to offer incentives for investors as well. There is also Mayoral Ordinance on managing rainwater in Wrocław.

As for local land-use plans provisions regulate so far:

- delimitation of new green areas and rules for their development;
- proportions between sealed area and a biologically active area in built-up areas;
- the proportion of 'high' greenery in a biologically active area;
- protection of trees and vegetation;
- the obligation of green walls in some investments;
- sustainable use of rainwater and thawing water;
- increasing the width of impermeable surfaces within streets,

which is not enough concerning the goals I would like to achieve.

The Wroclaw city also promotes:

- using greenery for water retention and evapotranspiration (rain gardens, green roofs, and walls);
- pre-treatment of rainwater from contaminated areas with the use of hydrofit water pre-treatment and other methods;
- planting water-retaining plants along streets and roads.

But this concerns only city's investments, the question is, how to extend it to private investors – combining obligations and incentives.

To achieve my goals I would like to use my 12-years experience as an urban planner working for the Wroclaw Municipality, my experience on Smart City field and my current position of Wroclaw City Gardener working on projects such as *GrowGreen – Green cities for climate and water resilience, sustainable economic growth, healthy citizens and environments* (within Horizon 2020 programme) or *Green Infrastructure Plan for Wroclaw and Greenery Charters* - sets of practical recommendations on nature-based solutions use, addressed to different stakeholders and designed for different types of investments.

Keywords: urban planning, green infrastructure