

ARIES is a web-based technology offered to users worldwide to assist rapid ecosystem service assessment and valuation (ESAV). Its purpose is to make environmental decisions easier and more effective. ARIES helps discover, understand, and quantify environmental assets and what factors influence their values, in a geographical area and according to needs and priorities set by its users.

Created by an international partnership of NGOs, policy-makers, and scientists, ARIES pairs the user's knowledge of a case study with that of experts. Using a unique artificial intelligence approach, ARIES studies all the data relevant to ESAV questions and constructs a cause-and-effect picture of how ecological and economic factors interact in the selected area, making sure that not even a bit of relevant data or knowledge is overlooked. The result of an ARIES user session is an *environmental asset portfolio* that describes in depth the spatial distribution of ecosystems and ecosystem services in the area, their potential and realized economic values, likely trends for future values, and the causal relationships that link the values to each other and to actual or potential policies. The directions and type of outcomes of an ARIES session are entirely decided by the user. The portfolio includes documentation and references that document and justify each and every operation, dataset, or model used to create it.

ARIES is the most recent in a series of federally funded projects aiming to provide intelligent support to ESAV; it started on April 1, 2007 thanks to a \$925,000 grant from the National Science Foundation to the UVM Ecoinformatics Collaboratory, Earth Economics, and Conservation International. Partners from Madagascar to Puget Sound are providing case studies, data and crucial knowledge to inform the ARIES algorithms. A fully functional portal will be available to the public at the end of the project in 2010, but demonstration, proof-of-concept and test releases will be made available starting in summer 2008.

ARIES is being developed following the open source software paradigm; unsupervised access to ARIES services will be open and free for all non-profit users, such as members of NGOs, academic, or governmental institutions. Non-profit users, in turn, commit to sharing data in modalities that best reflects their mission and their sources, contributing to the growth of the system over time. Access to ARIES for business groups and professional support will also be made available through an independent organization, whose proceeds will support the maintenance and growth of the system.

This document provides a non-technical introduction to the principles underlying ARIES and previews some of the ways users will be able to interact with it. The official **ARIES web site** (this site) is the place to go to keep updated on project developments and to access all tools and services created by our team on the road to ARIES.