NatureScape embarks on a mission to enhance sustainable urban development via Nature-Based Solutions (NBS). Acknowledging NBS's critical role in addressing climate change, enhancing biodiversity, and improving health and well-being. NatureScape addresses the complex postimplementation phase that often hinders the complete integration and evaluation of NBS in urban transformations. At the vanguard of socio-ecological innovation, NatureScape integrates local and expert knowledge with community-driven strategies for a dynamic, adaptive, and comprehensive approach to urban planning. The project's cornerstone, NBS Transformation Labs (T-Labs), serves as participatory hubs where diverse stakeholders collaborate to refine and incorporate NBS into the urban landscape. These T-Labs are essential for engaging communities, governments, civil society, and the private sector in the co-development and continuous evolution of NBS, utilizing citizen science and geobased platforms for broader involvement. NatureScape introduces a sophisticated monitoring and impact assessment framework, equipped with factors to enhance synergies, and reduce post-implementation NBS trade-offs, covering social, cultural, and ecological aspects. Supported by a transnational consortium spanning seven European cities, NatureScape ensures that the insights and innovations from the NBS T-Labs are adaptable across various urban settings. The project's outputs include: 1) A comprehensive database of existing NBS, including technological characterizations and impact assessments; 2) Detailed reports and toolkits to address gaps in NBS post-implementation, offering new methodologies and best practices for urban planning integration; 3) Innovative digital tools and Key Performance Indicators (KPIs) for assessing NBS synergies and trade-offs; 4) Publications contributing to the knowledge base on NBS effectiveness and sustainability; 5) Evaluations of lessons learned and best practices from city-wide NBS initiatives; 6) Tools and guidelines for urban planners to integrate NBS into urban governance and planning; 7) Evidence-based recommendations and strategies for scaling up successful NBS projects. The NatureScape consortium, with expertise in urban planning, environmental science, SSH, RRI, and technology development, promotes a holistic approach to NBS sustainability, fostering transformative change in urban sustainability practices and establishing a new paradigm for dynamic, resilient urban ecosystems.