Measurement procedure and tool	GIS/Survey
Scale of measurement	ha of potential habitat
Data source	
Required data	
Data input type	Quantitative
Data collection frequency	
Level of expertise required	High
Synergies with other indicators	
Connection with SDGs	3; 15
Opportunities for participatory data collection	
Additional information	
References	Bruckmann S.V., Krauss J., Steffan-Dewenter I. (2010). Butterfly and plant specialists suffer from reduced connectivity in fragmented landscapes. Journal of Applied Ecology, 47, 799-809. DOI: 10.1111/j.1365-2664.2010.01828 Hanski I. (1999). Habitat connectivity, habitat continuity, and metapopulations in dynamic landscapes, Biology, 87,2, 209-219. DOI: 10.2307/3546736

9.2 Number of native species

Project Name: CONNECTING Nature (Grant Agreement no. 730222)

Author/s and affiliations: Stuart Connop

Sustainability Research Institute, University of East London, UK

Number of native animal species	**Biodiversity**
Description and justification	The total number of native species within a defined area (site/neighbourhood/region/city). This can compromise one or more of the following taxonomic groups (it should be specified which groups are covered): a. Plants

	b. Birds c. Butterflies d. Invertebrates e. Mammals
Definition	Provides an overview of the species diversity, with distinctions able to be made across taxonomic groups if multiple groups can be covered. Defined species can also serve as an indirect “indicator” for the habitat quality.
Strengths and weaknesses	Results can support the evaluation of the original aims of a nature-based solution scheme and can monitor performance against these aims over time. Classification of native can be complicated by naturalised species and there is much debate over the role of non-native species in conservation biology, particularly in urban areas.
Measurement procedure and tool	The sum for each taxonomic group is calculated using field survey. It should be clarified whether this is the exact number or an estimation.
Scale of measurement	Number of species in a defined area
Data source	
Required data	Survey data
Data input type	Quantitative
Data collection frequency	Typically annual, but can be less frequent if resources are stretched.
Level of expertise required	High expertise is typically required for species identification. This requirement can be reduced if an index of easily identifiable species is created as a proxy
Synergies with other indicators	Synergies with non-native and invasive species indicators
Connection with SDGs	SDGs 14, 15.
Opportunities for participatory data collection	Surveying represents an excellent opportunity for widening participation.
Additional information	

References	Ruf, K., Gregor, M., Davis, M., Naumann, S. and McFarland, K., 2018. The European Urban Biodiversity Index (EUBI): a composite indicator for biodiversity in cities. ETC/BD report to the EEA. Also: CBI Indicator 3: https://www.nparks.gov.sg/biodiversity/urban-biodiversity/the-singapore-index-on-cities-biodiversity European Capital of Biodiversity Indicators 4-9: https://www.capital-biodiversity.eu/uploads/media/Indicators_on_urban_biodiversity_-_LIST_-_European_Capitals_of_Biodiversity.pdf Federal Capital of Biodiversity Indicators 2-7

9.3 Number of non-native species introduced

Project Name: CONNECTING Nature (Grant Agreement no. 730222)

Author/s and affiliations: Stuart Connop

Sustainability Research Institute, University of East London, UK

Number of non-native animal species	**Biodiversity**
Description and justification	Proportion of non-native animal and/or plant species introduced within an area as part of a nature-based solution scheme
Definition	Non-native species are those that have been transported to regions beyond their natural range. In terms of biodiversity objectives, these species can: • create a risk of harm if they become invasive; • provide biodiversity benefits (e.g., complementing native species provision to extend flowering seasons for nectar and pollen collecting insects) • reduce the number of native species within a scheme
Strengths and weaknesses	Results can support the evaluation of the original aims of a nature-based solution scheme and can monitor performance against these aims over time. Classification of native and non-native can be complicated by naturalised and invasive species.
Measurement procedure and tool	Proportion is calculated on the basis of the number of non-native species divided by the total number of species (i.e., the number of non-native species plus the total number of native species).
Scale of measurement	% of species in a defined area
Data source	