

1. Abstract Title: A decision support tool for coastal managers: the Coastal Lake Assessment and Management Tool (CLAM)
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Abstract (300 WORDS MAXIMUM)

With increasing and often conflicting management pressures on the catchments and estuaries of Australia's east coast, coastal managers are required to consider the integrated nature of the system and the implications of their management decisions. The Coastal Lake Assessment and Management tool (CLAM) was developed as a decision-support system (DSS), to assist managers and stakeholders to assess the environmental, economic and social trade-offs associated with the various development, remediation and use options for a coastal lake or estuary.

The CLAM approach and model code was developed by researchers at the Australian National University (ANU). It applies a Bayesian network approach to integrating the impacts throughout the estuary system. Data can be quantitative or qualitative – from empirical observations and model simulation, to expert knowledge. The data source and assumptions are thoroughly documented for each variable and accessible in the end-user interface. Any uncertainty is implicitly recognised in CLAM results through conditional probabilities.

CLAM allows decision-makers to draw on the best available science, or in its absence, expert knowledge, to inform them of system processes. They can then determine whether the CLAM data and result is of sufficient quality and certainty to support their decision making. Foremost, CLAM is an integrative and educative tool that can help identify and prioritise knowledge gaps, focusing the direction of future research. To remain current as our understanding of coastal processes improves, the CLAM tool has been constructed so that it may be easily updated as new information becomes available,

With 27 CLAMs now developed for the NSW coast, the CLAM approach has emerged as a DSS recognised by coastal managers. To build regional capacity to maintain these CLAMs and develop new tools, ANU has established an accreditation scheme whereby consultants can train in the CLAM approach, and a secure website for ANU technical support (www.clam.net.au).