22 Additional Indicators of Health and Well-being

22.1 Self-reported physical activity

Project Name: proGIreg (Grant Agreement no. 776528)

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Self-reported physical activity	Health and Wellbeing
Description and justification	An indicator of overall physical activity a participant does per week, based on the most-used validated short physical activity questionnaire. Several studies on the association between green space exposure and physical activity have shown that an increase in green space was associated with more physical activity. However, these results were not always consistent.
Definition	Self-reported physical activity in metabolic equivalent of task (*MET*) minutes per week
Strengths and weaknesses	A strength of this indicator is that it is obtained by using a validated and widely used questionnaire to assess the overall physical activity level. This questionnaire has been translated into many languages and has been re-validated many times. A limitation is that the indicator is self-reported, although validation studies have demonstrated that the questionnaire is reliable. Another limitation is that it measures overall physical activity, thus not specifically focusing on physical activity done in green spaces.
Measurement procedure and tool	The indicator is obtained using a survey which is taken by a sample of the general population. The survey includes the short-from International Physical Activity Questionnaire (IPAQ). In the IPAQ, the participants are asked how many days and how much time per day they spent on vigorous physical activity, moderate physical activity, walking, and sitting in the last 7 days. With these data, the overall physical activity in MET minutes per week can be calculated. This survey is repeated before and after the implementations of NBS in order to observe a potential change in physical activity.
Scale of measurement	General population in residential neighbourhoods
Data source	
Required data	Questionnaire data
Data input type	Continuous variables

Data collection frequency	Twice; once before the implementation of the nature-based solutions and once after.
Level of expertise required	Low
Synergies with other indicators	This indicator is linked to physical activity.
Connection with SDGs	Good health and wellbeing: if the implementation of NBS is associated with an increase in physical activity, NBS contribute to improved health and wellbeing.
Opportunities for participatory data collection	The questionnaires are self-reported and as such are reported by the citizens themselves.
Additional information	
References	Lee, Macfarlane, Lam & Stewart. 2011. Validity of the international physical activity questionnaire short form (IPAQ-SF): A systematic review. International Journal of Behavioral Nutrition and Physical activity. 8,115.

22.2 Observed physical activity level within NBS

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Observed physical activity level within NBS	**Health and Wellbeing**
Description and justification	An indicator of the total physical activity that takes place in a NBS, obtained by direct observation of activity in the NBS. This is an important indicator of the potential benefits obtained from a NBS, as implementing a new NBS or improving an existing NBS is hypothesized to increase the use and activity that takes place in the NBS.
Definition	Observed weekly physical activity in the NBS (% over three levels of physical activity [sedentary, walking, or vigorous])
Strengths and weaknesses	A strength is that the indicator is objective and provides an estimate of the physical activity that take place specifically in the NBS. Moreover, it disentangles different types of activity/use of these spaces (e.g., walking, jogging/running, cycling, etc.) that occur in NBS. This observation tool has been widely used to assess physical activity in parks, playgrounds, and other relevant environments. A potential weakness is that the