ECOKNOWLEDGE'S MODELS AND DECISION-SUPPORT TOOLS AID DECISION-MAKERS WORKING IN NATURAL RESOURCE MANAGEMENT.

PROVIDING OBJECTIVITY

Decisions about natural resource management are often confounded by uncertainty, differing values held by stakeholders and conflicting objectives. A decision support system (DSS) can help remove much of this subjectiveness by exploring the uncertainties and risks associated with alternative management strategies.

A DSS provides a framework in which program managers can undertake a more formal assessment of the costs and benefits of undertaking different actions, using all available data. It can also aid management by integrating complex models, expert knowledge, and monitoring data into a transparent and user-friendly medium. The DSS process facilitates better communication between stakeholders and the likely responses they need to make with regard to different management strategies.

INFORMED MANAGEMENT

Meeting the challenges of ecosystem conservation requires a comprehensive approach. EcoKnowledge can provide this by developing an initial understanding of a system through the design of conceptual models. This initial step can provide a basis for investigating the factors affecting the ecosystem and guide the development of appropriate monitoring and data collection methods.

Once collected, data can be used to develop more complex mathematical models and a DSS framework. This suite of information then guides management objectives.

SPECIALTY SERVICES

EcoKnowledge specialises in:
- optimisation of feral animal control programs
- informing how and when to monitor threatened species
- finding optimal solutions to habitat restoration problems
- Bayesian belief networks
- hosting workshops for eliciting expert opinions.

DEMONSTRATED EXPERTISE

EcoKnowledge has developed:
- a pilot DSS for the South Australian Government to analyse ecological consequence assessment data for Lake Alexandrina and Lake Albert
- the feral camel management DSS for the Australian Feral Camel Management Project
- the restoration planning tool Optimal Restoration of Altered Habitats (OPRAH).

OUR SERVICE NODES

EcoKnowledge's decision support systems are supported by our other service nodes: conservation planning and management; conceptual, spatial and ecological modelling; aerial and biological surveying; and bio information technologies.