

GB CMA 'Knowledge Inventory':

State, National or International projects that GB CMA is involved with

Updated 4 December 2009

	Project	GB CMA primary contact	Information updated
	Cross-investment area projects		
1	Landscape Logic is a research hub under the Commonwealth Environmental Research Facilities scheme, managed by the Department of Environment, Water, Heritage and the Arts. It is a partnership between six regional organisations, five research institutions and state land management agencies in Tasmania and Victoria. The aim of Landscape Logic is to improve the way decisions are made about land use and the resulting effects on water and vegetation. Further information: www.landscapelogic.org.au . Landscape Logic will conclude in June 2010. Projects within Landscape Logic that GB CMA is heavily involved with include:	Bill O'Kane	15 Oct 2009
1a	The Victorian and Tasmanian Retrospective studies (Projects 3 and 4) is testing the effectiveness of past environmental management programs using the information from the Spatial and Social projects. The emphasis in Victoria is on the effectiveness of past programs directed at native vegetation condition, while in Tasmania it is on the effects of land use and land management on water yield, river condition and estuarine health. The retrospective projects are led by Dr Bill Cotching (TIAR/CSIRO) in Tasmania and Adam Hood (DSE Victoria).	Vanessa Keogh (native vegetation) Wayne Tennant (water)	15 Oct 2009
1b	Decision Networks (Project 6) – objectives are <ul style="list-style-type: none"> to develop the capacity of regional NRM bodies to build and use decision networks. So that the decision networks are relevant and useful to the end-users, partner NRM and CMA organisations will be involved in their construction, and will be trained in how to build and alter decision networks. to undertake complementary research to incorporate a wide range of behaviours into the decision networks (for example, time series responses, feedback, uncertainty and spatial scales), and reduce unnecessary complexity in the decision networks. 	Vanessa Keogh	15 Oct 2009
2	Resilience thinking – GB CMA has a close relationship with the multi-national Resilience Alliance (www.resalliance.org). GB CMA has been represented at an international conference and a major paper on resilience related to the GB CMA region is being prepared by eminent scientists. GB CMA participated in a multi-sector Radio National Program on 18 Aug 2008 and a GB regional workshop is was conducted in November 2008. GB CMA's involvement in resilience thinking evolved out of its close relationship with CSIRO on 'sustainability' and 'ecosystem services' thinking.	Bill O'Kane	15 Oct 2009
3	The Farms Rivers and Markets Project has been developed by Uniwater (a joint initiative of the University of Melbourne and Monash University). The project will use the University of Melbourne Dookie Campus and the surrounding Broken River in the Goulburn Valley, to develop new methods to efficiently manage surface and groundwater resources for both agriculture and the environment. In direct response to the National Water Initiative, the Project's inter-disciplinary program will create opportunities to 'do more with less water', using new technology and knowledge that will enable operational innovations to improve level of service, reduce losses and boost efficiency. The project will take a whole-of-system approach, recognising that the management of farms, rivers and water markets must be integrated in order to achieve the best possible outcomes. It will encompass three components: <ul style="list-style-type: none"> Farms - which use rain water and irrigation water as part of the production system. Rivers and groundwater - which need to be managed together to meet environmental and production needs. Markets - which require greater sharing of information to promote choice, innovation and efficiency. 	Wayne Tennant	15 Oct 2009
	River health projects		
4	Streamlining River Health involves a range of sub-projects to streamline the development of river health projects, develop targets, forecasting, monitor progress and reporting mechanisms. Current projects include: development of a project brief, with Melbourne and Monash universities for an adaptive management project (including before and after monitoring, forecasting, monitoring design).	Wayne Tennant, Simon Casanella, Vanessa Keogh	15 Oct 2008
5	Victorian (DSE) Scientific Advisory Panel – has been established to develop frameworks and knowledge pathways to increase knowledge and look at future directions in river health. Current focus of work focus on evaluation and monitoring. Key themes include; ISC remote sensing; VEFMAP; Review of RRHS, Streamlining River Health and FLOWS revision.	Wayne Tennant	19 Jun 2008
6	Riparian Rehabilitation Experiment – is evaluating effectiveness of habitat reconstruction for stream rehabilitation or rehabilitation. The project involves setting up a dedicated experiment that is designed to run for at least ten years. The initial experimental design was based on an MBACRI model (Multiple Before After Control Reference and Impact (Downes et al., 2002)). This design meets the so-called 'gold medal' level of evaluation (Rutherford, Ladson and Stewardson, 2004), including replicated sampling, replicated control and reference locations, and sampling before and after rehabilitation. http://www.mdbc.gov.au/subs/rip-res-ex/publications/CatchwordArticle2005.pdf http://www.mdbc.gov.au/subs/rip-res-ex/RRE.html	Wayne Tennant	15 Oct 2008
7	MDBC Pest Fish Plan Taskforce - to be determined.	Wayne Tennant	15 Oct 2008
8	eWater CRC - Project P6 aims to develop decision systems will help catchment management organisations to prioritise their natural resource management activities by quantifying the ecological benefits of alternative strategies, and will provide specific guidance on how to implement those solutions at a reach scale. <i>Key outputs</i> The Catchment Planning Tool is designed to allow the prioritisation of natural resource management	Wayne Tennant	15 Oct 2008

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<p>activities on a whole of catchment basis. The Asset Prioritisation Tool will allow the identification of high value ecological assets at a catchment or broader scale. The Restoration Prioritisation Tool will allow stream managers to design reach-specific restoration solutions. http://www.ewatercrc.com.au/</p>		
<p>9 MDBC Native Fish Strategy Community Stakeholder Taskforce is one of three groups to assist the Commission with the development and Implementation of the Native Fish Strategy (NFS). Roles include: coordinate information and education activities; promote the preparation of material to inform the community on native fish management issues; and provide input from and develop links with catchment groups, special interest groups and educational institutions.</p>	Wayne Tennant	15 Oct 2008
<p>10 eWater P6 and RiVERS(II) project Steering Committee - project has been initiated to align the review of RiVERS (a tool for prioritising River Health Initiatives) and the development of a Catchment Planning Tool (CPT) - an eWater project. This work will be undertaken in preparation of a review (midterm) of the Regional River Health Strategies. Committee to oversee the completion of the RiVERS(II) conceptual framework: environmental/social and economic attributes, metrics and measures (for rivers, wetlands and estuaries); threats and impact measures and risk assessment process.</p>	Wayne Tennant	15 Oct 2008
<p>11 MDFRC Community Advisory Committee (CAC) http://www.mdrc.org.au/</p>	Wayne Tennant	15 Oct 2008
<p>12 Goulburn Broken Regional Sustainability Project led by Monash University through the Biodiversity and Ecosystem Processes and Water (UniWater) themes of the Monash Sustainability Institute, aims to address the question of planning for the sustainable management of the Goulburn-Broken region.</p>	Wayne Tennant	15 Oct 2008
<p>13 Bayesian Modelling – Index of Stream Condition includes the development of a Bayesian decision-support tool for mapping assumptions between river management actions and environmental outcomes’.</p>	Wayne Tennant, Simon Casanelia	15 Oct 2008
<p>14 (LWA Project UMO49) Delivering Sustainability through Risk Management (Steering Committee) - This Land & Water Australia funded project aims to develop and test Bayesian decision network (BDN) models that will assist decision-makers in making environmental flow allocations for Australian rivers and wetlands, taking into consideration both environmental and regulatory factors. The project will run for two-years from February 2007 to January 2009.</p>	Wayne Tennant	15 Oct 2008
<p>15 Trialling the Application of HCVAE To Victorian Rivers (Steering Committee) - The key objective of this project is trial how the draft “High Conservation Value Aquatic Ecosystems” HCVAE criteria can be applied to existing Victorian river health databases to determine river reaches of high conservation value. http://www.environment.gov.au/water/publications/environmental/ecosystems/hcvae.html</p>	Wayne Tennant	15 Oct 2008
<p>16 E2 modelling – participant within the G-MW application project (water quality / catchment landuse scenarios). E2 is a software product for whole-of-catchment modelling. It is designed to allow modellers and researchers to construct models by selecting and linking component models from a range of available choices. E2 enables a flexible modelling approach, allowing the attributes and detail of the model to vary in accordance with modelling objectives http://www.toolkit.net.au/cgi-bin/WebObjects/toolkit.woa/2/wa/productDetails?productID=1000036&wosid=2EUBqIWpELN98hNBKT3mq</p>	Wayne Tennant	15 Oct 2008
Biodiversity projects		
<p>17 Natural Regeneration research – The GBCMA has been working in partnership with The University of Melbourne and Arthur Rylah Institute over the last 3 years to better understand the factors influencing successful regeneration of native vegetation. This has included monitoring and experiments at participating properties of the Bush Returns program. A paper on Bush Returns was presented at a national biodiversity conference in Launceston in June 2007. The paper “Testing market-based instruments for conservation in northern Victoria” can be found in a CSIRO publication, “Biodiversity: integrating conservation and production, case studies from Australian Farms, Forests and Fisheries” http://www.publish.csiro.au/pid/5915.htm</p>	Carla Miles	7 Aug 2008
<p>18 The Carbon Project: carbon, biodiversity and water consequences of carbon farming for a whole of catchment. 5-year research project to predict the effect of reforestation on the Goulburn Broken catchment in terms of water use, carbon storage and biodiversity value. The project will build on the Environmental Systems Modelling Platform (EnSym) developed by DSE and produce a detailed land use map, revealing knowledge gaps to be addressed in the project by field surveys. Models will help to explore 1) how government incentives might be used to influence uptake of biodiversity carbon farming 2) how the interaction of future climates will affect the productivity of carbon farming and 3) how the interaction of future climates and pricing scenarios drive establishment of carbon farming across the catchment. Further info: Dr Shaun Cunningham shaun.cunningham@sci.monash.edu.au</p>	Tim Barlow Wayne Tennant	9 th Sept 2009
Climate change projects		
<p>19 Information and communication on vulnerability of NRM regions to climate change, in forms and scales relevant to natural resource managers was a project identified by the National Natural Resource Management Ministerial Council and implemented by the National Climate Change in Agriculture and Natural Resources working group (CLAN). The GB CMA is one of 13 trial regions involved in the project, the purpose of the project is to disseminate regionally relevant information and raise awareness on the vulnerability of NRM regions to climate change and assist building climate change into NRM planning and programs, it also aims to identify the capacity building of NRM regions to adapt to climate change on an on-going basis.</p>	Kate Brunt	15 Jul 2008
Miscellaneous projects		
<p>20 Landcare in the Goulburn Broken Catchment received funding from the National Landcare Program to assist the introduction and spread of beneficial dung beetles. This project built on several smaller dung beetle projects conducted by Landcare over previous years and concluded in 2009. There are</p>	Tony Kubeil	15 Oct 2009

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two species of introduced dung beetles that are widespread in the Goulburn Broken Catchment and both are summer active. The aim is to introduce many more types of dung beetles to our catchment (to spread dung beetle activity across all seasons), for the benefit of soil health, animal health and water quality.		
21 Pasture cropping: the Gecko CLaN has been trialling the use of pasture cropping principles as a method of increasing ground cover, improving soil health, soil organic carbon and water retention and providing more feed on the ground for more of the year. The project commenced as a result of overwhelming farmer interest and is working with groups in New South Wales and Victoria.	Tony Kubeil	15 Oct 2009
22 The Rural Extension Program is a local community-scale approach to regulation developed over the last few years to address weeds through extension partnerships between community groups and agencies.	Tony Kubeil	15 Oct 2009