

## Media release

### eWater Releases Eco Evidence

9 February 2012

eWater has released Eco Evidence, a software tool to support evidence-based decision-making in environmental management.

Eco Evidence is available as a free download for members of the eWater Toolkit, a free-to-join community of practice that provides access to hydrological, ecological and catchment management resources. This latest tool from eWater lets users search and access a reusable knowledge bank of pieces of evidence (extracted from scientific papers) to answer cause-effect questions, make assessments, plan for restorations, and carry out critical reviews on a specific topic of interest.

The power of the tool lies in its ability to help users apply criteria to establish clear cause-and-affect linkages in environmental investigations. It lets users analyse existing evidence in a well-documented, transparent, repeatable and rigorous manner. Eco Evidence can also be used to store evidence from a particular analysis, and lets users publish material to the on-line database for re-use and sharing with other users.

The software is useful to anyone needing to make scientifically defensible assessments about cause-effect relationships in aquatic environments. An understanding of cause and effect is central to good decision-making in environmental management. It matters most where decisions may be subject to challenge or where restoration budgets are tight and managers are looking to narrow down their options to the best value solutions.

“Eco Evidence can support evidence-based decision-making for environmental management. It will make it easier for decision makers to embrace the principle of evidence-based decision making and promote much better collaboration, new methods and technology,” said Product Development Manager Ralph Ogden.

#### *Eco Evidence Database*

The online database stores information about causal relationships extracted from environmental science studies. ‘Atomised’ information captured in the Eco Evidence Database is specifically geared to support cause and affect assessments. The data describes aspects of a study’s (i) location or environment, (ii) methods and study design, and (iii) results, as well as providing details of the scientific study.

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The database may be searched for studies containing evidence for specific causal relationships and then use the information to evaluate the strength of evidence for a cause-effect relationship using the Eco Evidence Analyser. Users may also add evidence to the database yourself, for use immediately or at a later date.

### *Eco Evidence Analyser—Improved Evidence Based Practice*

By allowing evaluation of evidence from environmental science literature in a standardised, transparent and repeatable manner, the Eco Evidence Analyser reduces bias and subjectivity. The Eco Evidence Analyser guides users through an eight-step framework to gather evidence and weight it according to study design features.

The analysis method draws together information from the literature to assess how a particular human activity or natural event may influence the environment. The information is synthesised using a 'causal criteria' approach adapted from a method originally developed by epidemiologists in the 1960s – first used to clearly demonstrate the detrimental effects on health of tobacco smoking.

Eco Evidence Analyser can be used to:

- assess the likely environmental impacts of a development proposal
- establish whether or not an environmental impact has occurred
- identify the cause of poor water quality
- draw on existing scientific literature to assess the more general applicability or transferability of results from local field studies
- carry out evidence-based planning
- design effective on-ground restoration or management programs
- make transparent, repeatable and defensible conclusions where decisions based on these may be contested
- adopt as a means of quality assurance for reviews you undertake (e.g. as a consultant to environmental managers)
- focus a literature review on very specific questions of interest with output capable of being published as a succinct review paper.

### *An International Affair*

Researchers working on Eco Evidence are part of a growing international community of practice concerned with evidence based practice in environmental and ecological sciences. The Eco Evidence Database has been designed in a manner that ensures that, in the next few years, it will be able to link with other similar databases around the world.

More information can be found on the [eWater website](#)

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