24 Additional Indicators of New Economic Opportunities and Green Jobs

24.1 New businesses established in proximity to NBS

Project Name: UNaLab (Grant Agreement no. 730052)

Author/s and affiliations: Laura Wendling[1], Ville Rinta-Hiiro[1], Maria Dubovik[1], Arto Laikari[1], Johannes Jermakka[1], Zarrin Fatima[1], Malin zu-Castell Rüdenhausen[1], Peter Roebeling[2], Ricardo Martins[2], Rita Mendonça[2]

[1] *VTT Technical Research Centre Ltd, P.O. Box 1000 FI-02044 VTT, Finland*

[2] *CESAM – Department of Environment and Planning, University of Aveiro, Campus Universitário de Santiago, 3810-193 Aveiro, Portugal*

Indirect economic activity: Establishment of new businesses in the area surrounding NBS	**New Economic Opportunities and Green Jobs**
Description and justification	Urban regeneration can lead to improvement in the economic, physical, and social conditions of an area that has witnessed negative changes (Tallon, 2013). As such, it can include aspects such as development of business, housing, and a positive change on the community level (Tyler, Warnock, Provins, & Lanz, 2013). Nature-based solutions also provide a ground for 'Green businesses' to flourish (Organisation for Economic Co-operation and Development [OECD], 2013).
Definition	Number of new businesses established in the area surrounding implemented NBS (within 300 m linear distance of NBS of at least 0.5 ha in size)
Strengths and weaknesses	+ The indicator is easy to define - A lot of input data needs to be collected
Measurement procedure and tool	A report by Gore, Ozdemiroglu, Eadson, Gianferrara, and Phang (2013) states that gross domestic product (GDP) and gross value added (GVA) metrics alone cannot accurately estimate the contribution of green infrastructure/NBS to economic growth. Some methods to measure success can include occupation of premises in local areas or taking up of vacated spaces, changes in taxation, increase in start-ups, increase in visitors, new and expanding producer and retail firms, direct employment in development, maintenance and services, indirect employment in supporting firms, attracting and retaining the workforce. The major indicator is the number of established businesses located around the implemented NBS and also the rates paid for occupying that particular space (Gore et al., 2013). However, this will require gathering data over a

	period of years to understand the trend and business activities, both before and after the NBS implementation. Data can be derived annually from municipalities, planning departments and interviews with local businesses. Understanding and identifying the buffer zone surrounding NBS and assessing the number of new businesses in parallel is a critical component. It may be useful to define the proximity of land or property to NBS similarly to urban green space accessibility as in the indicator *Accessibility of urban green spaces*, i.e., land or properties within a 300 m distance from NBS. The type, quality and size of a given NBS, and the different recreational opportunities, attractiveness and aesthetic values associated with the NBS, will largely determine the extent (in distance or time) and magnitude of its impact on local business development.
Scale of measurement	District to regional scale
Data source	
Required data	A number of possibilities exist, including GDP, GVA, number of start-ups, etc. (See *Measurement procedure and tool)*
Data input type	Quantitative
Data collection frequency	Before and after NBS implementation
Level of expertise required	Low to moderate
Synergies with other indicators	Synergies with the indicator group *New Economic Opportunities and Green Jobs* indicators and the indicators *Distribution of public green space* and *Accessibility of urban green spaces*
Connection with SDGs	SDG 8 Decent work and economic growth, and SDG 9 Industry, innovation and infrastructure
Opportunities for participatory data collection	No opportunities identified
Additional information	
References	Gore, T., Ozdemiroglu, E., Eadson, W., Gianferrara, E., & Phang, Z. (2013). Green Infrastructure's contribution to economic growth: A review. A Final Report for Department for Defra and Natural England. July 2013. London: eftec. http://sciencesearch.defra.gov.uk/Default.aspx?Menu=Menu&Module=More&Location=None&Completed=0&ProjectID=19056 Madureira, H., Nunes, F., Oliveira, J. V, Cormier, L., & Madureira, T. (2015). Urban residents' beliefs concerning green space

benefits in four cities in France and Portugal. Urban Forestry & Urban Greening, 14(1), 56-64.
Organisation for Economic Co-operation and Development (OECD). (2013). Green Growth in Cities. Paris, France: OECD Environment Directorate. Retrieved from https://doi.org/10.1787/9789264195325-en
Tallon, A. (2013). Urban Regeneration in the UK. Abingdon, Oxon: Routledge.
Tamosiunas, A., Grazuleviciene, R., Luksiene, D., Dedele, A., Reklaitiene, R., Baceviciene, M., … Niewenhuijsen, M.J. (2014). Accessibility and use of urban green spaces, and cardiovascular health: findings from a Kaunas cohort study. Environmental Health, 13(1), 20.
Tyler, P., Warnock, C., Provins, A., & Lanz, B. (2013). Valuing the benefits of urban regeneration. Urban Studies, 50, 169-190.

24.2 Value of rates paid by businesses in proximity to NBS

Project Name: UNaLab (Grant Agreement no. 730052)

Author/s and affiliations: Laura Wendling[1], Ville Rinta-Hiiro[1], Maria Dubovik[1], Arto Laikari[1], Johannes Jermakka[1], Zarrin Fatima[1], Malin zu-Castell Rüdenhausen[1], Peter Roebeling[2], Ricardo Martins[2], Rita Mendonça[2]

[1] *VTT Technical Research Centre Ltd, P.O. Box 1000 FI-02044 VTT, Finland*

[2] *CESAM – Department of Environment and Planning, University of Aveiro, Campus Universitário de Santiago, 3810-193 Aveiro, Portugal*

Indirect economic activity: Value of rates paid by businesses	**New Economic Opportunities and Green Jobs**
Description and justification	The major indicator is the total value of rates paid by businesses within a defined area surrounding implemented NBS for occupying that particular space (Gore et al., 2013).
Definition	Value of rates paid by businesses established in the area surrounding implemented NBS (within 300 m linear distance of NBS of at least 0.5 ha in size)
Strengths and weaknesses	+ The indicator is easy to define - A substantial amount of input data needs to be collected
Measurement procedure and tool	To accurately determine the impact of NBS implementation on the value of rates paid by nearby businesses, it is necessary to gather data over a period of years to understand trends and business activities before and after NBS implementation. Data can be derived annually from municipalities, planning departments and interviews with local businesses.