

Landscape Science Cluster

Update: March 2008

Integrated Landscape Science and Management Forum: A Showcase of National Initiatives and Products

The forum on 13 March was an informative and lively exchange. It was well attended by people from state agencies, universities, regional NRM Boards, commodity groups and a couple of consultants. The interstate speakers provided us with a comprehensive overview of their experiences with Landscape Science type research and application activities. See the program at www.icewarm.com.au/userfiles/File/ILS_FORUM.pdf.

Here is a summary of the day:

The scene was set by Wayne Meyer who provided the SA context of NRM. The need for some new approaches is highlighted by the statement that “despite good NRM legislation and institutional arrangements, the general condition of resources continues to decline”. One response in SA has been the formation of the Landscape Science Cluster that has started to bring together the network of interested researchers and stakeholders. The core group of the Cluster has focused on the need for an Integrated Landscape Science capability to help regions move out of a repetitive planning cycle and into a more informed option assessment and implementation phase. The purpose of the Forum was to find out what others around Australia had learned about similar processes.

Landscape Logic is a CERF funded program operating in regions in Victoria and Tasmania. This is a partnership between 6 regional organisations and 7 research institutions and State Land management agencies. The aim is to improve the process of making decisions about investment in environmental management. They have organised themselves around 3 themes: Knowledge Discovery, Knowledge Integration and Knowledge Broking. A central methodology is to identify the reasons for previous decisions in relation to land use practice and identify the consequences in an attempt to understand what the consequences of decisions and processes are in order to inform pending decisions.

Another CERF funded program, Applied Environmental Decision Analysis (AEDA) Research Hub operates across research institutions in Vic., NSW and Qld. This group is developing and refining methodologies to assist with selection of conservation areas as well as efficient and cost effective monitoring programs. They do not have specific connections to regional CMA or NRM groups apart from specific project involving regions.

The Fenner School of Environment and Society which is part of the ANU College of Science has recently (Feb. 2007) revamped its connections to build on the Centre for Resource and Environmental Studies (CRES) and the School of Resources, Environment and Society (SRES). As their promotional material indicates “The Fenner School is unique in Australia. There are very few places in the world where economists and hydrologists, historians and ecologists, anthropologists and climatologists work together towards common objectives.” Forming and managing such a diverse group is challenging but it is leading to interactions and insights that would otherwise not have happened. This is a substantial “integrated system” effort which demonstrates the feasibility and sense of what has been thought about in the SA context. The School has considerable “mass” within the University and while it has many projects associated with NRM in Australia and overseas it does not specifically identify with the regional NRM network in Australia.

The Salinity Investment Framework (SIF3) described by David Pannell from UWA has come as the result of significant experience with designing dryland salinity mitigation projects that make a difference. While the final steps involved in this decision aid seem simple and straight forward they have come from a considerable body of knowledge which has understood the complexity of the bio-physical, social and economic settings. An example of the breadth of information necessary to describe the bio-physical, social and economic dimensions of a region was shown by Brett Bryan from CSIRO with the Lower Murray Landscape Futures project. The power of this approach to identify very significant alternative management options and their consequences on what a regional landscape might look like and how well it functions in the future is impressive. A challenge for this approach is to develop summary and simplified methods and messages to help decision makers and communities make use of its insights.

Two other projects, one dealing with forestry configurations in different landscapes and the other with integrated catchment assessment and management, again showed the importance of bringing the bio-physical, social and economic representations together. While improvements in on-ground measurement and monitoring are needed there is also need to improve the understanding and appreciation of data and modelling systems that represent the completeness and complexity of these landscape systems. Only with good robust information and analysis is it likely that simplifications that assist communication and uptake be made with confidence. This is the message that came through from Dave Pannell’s presentation and was followed during the workshop on the following day, Friday the 14th.

Integrated Landscape Science and Management Workshop

A workshop involving three of the previous day's speakers together with a very engaged local audience was facilitated by Dr Paul Dalby. The aim of the workshop was to "explore what science and organisation are required to create a credible case for a Centre for Integrated Landscape Science".

The framework that Dave Pannell had worked on for the successful development and implementation of the regional investment for salinity mitigation (SIF3) was used as a template for discussion. The five components of the framework are:

1. Define the task/problem
2. Understand the complexity
3. Simplify the messages (rules of thumb), trial and testing
4. Build trust around the process, quality assurance, capacity building
5. Helpdesk

The group used this framework to identify where the group was up to in terms of its development and also to identify which organisations and people are interested in which components.

It was agreed that further development of the business plan for an integrated landscape capability should use the framework as a guiding structure and that we should focus on developing some significant and credible projects to start work on and demonstrate what we are trying to achieve with integrated landscape science and its application.

Possible projects outlined were:

- Landscape futures analysis for Eyre Peninsula NRM region
- SA sustainability market underpinning science and prioritisation methods
- Naturelinks connections in Northern and York Peninsula NRM region
- River Murray Forest multiple benefit analysis
- Mediterranean region comparison within the European Union.

The next steps identified were:

- Develop flagship projects with brainstorming including stakeholders with a view of identifying project champions and developing background papers
- Identify and develop national linkages through contacts made at the forum and explore potential organisation (CERF centres) and project linkages.
- Explore possible website development perhaps through Land and Water Australia
- Continue to identify national conference and workshop opportunities that explore integrated landscape science
- Look for funding support for postgraduates perhaps in association with existing CERF Centres.

A meeting of the Core Group Executive would be organised before the end of March which would decide on next actions.

What's happening now?

The Core Group Executive met on 27th March.

The Group focussed on further developing the possible project areas and indicated who would be the key contacts for the different areas

- Wayne Meyer – Eyre Peninsula landscape futures
- Chris Raymond – NYP NRM and Naturelinks connection
- Andrew Lowe – River Murray Forest multifunctionality analysis
- Andrew Fisher – building the research and extension linkage associated with landscape futures implementation
- Brett Bryan – build connection with AEDA, DEH and CSIRO on RMF project
- Paul Dalby – organise notes on Habitat Restoration workshop and initiate planning for a combined Integrated Landscape Science and Habitat Restoration workshop in July or August this year.

If you have questions about any of these possible project areas please contact the person named.

For those interested in the network of the Landscape Science Cluster two things worth noting are

- A presentation about the Cluster and its intentions will be made to the NRM Research Alliance towards the end of May
- A combined workshop on activities and project developments will be held in July or August – please stay connected for further updates on date and location.

We look forward to interacting with you as we develop Integrated Landscape Science in SA

Wayne Meyer (UA), Andy Lowe (DEH & UA) Brett Bryan (CSIRO)
Chris Raymond (DWLBC), Andrew Fisher (DWLBC), Paul Dalby and Amber Welk (ICEWaRM)