

	<p>https://www.urbangreenup.eu/insights/deliverables/d2-4---monitoring-program-to-valladolid.kl</p> <p>URBAN GreenUP Deliverable D3.4 - Monitoring program to Liverpool</p> <p>https://www.urbangreenup.eu/insights/deliverables/d3-4---monitoring-program-to-liverpool.kl</p> <p>URBAN GreenUP Deliverable D4.4 – Monitoring program to Izmir</p> <p>https://www.urbangreenup.eu/insights/deliverables/d4-4---monitoring-program-to-izmir.kl</p> <p>URBAN GreenUP Deliverable D5.3: City Diagnosis and Monitoring Procedures</p> <p>https://www.urbangreenup.eu/insights/deliverables/d5-3-city-diagnosis-and-monitoring-procedures.kl</p> <p>European Commission. Green infrastructure in the Energy sector.</p>
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2.3. Estimated carbon emissions reduction from building energy saving - cooling

Project Name: URBAN GreenUP (Grant Agreement no. 730426)

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Recommended citation: The Mersey Forest, Natural Economy Northwest, CABE, Natural England, Yorkshire Forward, The Northern Way, Design for London, Defra, Tees Valley Unlimited, Pleasington Consulting Ltd, and Genecon LLP (2010). GI-Val: the green infrastructure valuation toolkit. Version 1.6 (updated in 2018). <https://bit.ly/givaluationtoolkit>

Reduction in carbon emissions from building energy saving - cooling	Climate Resilience
<p>Description and justification</p>	<p>GI-Val is The Mersey Forest's green infrastructure valuation toolkit. The current prototype is free and open source, and can be downloaded under a Creative Commons License from: https://www.merseyforest.org.uk/services/gi-val/. It takes the form of a spreadsheet calculator and a user manual.</p> <p>GI-Val Tool 1.6 can estimate reduced carbon emissions from building energy saving due to the cooling impact of nature-based solutions. It uses data from the US and UK to estimate energy, fuel cost and CO₂ savings as a result of having trees around buildings.</p> <p>An independent assessment of GI Val by the Ecosystems Knowledge Network is available from this link, along with</p>

	links to other tools: https://ecosystemsknowledge.net/green-infrastructure-valuation-toolkit-gi-val
Definition	Estimates the reduction in carbon emissions associated with energy savings for cooling by multiplying the reduction in energy consumption (in kWh) by 0.537. The 0.537 multiplication factor is derived from carbon intensity for grid electricity: 0.537 kg/kWh (Defra/Carbon Trust).
Strengths and weaknesses	<ul style="list-style-type: none"> - Tool developed using English data. - The toolkit remains a prototype and this means there are some green infrastructure benefits for which it cannot calculate a direct financial value. While there is a rich body of evidence that illustrates and demonstrates the different types of benefits deriving from quality green infrastructure, robust valuation techniques do not yet exist for all benefits. Therefore some valuations come with detailed caveats as they are based on limited evidence at this stage. - The toolkit's calculation is designed to be useful for initial, indicative project appraisal, providing a range of figures indicating the potential impact of a green infrastructure intervention or the value of an existing green infrastructure asset. The toolkit does not assess the quality of the design or detailed management requirements of green infrastructure. It does not replace a full cost benefit analysis, but it provides a basic valuation at a much lower cost. - Valuations such those made with a toolkit or cost benefit analysis also need to be seen as part of a much bigger picture. The valuation should not replace community engagement and local dialogue about what is valued about a place. Calculating economic value of green assets will always be a controversial technique and financial value should only be seen as one factor in decision-making. - The reported GVA values include transfers from one organisation to another, which means that although GVA increases for the beneficiaries, it may not increase for the study area as a whole.
Measurement procedure and tool	<p>The toolkit provides a set of calculator tools, to help assess an existing green asset or proposed green investment.</p> <p>The toolkit uses standard valuation techniques to assess the potential benefits provided by green infrastructure within a defined project area. These benefits are assessed in terms of the functions that the green infrastructure may perform, support or encourage, depending upon the type of project. For example, the diagram below shows how an urban tree planting scheme can result in improved air quality, carbon</p>

	<p>sequestration and reduced health costs, thereby illustrating green infrastructure function, benefit and potential monetisation.</p> <p>Once data is entered into the toolkit, it generates an estimate of annual reduction in energy consumption and CO₂e saving (in units of kg CO₂e/year). The toolkit identifies the marginal benefit, the additional value of the green infrastructure, and also tries to ensure that there is no 'double counting' of value.</p>
Scale of measurement	Street – district – city
Data source	
Required data	General information about area of investigation and local green infrastructure
Data input type	Numeric data
Data collection frequency	Individual assessments
Level of expertise required	Technical / Expert
Synergies with other indicators	
Connection with SDGs	SDG3 / SDG11
Opportunities for participatory data collection	<p>Developing the toolkit's next iteration will require wide and sustained collaboration. To facilitate this process, interested parties are invited to pass the toolkit to others who might be able to incorporate it into their work and to provide feedback on their experience in using the toolkit, good and bad! Sources of improved evidence Suggestions for improving the tools Ideas for new tools The consortium who led the development of this toolkit has handed over the responsibilities for co-ordinating future work to the Green Infrastructure Value Network (GIVaN). Further information on the network can be found at:</p> <p>www.bit.ly/givaluationtoolkit</p>
Additional information	
References	<p>URBAN GreenUP Deliverable D5.3: City Diagnosis and Monitoring Procedures</p> <p>https://www.urbangreenup.eu/insights/deliverables/d5-3-city-diagnosis-and-monitoring-procedures.kl</p> <p>http://www.merseyforest.org.uk/services/gi-val/</p>

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SDG	indicator	11.6.2. https://unstats.un.org/sdgs/metadata/files/Metadata-11-06-02.pdf

2.4. Energy and CO₂ emissions savings from reduced volume of water entering sewers

Project Name: URBAN GreenUP (Grant Agreement no. 730426)

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Estimated energy and CO ₂ emissions savings from reduction in the volume of water entering combined sewers	Climate Resilience New Economic Opportunities and Green Jobs
Description and justification	<p>GI-Val is The Mersey Forest's green infrastructure valuation toolkit. The current prototype is free and open source, and can be downloaded under a Creative Commons License from: https://www.merseyforest.org.uk/services/gi-val/. It takes the form of a spreadsheet calculator and a user manual.</p> <p>Drainage of stormwater run-off into combined municipal sewers results in a proportionate level of energy use and CO₂ emissions associated with stormwater transport and</p>