

References	<p>Butz Jr, H.E. and Goodstein, L.D., 1996. Measuring customer value: gaining the strategic advantage. <i>Organizational dynamics</i>, 24(3), pp.63-77.</p> <p>Jones, M.A., Mothersbaugh, D.L. and Beatty, S.E., 2002. Why customers stay: measuring the underlying dimensions of services switching costs and managing their differential strategic outcomes. <i>Journal of business research</i>, 55(6), pp.441-450.</p>
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24.4 Local economy GDP

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

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Indirect economic activity: Change in local economy GDP in proximity to NBS	New Economic Opportunities and Green Jobs
Description and justification	This indicator provides information about the change in total consumption/production for a given area in proximity to the NBS. It is a general indicator of the direction of economic growth (increasing/stable/decreasing) and is easily aggregated and comparable at many levels.
Definition	<p>GDP (Gross Domestic Product) is a measure of the 'output' of a specified economy. Data can be collected at any scale as the indicator is simply the total monetary value of all production/sales in a given location / within a given boundary. Eurostat relates GDP to Gross Value Added (see Indicator 12.1.3.4) and defines GDP as: "an aggregate measure of production, GDP is equal to the sum of the gross value added of all resident institutional units engaged in production, plus any taxes on products and minus any subsidies on products. Gross value added is the difference between output and intermediate consumption."</p> <p>It should be noted that GDP is often confused with GNP (Gross National Product), which is defined as GDP plus "net" income from other countries.</p>
Strengths and weaknesses	+ The indicator is widely reported and generally understood

	<ul style="list-style-type: none"> + The indicator is a meaningful and comparable at multiple levels of aggregation - The causal relationship between the NBS and the overall change in GDP may be difficult to establish - The geographic scale at which the data is available may not be adequate for reporting NBS impact
<p>Measurement procedure and tool</p>	<p>GDP (and GNP) are regularly calculated and reported by national statistics offices based on sales data collected from businesses, government expenditure and trade flows. The specific components of GDP are:</p> <p>GDP = C (private Consumption) + I (gross private Investment) + G (Government investment) + X (eXports) – M (iMports).</p> <p><i>GNP</i> adjusts measures of GDP based on remittances in/out of the country. For example, if Apple Inc. produces €100 million of computers in Ireland and sends €20 million in profits to shareholders in the US, then €20 million would be subtracted from Ireland’s GDP (which includes the original €100 million). In addition, the US figure for GNP would be increased by €20 million.</p> <p>GDP is generally reported as a total in a given period (usually a year) within a specific administrative boundary (e.g., state, region, country). Most statistical offices will be able to provide this data at lower levels of geographic scale, following locally defined administrative boundaries. However, it is more likely that <i>Income per Household or per Person</i> (See Indicator 12.2.17) will be reported at smaller geographical scales. It is also the case, that in some jurisdictions – and for some purposes – GNI (Gross National Income) is used instead of GDP/GNP as an indicator of economic performance.</p> <p>Determining GDP for a given area in proximity to an NBS will involve establishing the appropriate ‘buffer zone’ around the NBS and determining the relevant source for GDP data at that scale.</p> <p>Understanding and identifying the buffer zone surrounding NBS and determining the relevant geographic area from which to report GDP is a critical component of this indicator. It may be useful to define the area surrounding the NBS similarly as defined in the indicator <i>Distribution of public green space</i>, e.g., land or properties with a 5 min walk from NBS (Madureira et al., 2011). Alternatively, proximity of land or property to NBS could be defined similarly to urban green space accessibility as in the indicator <i>Accessibility of urban green spaces</i>, i.e., land or businesses within a 300-500 m distance from NBS (Tamosiunas et al., 2014).</p> <p>From a data availability standpoint, however, it is likely to be more convenient to define the impact area in relation to</p>

	<p>existing administrative boundaries for which GDP is already reported. Note that administrative areas are often established based on population numbers (e.g., electoral districts, community healthcare zones, etc.). This means that the economic data is available for pre-defined geographic areas that may – or may not – align with the expected impact ‘buffer zone’ or be comparable to other impact indicators’ geographic span of impact.</p> <p>Therefore, it may be necessary to assess the proportion of a given administrative area’s population / economy that is affected by the NBS in order to use existing data to represent overall impact. In Connecting Nature, we are trialling an approach that will establish thresholds of geographic coverage to determine what proportion of a given administrative area’s measurements to include / what weight to assign. Our initial approach will be to set a maximum threshold of geographic coverage above which the entire administrative area’s measurements will be included and a minimum threshold below which the area will not be included in the indicator measurement at all. In between these thresholds, it will be up to the relevant measurement body and NBS promoter to assess the relevant proportion of the population in the administrative area to include in the overall measurement.</p> <p>The type and size of a given NBS, and the different economic and/or recreational opportunities and aesthetic values associated with the NBS, will largely determine the extent (in distance, population size and/or time) and magnitude of its impact on the affected community.</p>
Scale of measurement	Regional - National
Data source	
Required data	As noted above, GDP is generally collected and reported by national statistics offices. The challenge is to define the area affected by the NBS and to map this to administrative boundaries within which GDP is reported.
Data input type	Quantitative
Data collection frequency	Annually (actual data) and quarterly (estimated)
Level of expertise required	Moderate
Synergies with other indicators	Synergies with <i>New Customers</i> , <i>Gross Value Added</i> , <i>Income per capita</i> and <i>numbers of businesses</i> indicators.
Connection with SDGs	SDG 8 Decent Work and Economic Growth

Opportunities for participatory data collection	No opportunities identified
Additional information	
References	<p>Eurostat (2010) European System of National and Regional Accounts (2010), EU – may be accessed at https://ec.europa.eu/eurostat/documents/3859598/5925693/KS-02-13-269-EN.PDF/44cd9d01-bc64-40e5-bd40-d17df0c69334</p> <p>Eggermont, H., Balian, E., Azevedo, J.M.N., Beumer, V., Brodin, T., Claudet, J., Fady, B., Grube, M., Keune, H., Lamarque, P. and Reuter, K., 2015. Nature-based solutions: new influence for environmental management and research in Europe. <i>GAIA- Ecological Perspectives for Science and Society</i>, 24(4), pp.243-248.</p> <p>Stiglitz, J., Sen, A.K. and Fitoussi, J.P., 2009. The measurement of economic performance and social progress revisited: reflections and overview.</p>

24.5 Initial costs of NBS implementation

Project Name: PHUSICOS (Grant Agreement no. 776681)

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Initial Costs	New Economic Opportunities and Green Jobs
Description and justification	Indicators of Cost-Benefit Analysis of the Intervention sub-criterion will assess the financial feasibility of the project scenario.
Definition	Project's initial costs are those occurring during the design and construction phases.
Strengths and weaknesses	<p>+ Top-down synthetic approach could ensure rapid estimation but low accuracy;</p> <p>- Bottom-up analytical approach and parametric approach are very time-consuming.</p>
Measurement procedure and tool	Different methods can be used to assess initial cost and the choice among them depends on the detail of the available data and of the evaluation itself. These methods can be classified in three different approaches: