

# **DECISION NETWORKS**

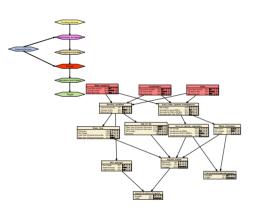
# **PROJECT 6**



# **WHAT**

Project 6 will assist the Regional NRM bodies in integrating both prior and new knowledge in a way that will better inform their NRM activities. This includes:

- Identifying and documenting assumptions used in decision making processes,
- Targeting research and development, monitoring and evaluation activities to reduce and refine these assumptions,
- Defining and redefining realistic resource condition targets, and
- Identifying cost effective activities for achieving targets that can be incorporated into regional project planning.



## **HOW**

- •The Regional NRM bodies are being trained in how to conceptualise their systems using their regional knowledge base, including identifying management assumptions and knowledge gaps.
- •Conceptual models are being developed into Bayesian Networks (BN) that will help in assessing management assumptions and knowledge gaps qualitatively and quantitatively.
- •Generic BNs are being developed in collaboration with the Regional NRM bodies and Landscape Logic research partners to assist in the management of key issues as identified by the Regional NRM bodies (water quality and quantity and native vegetation condition).
- •Methods for exploring the sensitivities and limitations of the BN technique for decision making are being investigated.

# Integration Economics Uncertainty Pedology Vegetation Ecology iCAM ANU Expertise Hydrology Sensitivity Water quality Decision support Modelling

## WHO

Integrated Catchment Assessment and Management (iCAM) Centre, The Fenner School of Environment and Society, The Australian National University

Project management: Prof Tony Jakeman Science coordination: Dr Rebecca Letcher

Training the Regional NRM bodies: Dr's Carmel Pollino, Jenifer Ticehurst, Matthew Tighe

Development of generic BNs: Dr Carmel Pollino, Dr Jenifer Ticehurst

Sensitivity analysis & extending capabilities of BNs: Prof John Norton, Dr Matthew Tighe Water quality and land use change: Dr Lachlan Newham

### Students

Socio-economic impacts and costs of NRM: Marit Kragt Water quality impacts upon freshwater ecology: Serena Chen Native vegetation condition: Sunail Hasnain





# BRINGING IT ALL TOGETHER

Project 6 seeks input from the other Landscape Logic projects in the following areas in order to build and populate BNs that will inform regional management. This includes:

- Existing and prior spatial information on regional social, economic and biological status,
- · Regional social profiles,
- Policy, market and motivation mechanisms for NRM change,
- Regionally initiated and other past management actions that have instigated change in water quality, quantity, river health or native vegetation condition, and
- Validation of the cause and effect assumptions in nutrient fluxes.