

ECOPLAN-QUICKScan

Introduction

The ECOPLAN-QUICKScan tool is a script/method that is useful to make results from mapping and simulations insightful to stakeholders.

Keywords

Stakeholder inclusion; Spatially explicit tool; Simulation/ future analysis

Why would I chose this approach?

The tool converts spatial datasets on ES supply (e.g. maps of carbon stored) into a set of average values per unit area (e.g. carbon stored per hectare for each region). This allows different regions or scenarios to be compared. The target audience is local experts in, for example, spatial planning, environment or industry. The tool can help project planners with vision building and/or raising awareness on ES supply.

What are the main advantages of the approach?

- Comparing areas provides insight into the characteristics of a region relative to its surroundings and/or comparable sites/catchments;
- Comparing scenarios for a defined area reveals clearly the total aggregated impact of each scenario on ES delivery;
- Requires limited effort by the end user: the end user selects specific areas and /or scenario simulation results from a drop-down menu in a table;
- Results are made available in tabular form and graphs.

What are the constraints/limitations of the approach?

- Requires some VBA and Excel programming to adapt the tables and infographics to a new dataset;
- Reliant on availability of input data.

What types of value can the approach help me understand?

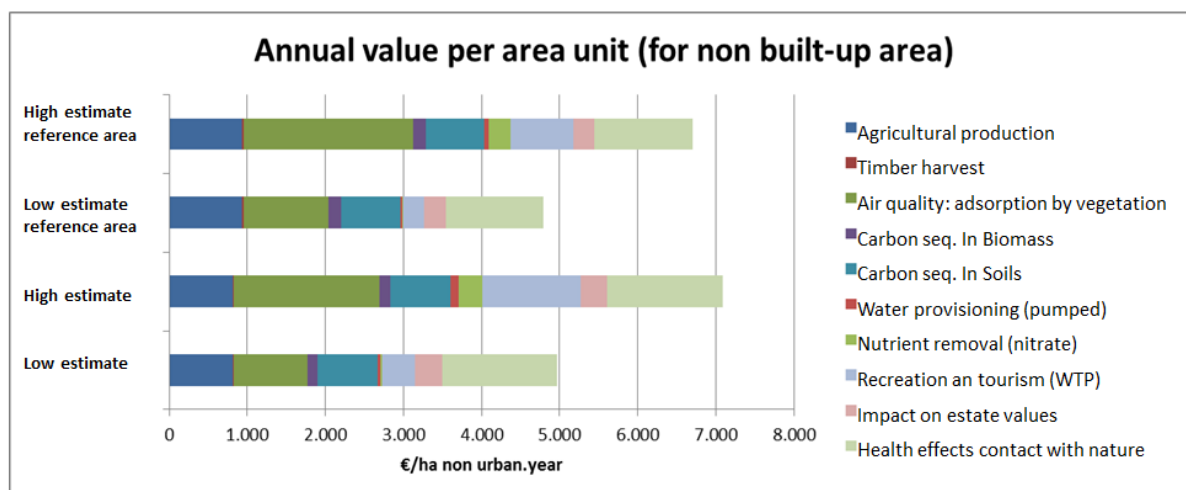
The approach allows biophysical values to be mapped and explored with stakeholders. It also allows different future options to be explored. As such it can also be used to understand a wide range of socio-cultural and other values as part of the stakeholder process.

How does the approach address uncertainty?

Uncertainty can be explored by comparing values for alternative scenarios (e.g. by comparing high and low estimates of the same service). Services can be expressed in biophysical units or converted to monetary values.

How do I apply the approach?

ECOPLAN-QUICKScan is a technical tool to process mapping and modelling results to generate insightful data for specific areas. The input is GIS mapped raster datasets on ES-stocks or ES-delivery for a current situation and/or simulation results for (multiple) scenarios. Units can be quantitative or monetary, but they need to be specified as a value per unit area. A set of polygons is also needed that defines the specific areas of interest (specific sites, municipalities, provinces, catchments etc.). Map layers in GIS representing supply or delivery of different ES are selected with the aid of a Python script, then zones of interest are clipped and data for each zone is summarised. This procedure is also undertaken for land-use/land-cover data to make results area-independent for comparison. The totals are written to a text file that can be further processed in Excel. Examples of the output for a comparison of the value of ES between two sites are shown in Figure 1.



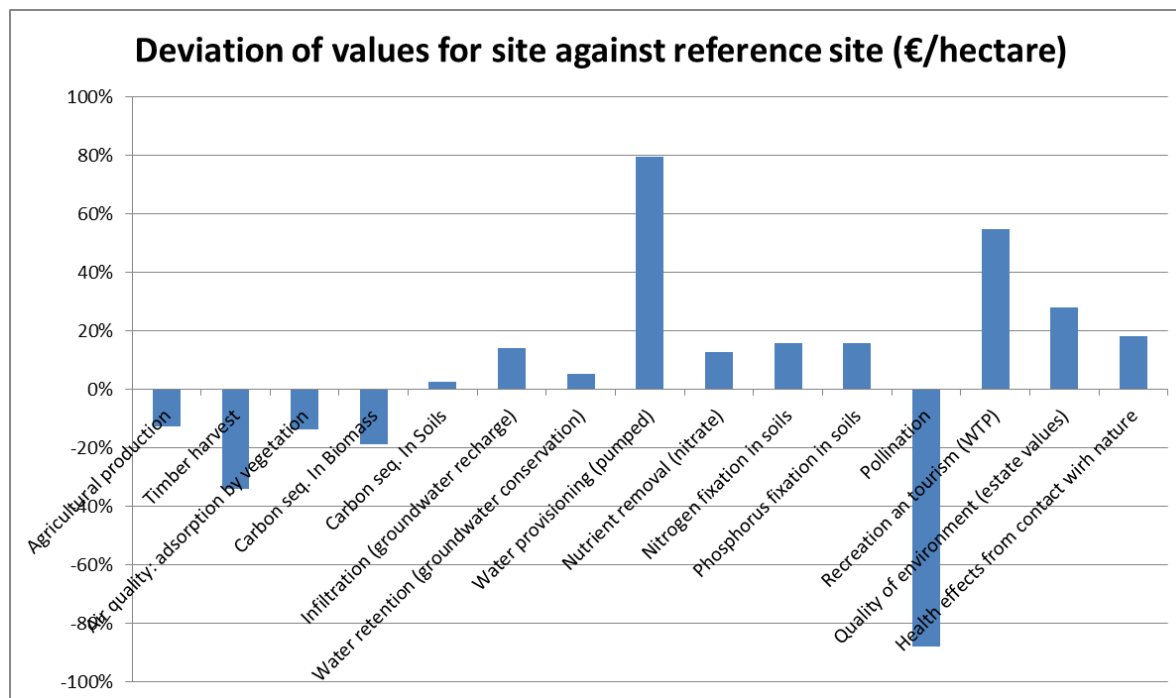


Figure 1: Illustrative outputs for ECOPLAN-QUICKScan.

Requirements

Data	<input type="checkbox"/> Data is available <input checked="" type="checkbox"/> Need to collect some new data <input checked="" type="checkbox"/> Need to collect lots of new data	Depending on the case study, large amounts of data may need to be collected
Type of data	<input type="checkbox"/> Qualitative <input checked="" type="checkbox"/> Quantitative	
Expertise and production of knowledge	<input checked="" type="checkbox"/> Work with researchers within your own field <input checked="" type="checkbox"/> Work with researchers from other fields <input checked="" type="checkbox"/> Work with non-academic stakeholders	The outputs are designed for discussion with stakeholders and to facilitate comparisons between regions
Software	<input checked="" type="checkbox"/> Freely available <input type="checkbox"/> Software licence required <input checked="" type="checkbox"/> Advanced software knowledge required	The software is coded to run in QGIS. Post-processing scripts need to be run to prepare data for QUICKScan. Software will become freely available by the end of next year.
Time resources	<input checked="" type="checkbox"/> Short-term (< 1 year) <input type="checkbox"/> Medium-term (1-2 years) <input type="checkbox"/> Long-term (more than 2 years)	The ECOPLAN-QUICKScan system is composed of FOS scripts that run in Q-GIS, so any developer can take them and edit them. The current system is designed to work with Flemish Data, but with programming skills they can be made applicable for other data sets
Economic resources	<input checked="" type="checkbox"/> < 6 person-months <input type="checkbox"/> 6-12 person-months <input type="checkbox"/> > 12 person-months	

Other requirements	
-------------------------------	--

Where do I go for more information?

Broekx, S., De Nocker, L., Liekens, I., Poelmans, L., Staes, J., Van der Biest, K., Meire, P. and Verheyen, K. (2013) *Estimate of the benefits delivered by the Flemish Natura 2000 network*. Study carried out on the authority of the Agency for Nature and Forests (ANB/IHD/11/03) by VITO, Universiteit Antwerpen and Universiteit Gent 2013/RMA/R/87 (March 2013). Online at <https://www.uantwerpen.be/en/rg/ecoplan/research/products/>

Factsheet prepared by Jan Staes & Francis Turkelboom