SURE Research Publication Service

1) Reference of your publication:

Kabisch, N., Frantzeskaki, N., Pauleit, S., Naumann, S., Davis, M., Artmann, M., Haase, D., **Knapp, S.**, Korn, H., Stadler, J., Zaunberger, K., Bonn, A. (2016) Nature-based solutions to climate change mitigation and adaptation in urban areas - perspectives on indicators, knowledge gaps, barriers and opportunities for action. Ecology and Society, 21 (2): 39

2) Hyperlink to the publication:

https://www.ecologyandsociety.org/vol21/iss2/art39/

3) Abstract:

Nature-based solutions promoting green and blue urban areas have significant potential to decrease the vulnerability and enhance the resilience of cities in light of climatic change. They can thereby help to mitigate climate change-induced impacts and serve as proactive adaptation options for municipalities. We explore the various contexts in which nature-based solutions are relevant for climate mitigation and adaptation in urban areas, identify indicators for assessing the effectiveness of nature-based solutions and related knowledge gaps. In addition, we explore existing barriers and potential opportunities for increasing the scale and effectiveness of nature-based solution implementation. The results were derived from an inter- and transdisciplinary workshop with experts from research, municipalities, policy, and society. As an outcome of the workshop discussions and building on existing evidence, we highlight three main needs for future science and policy agendas when dealing with nature-based solutions: (i) produce stronger evidence on nature-based solutions for climate change adaptation and mitigation and raise awareness by increasing implementation; (ii) adapt for governance challenges in implementing nature-based solutions by using reflexive approaches, which implies bringing together new networks of society, nature-based solution ambassadors, and practitioners; (iii) consider socio-environmental justice and social cohesion when implementing nature-based solutions by using integrated governance approaches that take into account an integrative and transdisciplinary participation of diverse actors. Taking these needs into account, nature-based solutions can serve as climate mitigation and adaptation tools that produce additional cobenefits for societal well-being, thereby serving as strong investment options for sustainable urban planning.

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