Tool Assessor

Information Sheet

Ecosystems Knowledge Network

InVEST

InVEST
integrated valuation of ecosystem services and tradeoffs

Quick Facts

Inputs

GIS map data, data in tables (usually .csv format)

Outputs

Maps showing ecosystem services (tiff images)

Scale

Local to national scale & multi-scale

Context

A range of land uses

Cost

Open access

Software required

Models run on windows, no specific software needed to view tiff outputs. ArcGIS, QGIS or similar required for further analysis of outputs

Skills Required

GIS user, basic - intermediate level. Python scripting not needed (but may be useful)

Developer

Natural Capital Project

Description

InVEST is a suite of open-source software models for mapping and valuing ecosystem services provided by land and seascapes. It uses data about the environment to explore how changes in ecosystems are likely to affect the flow of benefits to people. It is designed to inform decisions about natural resource management.

Ecosystem services included

18 ecosystem services across provisioning, regulating and cultural categories.

Habitats

Mountains, moors and heaths; semi-natural grasslands; enclosed farmland; woodland; freshwater, wetlands and floodplains; urban, marine, Coastal margins.

How does it work?

InVEST consists of 18 software models for mapping and valuing ecosystem services. Models can be applied at multiple scales.

Most models use a 'production function' approach, which means that the output (a map of ecosystem services) is derived from information about the environment's condition and it's processes.

The final map result is expressed in either biophysical terms (i.e. a quantity) or economic terms (monetary value). InVEST is suitable for users who wish to look at multiple services or have multiple objectives for their area of interest.

Case studies in the UK

Urban-BESS in Milton Keynes modelled carbon storage, soil erosion and pollination to test model outputs against spatial resolution of input data. Wessex-BESS also used it for pollination modelling. In Scotland, the James Hutton Institute and Aberdeenshire Council used it for water and pollination modelling.

Where can I get it?

http://www.naturalcapitalproject.org/invest/

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