Tool Assessor
Information Sheet

ARIES

Quick Facts

Inputs

Maps or GIS databases

Outputs

Environmental asset portfolio, maps, quantitative data about ecosystem services

Scale

Local, regional, national and multi-scale

Context

A range of land uses

Cost

Open access for non-commercial use

Software required

Standalone k.Lab software tool environment, k.Explorer will run on the web

Skills Required

Good understanding of environmental modelling, GIS skills beneficial, Bayesian modelling skills beneficial

Developer

National Science Foundation, University of Vermont, Earth Economics and Conservation International.

Description

ARIES (ARtificial Intelligence for Ecosystem Services) is a networked collaborative software designed for rapid ecosystem service assessment and valuation. It gives equal emphasis to supply, demand and flow to quantify actual service provision and use by society (as opposed to quantifying potential service benefits). It aims to provide a suite of models that support science-based decision-making.

Ecosystem services included

11 ecosystem services across provisioning, regulating and cultural categories.

Habitats

Semi-natural grasslands, woodland, enclosed farmland, freshwater, wetlands and floodplains, mountains, moors and heaths, marine, coastal margins and urban.

How does it work?

ARIES is based on technology which allows researchers to contribute models and scientific data that simulate and integrate environmental and socioeconomic systems. Collaborative information is hosted on a network and when provided with a user query, ARIES connects all the agents involved into a flow network and creates the best models for each agent and connection. It assesses benefits including carbon sequestration, river and coastal flood regulation, freshwater supply, sediment regulation, fisheries, recreation, aesthetic viewsheds, and open-space proximity values. ARIES prototypes are currently available for experienced modellers (training is recommended), however a web-based ARIES Explorer (k.Explorer) will allow non-technical users to use the tool in the next year (2016-17).

Case studies in the UK

ARIES has not yet been used in the UK.

Where can I get it?

http://aries.integratedmodelling.org/

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