8.31.3 Number of and reasons for visits to an NBS area

Project Name: RECONECT (Grant Agreement no. 776866)

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Number and reason of visits to an NBS area	**Green Space Management**
Description and justification	A tangible physical characteristic of the NBS by providing information about the number of people visiting the area and also making inference about the purpose of the stay. It has a value in itself in providing a non-debatable tangible input, but is also a critical input to other core indicators described in this note.
Definition	Visits means discretionary time, ranging from a few minutes out of the home to an all day trip. Visits may include time spent close to home or further afield, potentially while on holiday.
Measurement procedure and tool	Changes in use and user characteristics would be of interest both immediately post-intervention and also after a longer interval, to establish the sustainability of any impact on recreational use. Visitor count and characteristic estimation surveys could therefore be carried out before and after the NBS intervention to estimate the impact on recreational use. A good example of this kind of approach is (Vert et al., 2019). Suggested Priority for Data Collection and Assessment We suggest a key opportunity for estimating a range of impacts of the NBS is to measure changes in visit frequency and characteristics following the intervention. If data collection at only one time point is possible, this is still useful as it may be possible to estimate the potential for change associated with intervention. Therefore a priority measure to carry out before RECONECT NBS work is started (or post intervention for some Demonstrator B sites) would be to use observational surveys within the NBS area itself and/or surveys of the surrounding population to investigate local people's use of their neighbourhood green/blue space. A) NBS-specific area We recommend the implementation of SOPARC, System for Observing Play and Recreation in Communities. Full details of the SOPARC observation process and training materials are available here: https://activelivingresearch.org/soparc-

	system-observing-play-and-recreation-communities. Typically, observers with basic training will observe visitors and their activities at a range of times of day and days of the week, and record counts of visitors and so on, on standard record sheets. B) Local community We recommend the inclusion of several specific questions on visits to natural spaces in any survey (which could be delivered by post, online or face-to-face). These questions are used in UK government surveys that have been used extensively for evaluation of population visits to nature. These questions have also been used across multiple countries in the H2020 BlueHealth project. The recommended questions and associated information are below. The definition of 'visits' has been adapted here to focus on visits in the local area around the home, so should reflect primarily the natural spaces in the immediate surroundings of the community, including the NBS site. Economic valuation The number of people visiting can be converted to an economic value using several economic methods for assessing non-market value. The value people associate with using the NBS may be inferred by how far they travel to use the NBS. A basic introduction to the Travel cost method can be found here: http://www.ecosystemvaluation.org/travel_costs.htm Another method can be to use the WHO HEAT tool - economic value of changes in walking and cycling impact on all cause mortality - https://www.heatwalkingcycling.org A note on ethics • Any study involving human participants is likely to require ethical approval to ensure any risk to participants and people carrying out the work (e.g., surveys, observations in situ) is minimised, and data governance is appropriate. Municipal authorities may have their own ethical approval committees, or may need to work with local universities or related institutions to gain ethical approval for their work.
Data source	
Required data	User/visitor survey and count data can be used to assess the numbers of people visiting the NBS area for recreation and their individual and visit characteristics. These data can be used to derive associated values.

	The total number of recreational users of the NBS area, and their characteristics, can be estimated through: A) automated pedestrian/cycle counters (many commercial products available[1]) B) observational surveys using standardised tools such as SOPARC[2] User and visit characteristics may be of interest, for example: • Age • Gender • Activities undertaken (e.g., physically active or sedentary) • Duration of visit Some of these can be captured through observational surveys, but some may require face-to-face user surveys. **Local population** Survey of the local population may also be used to understand the recreational patterns of the local community, in terms of how they use their local green/blue space for recreation. Questions can be included in a survey (postal, online, face-to-face) to establish how often community members visit natural spaces, how long they spend there, and what they typically do. NBS may have the potential to increase visit frequency and/or duration and/or physical activity levels in the spaces, which all have potential wellbeing benefit. **Economic valuation** The potential (economic) value of recreational visits can be calculated in two primary ways, requiring different data inputs: • Travel cost method • -Economic valuation of wellbeing improvement associated with increased visit frequency/duration
Data collection frequency	
Level of expertise required	Good. Permission maybe required if accessing large quantities of data and the duration for which the data will be assessed
Synergies with other indicators	
Connection with SDGs	

Additional information	
References	[1] Example: https://www.eco-compteur.com/en/application/parks-recreation/ [2] https://activelivingresearch.org/soparc-system-observing-play-and-recreation-communities

8.31.4 Frequency of use of green and blue spaces

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Use frequency of green and blue spaces	Green Space Management Health and Wellbeing
Description and justification	This is an indicator of the frequency of visits to and time spent in different types of green and blue spaces, separately for spring-summer and autumn-winter. Previous studies have demonstrated that the use of green and blue spaces is an important measure of exposure to these spaces and could provide important benefits for health.
Definition	Self-reported time spent in green and blue spaces in hours per week, separately during summer and winter
Strengths and weaknesses	A strength of this indicator is that it obtains information on use of several different green and blue spaces and takes into account the season. However, a limitation is that it is prone to recall bias.
Measurement procedure and tool	The indicator is obtained using a survey which is taken by a sample of the general population. The survey includes a section which is adapted from questionnaires applied in previous studies of the health effects of exposure to natural environments. The indicator is obtained from the question "*In a normal week during the last 12 months, on average, how many hours did you spend in the following green or blue spaces?*" The answers are the number of hours, given separately for a week in spring-summer and a week in autumn-winter and for the following natural environments: parks/public gardens, woods/other natural green spaces, agricultural fields, and blue spaces. This survey is repeated before and after the implementations of NBS in order to observe a potential change in use of green and blue spaces.