

Actions for Biodiversity Conservation (ABC) is a web-based tool developed and implemented by the Biodiversity and Ecosystem Services section of the Department of Sustainability and Environment (DSE). It facilitates the management of actions documented in Action Statements prepared under the Flora and Fauna Guarantee Act 1988 and Recovery Plans prepared under the Environment Protection and Biodiversity Conservation Act 1988. This includes recording and reporting on location and action priorities and results as well as, threats for all significant species and communities in Victoria.

The ABC tool provides a central resource for threatened species and communities monitoring and outcomes. An outcome is the observed trends in species populations or community occurrence over time. By bringing together information from a range of sources it will make significant improvements in knowledge and its transfer. The recording of monitoring information enables the development of prioritised list of actions to be made on an increasingly sound basis by land and water managers. Reporting on outcomes provides a basis for applying adaptive management, whereby the effectiveness of management can be improved based on the current and previous outcomes for a population. Ultimately, it will allow greater utilisation and sharing of conservation management information for threatened species and communities in Victoria and an assessment of the risk of decline for each population.

The recent phase of development includes a component allowing the users to develop specialised Bayesian Networks (BNs) modelling the factors affecting the health of species and communities. These factors consist of the threats to these species alongside the environmental factors that support them. The models also include possible actions, allowing us to compare the consequences of different choices, particularly against the effects of the real choices made.

The BN component utilised in this project was constructed using NeticaJ java API. In addition to providing a tool for the management of BNs, the component also facilitates elicitation and scenario exploration/recording.

The elicitation component guides the user through the construction of a BN based on a template structure and assists in the elicitation of probabilities by use of verbal cues. The eliciting the probability values, is recognised as a difficult task. This difficulty is alleviated by presenting the user with scenario descriptions and providing a selection of common chance statements, such as unlikely, certain, almost impossible and very likely. In this way actual probability values are not required or shown to the expert.

The scenario exploration/recorder provides a clear summary of the im-

pact of various actions in each scenario. Tailor designed for the template BN structure used in the elicitor, it improves upon the Netica interface by providing an enhanced functionality for the entering of likelihood evidence.

The BN component of ABC is still in development. It has been trailed, with very positive feedback, in 5 elicitation workshops around the state, generating 100 BNs of threatened species and communities.