

18.10 Adaptation of local plans and regulations to include NBS

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Policy learning concerning adapting policies and strategic plans	Participatory Planning and Governance
Description and justification	Policy learning to systemically incorporate ecosystem-based adaptation into climate change strategies and ecosystem services into municipal planning is a critical step in shifting the prevailing paradigm of dealing with risk and disaster (Wamsler, Luederitz & Brink, 2014).
Definition	The extent to which the NBS project has contributed to, or inspired, changes in municipal rules, regulations and behavioural change instruments to support implementation and “mainstreaming” of NBS (unitless)
Strengths and weaknesses	<ul style="list-style-type: none"> + Policy learning can create windows of opportunity for other, similar urban innovations + Diffusion of good policies to increase NBS implementation and maintenance and, hence, urban resilience - Implementation of NBS in the absence of policy and planning support may be challenging, as bottom-up and decentralised processes are inherent within the concept
Measurement procedure and tool	<p>The extent of policy learning during or as a result of an NBS project can be evaluated using a five-point Likert scale (Bosch et al., 2017):</p> <p>No impact — 1 — 2 — 3 — 4 — 5 — High impact</p> <ol style="list-style-type: none"> 1. No impact: the NBS project has not, at any level, inspired changes in municipal rules and regulations. 2. Little impact: the NBS project has led to localised discussion about the suitability of the current municipal rules and regulations. 3. Some impact: the NBS project has led to public discussion, leading to a change in municipal rules and regulations. 4. Notable impact: the NBS project has led to public discussion, leading to a change in municipal rules and regulations. This, in turn, has sparked discussion amongst other administrations about the suitability of current rules and regulations.

	5. High impact: the NBS project has led to public discussion, leading to a change in municipal rules and regulations. This, in turn, has inspired other administrations to reconsider their respective rules and regulations
Scale of measurement	Municipal scale
Data source	
Required data	Information on changes in municipal rules and regulations to support implementation and “mainstreaming” of NBS as a result of a NBS project
Data input type	Qualitative
Data collection frequency	Annually; at minimum, before and after NBS implementation
Level of expertise required	Low
Synergies with other indicators	Relation to <i>Openness of participatory processes</i> , <i>Design for sense of place</i> indicators and <i>Green Space Management</i> indicator group
Connection with SDGs	SDG 6 Clean water and sanitation, SDG 7 Clean and affordable energy, SDG 10 Reduced inequalities, SDG 11 Sustainable cities and communities, SDG 13 Climate action, SDG 15 Life on land
Opportunities for participatory data collection	No opportunities identified
Additional information	
References	<p>Bosch, P., Jongeneel, S., Rovers, V., Neumann, H.-M., Airaksinen, M., & Huovila, A. (2017). CITYkeys indicators for smart city projects and smart cities. CITYkeys D1.4. Retrieved from http://nws.euocities.eu/MediaShell/media/CITYkeysD14Indicatorsforsmartcityprojectsandsmartcities.pdf</p> <p>Wamsler, C., Luederitz, C., & Brink, E. (2014). Local levers for change: Mainstreaming ecosystem-based adaptation into municipal planning to foster sustainability transitions. <i>Global Environmental Change</i>, 29, 189-201.</p>