



# The Blue Mountains World Heritage Institute

## Catalogue of Projects

\* note list of abbreviations at end of document

Year	Program	Project Title	Funding	Partners / Researchers	Overview
2004-2007	Sustainable Development	Development Alternatives for Lawson	\$37,000 – Blue Mountains City Council (BMCC)  \$50,000 Integral Energy a	John Merson, Michael Kachka (energy), Sandy Booth (water), Cheryle Yin-Lo (community engagement)	The project explored more sustainable options for industry and businesses in the town of Lawson. In partnership with Blue Mountains City Council, we developed an integrated water plan to pursue environmental restoration, protection and enhancement in urban areas and downstream World Heritage Areas. With funding from Integral Energy we conducted energy audits and distributed compact fluorescent light bulbs throughout the township, with the aim of achieving lower energy usage.
2004-2008	Sustainable Development	Sustainable Small-Scale Agri-Industries Neighbouring the Greater Blue Mountains World Heritage Area	\$260,000 Rural Industries Research & Development Council (RIRDC)	Peter Ampt (FATE program at UNSW), Rob Mulley (UWS), Roger Attwater, Howard Wildman, Shaun Hooper, John Merson and Sandy Booth	The project identified the agri-industries located in the Hawkesbury Nepean region and documented their economic, social and environmental impacts, with the over-riding aim being to facilitate the long-term sustainability of agri-industries along the north-eastern boundary of the Greater Blue Mountains World Heritage Area (GBMWhA) in a way which complements and enhances the values of the neighbouring protected conservation area and Sydney catchment. Work also involved practical on-the-ground trials of three integrated technology systems to assist future sustainability. Key findings included the identification and testing of methodological tools found to be relevant to producers with a range of different production and marketing strategies. These tools included Landscape Function Analysis (LFA), which provided a quantitative means for assessing the ecosystem services generated onsite by different forms of horticultural production, and has the potential to link specific production systems to implications at a regional landscape scale. Innovation with fungal products is another tool with potential to utilise on-farm organic wastes, contributing to saleable products, with residues that potentially reduce a common orchard disease. LFA and organic waste conversion, applied in conjunction with GIS analysis, provide a complementary set of tools that operate at different spatial and temporal scales. These types of initiatives contribute to the resilience of the local production systems, reinforcing opportunities for diversity and sustainability.

2004-ongoing	Natural and Cultural Heritage	The Landscape of Blue Mountains Rock Art	\$14,400 Wollemi Pine International	Paul S.C. Tacon, Wayne Brennan, Graham King, Matthew Kelleher	The project is focused on documenting the Aboriginal rock art sites (drawings, stencils, paintings and engravings) of Wollemi National Park and describing cultural change in the region over the past few thousand years. The project involves extensive ongoing Indigenous community consultation and participation. In addition to their cultural significance for Aboriginal communities, as well as their scientific significance, the results are of great value to park and World Heritage Area managers and interpretation officers, tourists and others with an interest in Aboriginal culture, rock-art and the World Heritage Area. This research is ongoing.
2005-2006	Community Engagement	Nature Through Fresh Eyes	No direct funding to BMWHI	Multicultural Residents Association (MRA), Mountains Community Resource Network (MCRN) and Cheryle Yin-Lo (Community Cultural Development worker, BMWHI)	The project provided an opportunity for multicultural residents in the Blue Mountains to participate in guided bushwalks with Aboriginal interpretive guides and explore their artistic response to the natural environment and discover what the World Heritage Area means to them.
2005-2006	Natural and Cultural Heritage	Mapping Country (pilot study): Indigenous Cultural Mapping within the Greater Blue Mountains World Heritage Area	\$332,000 comprising: \$100,000 HNCMA (funds from NHT), \$75,000 NSW NPWS and \$157,000 BMCC	Shaun Hooper, John Merson, Teekee Marloo, Wayne Brennan, Elly Chatfield, Jo Rogers, Edward Smith and Nicola Hooper in partnership with DECC, BMCC, Darug Tribal Council, Darug Custodian and Gundungurra Tribal Council	The project documented and mapped the Indigenous cultural heritage values of the Blue Mountains region of the GBMWHA. Led by a local Aboriginal community member, we aimed to increase awareness of Aboriginal cultural and natural values in the World Heritage Area. The information collected through this project supported the Aboriginal co-management policy for the GBMWHA, as well as decision-making for the World Heritage Area and the surrounding Local Government Area.
2004-ongoing	Community Engagement	Integrating Community Cultural Development (CCD) principles into the programming of BMWHI	Australia Council for the Arts \$75,000 NSW Ministry for the Arts \$30,000 University of Western Sydney PhD scholarship \$30,000/yr (2007-10)	Cheryle Yin-Lo, community cultural development (CCD) worker, BMWHI	Community Cultural Development (CCD) is based on use of the arts for creative expression of community values. The arts can encourage new ways of thinking about environmental problems, and create a 'space' for negotiation over complex and contentious environmental issues. A CCD position based at BMWHI and filled by Cheryle Yin-Lo, was for the 1 <sup>st</sup> years funded by the Aust Council then the Min for the Arts. From 2007-2010 Cheryle's work is funded through a UWS Scholarship from the Centre of Cultural Research to undertake a workplace-based Doctorate of Cultural Research at BMWHI.

2006-2007	Sustainable Development	Mid Mountains Community Collaborative Government Framework	\$18,800 Blue Mountains City Council (BMCC)	Sandy Booth, Cheryle Yin-Lo and Lauren Terry (BMCC)	The project developed a Community-Government Collaborative Framework for the Mid Mountains, involving all interested people and parties in workshops during February and March 2007. The workshops identified new ways in which mid-Mountains communities and the BMCC can communicate and work more effectively together for mutual benefit on important issues and matters of community interest and concern. The framework consisted of practical directions and activities for the mid Mountains and Lawson, consistent with the 25 Year Vision for the Blue Mountains. It also included ways to enable: more effective and regular two-way communication; more consistent approaches to providing and exchanging information and views; improved and more coordinated, integrated planning and decision-making; improved co-operation and collaboration generally; and a strengthening of respect and trust.
2006-2007	Natural and Cultural Heritage	Assessment of the Indigenous Heritage Values of the GBMWhA	\$10,000 Federal Dept of Env & Water (DEW) - Indigenous Heritage Assessment Section	Joan Domicelj, Shaun Hooper, John Merson and Paul Tacon	The project researchers undertook a desktop study to identify all significant documents relevant to the Indigenous heritage values of the GBMWhA. This project involved examining the quantitative data to find an aggregate of the number of sites on the AHIMS database (NSW Department of Environment and Conservation), and additional sites that are not yet on this database. For the most important contemporary site, Eagles Reach, in Wiradjuri country, Graham King provided an assessment of its cultural significance, and Prof Paul Taçon, one of the world's leading authorities on rock art and who has worked on the Eagles Reach site, to provide an evaluation of its national significance; an historical time line of Indigenous traditions, with accounts of traditional and contemporary ceremonies that continue to be practised in the region by the Aboriginal communities.
2007	Sustainable Development	Horticultural Waste Reduction and Conversion through Microbial Bioremediation	\$15,000 Horticulture Australia Ltd (HAL)	Howard Wildman and Roger Attwater	The project involved the testing of an organic waste conversion tool as detailed in the sustainable agri-industries project (see above).
2007	Natural and Cultural Heritage	Cultural Heritage Assessment of the Six Foot Track between Katoomba and Jenolan Caves	\$10,000 NSW Department of Lands	Shaun Hooper and Teekee Marloo	The project was a survey of Indigenous heritage sites along the Six Foot Track, produced as a GIS map layer.
2007-2008	Community Engagement	Marra Mob	\$10,000 Arts NSW	Cheryle Yin-Lo	The project assisted a group of Aboriginal artists to develop a business plan for increased artistic and cultural tourism opportunities.
2007-2008	Community Engagement	Aboriginal World Heritage Education Package (sub-project of co-	\$17,500 Natural Heritage Trust	Bronwen Maxwell (BMWHL), Teekee Marloo, Chris Tobin, teachers and practitioners from the	This project assessed the resource materials needed to support local Aboriginal Education in primary schools. The research identified resources currently available or that require further development.

		management projects below)		local community and Aboriginal reference group	
2007-2008	Natural and Cultural Heritage	Indigenous Co-Management Projects	\$100,000 Natural Heritage Trust	Jacqueline Reid, Den Barber (NPWS), Bronwen Maxwell, Chris Tobin and Teekee Marloo	This project had five sections which were jointly developed by BMWHI and the DECC World Heritage Unit of NSW National Parks and Wildlife Service. (a) GBMWhA Aboriginal Community Engagement Forums (b) Development and implementation of a GBMWhA Aboriginal Cultural Heritage Landscapes Management Strategy (c) Development and implementation of the GBMWhA Indigenous Tourism Guidelines (d) Extending the Mapping Country project (above) (e) GBMWhA Indigenous Education project (above).
2007-2010 3 yrs	Natural and Cultural Heritage	Managing Ecosystem Change in the (GBMWhA)	\$450,000 Australian Research Council Linkage grant Partner contributions: \$75,000 National Parks Division of DECC \$45,000 BMCC \$33,000 UWS \$30,000 Policy & Science Division of DECC In-kind partners: NSW Dept Primary Industry Hawkesbury Nepean CMA Total project value: \$1,400,000 (including in-kind)	Chief Investigators: Richard Kingsford, David Warton, Shawn Laffan and John Merson (UNSW), Rob Mulley (UWS), Rosalie Chapple (BMWHI), Tony Auld (DECC), Ross Bradstock (UOW), Daniel Ramp (UNSW) Post-grad students incl: Fiona Thomson (PhD UNSW), Jack Pascoe (PhD UWS)	This research is identifying the conservation importance and spatial impacts of drivers of change (frequent fires, climate change and invasive species) on biodiversity in the Greater Blue Mountains World Heritage Area. The project aims to assess the impact of drivers of change on biodiversity and ecosystem condition in the GBMWhA, with the following principal aims: 1. To quantify the past, present, and future effects of anthropogenically-related drivers of change on biodiversity and ecosystem processes at different spatial scales within the GBMWhA; 2. To quantify the effectiveness of the current protected area in representing and conserving regional biodiversity, identifying areas of relative importance (hotspots) for biodiversity; 3. To identify and document the sensitivity of bioindicators to drivers of change within the GBMWhA; 4. To develop a strategic monitoring programme for the conservation of biodiversity and ecosystem condition in the GBMWhA based on the spatial distribution of bioindicators and pressures from anthropogenic drivers of change, satisfying World Heritage classification requirements; 5. To develop an adaptive environmental management framework that delivers conservation policy and management outcomes to government and community.
2007-Ongoing	Sustainable Development	Native Agri-Forestry and Bio-Energy Project for the Western Edge of the GBMWhA	\$40,000 FATE program, UNSW; Submitted a preliminary proposal to RIRDC Biofuels and Bioproducts Program for a feasibility and development study over the next two years. RIRDC submitted this project for funding under the new Climate Change	Partners: Central Tablelands Councils (Oberon, Lithgow and Mudgee) Catchment Management Authorities (Hawkesbury Nepean, Central West and Lachlan).  Researchers: Peter Ampt and Alex	This project will complete the preparatory work required to establish an economically viable native farm forestry industry in the target area of the Central Tableland Councils (Oberon, Lithgow and Mudgee). Using an expert team, a local working group and consultants, the project will develop a land-use plan and a framework for participation of individual landholders that can generate investment in strategic revegetation that sequesters carbon, increases biodiversity, improves riparian zones, delivers improved water quality and provides a biomass harvest. The result will be a land-use mosaic that is resilient in the face of climate change, beneficial to local landholders and their community and compatible with values of the World Heritage Area. The project will explore options for the participation of individual landholders to develop

			and Bio-energy allocation of the Dept of Agriculture Forestry & Fisheries (DAFF) in Sept 09 and result is pending	Baumber (FATE Program UNSW), John Mathews (Macq Uni) John Merson (UNSW/BMWHI), Sandy Booth, Joe Landsberg (ex-CSIRO), Peter Rogers (UNSW)	a framework for the full range of environmental services and economic goods, which meet the needs of landholders, investors and buyers of native farm forestry products. The project also aims to identify regional development opportunities that flow from the native farm forestry initiatives such as biomass processing and enterprises that add value to the native forest plantation materials. A major objective of the project will to be to develop a prospectus that will be attractive to landholders, relevant processors, investors, purchasers of forestry products and those who can benefit from the enhanced ecosystem services provided by the improved landscape mosaic, such as increased carbon sequestration, improved water quality and greater biodiversity. Alex Baumber's PhD addresses whether bioenergy is a driver of reforestation or deforestation and aims to develop an environmental policy for emerging bioenergy industries.
2008	Community Engagement	The Streetwise Project	\$15,000 Arts NSW (auspiced grant)	Peter Adams, Alan Lloyd, Cheryle Yin-Lo	This project comprised a word and image portrait of the Blue Mountains by Peter Adams and Alan Lloyd. Peter Adams captured the heart and soul of the Blue Mountains through its people. Working with writer Alan Lloyd, he set out to make a portrait in images and words of a unique community. More than 20,000 images were shot and 80,000 words written, resulting in a remarkable book and photographic exhibition opened by the Governor of NSW, Professor Marie Bashir.
2008	Sustainable Development	The Impact of Climate Change on Australian Tourism Destinations	\$22,000 DRET and Sustainable Tourism CRC via University of Canberra.	J Merson & R Chapple (BMWHI) and UNSW post-graduate students	The project was part of a national project assessing the impacts of climatic change on tourism in World Heritage areas. It involved a desktop assessment and building economic models and scenarios. The 5 case studies included the Wet Tropics, Kakadu, Barossa Valley, Victorian ski-fields and the Blue Mountains. BMWHI provided a review on (a) current knowledge of tourism activities in the BM (statistical data etc) (b) current knowledge of climate change especially relating to biophyscial impacts (c) in light of the above reviews to ask "so what for tourism?" ie, a review of the degree to which the tourism sector is reliant on resources and the current climatic conditions of the region; how environmental resources might affect tourism.
2008-ongoing	Community Engagement	Branching Out - Stories from the Blue Mountains	Arts NSW \$7,000	Cheryle Yin-Lo	The project involves meetings with collaborators to set up digital storytelling training.
2009-Ongoing	Natural and Cultural Heritage	"One Health" - An integrated system for wildlife, plant, livestock and human health surveillance in	In preparation.	BMWHI Taronga Conservation Society Australia Australian Registry of Wildlife Health Botanic Gardens	This project is based on the 'One Health' concept, a worldwide strategy based on the awareness that human health and ecosystem health are inextricably linked. This project focuses on the creation and applied assessment of systems for information management, analysis, and communication that facilitate early disease detection, diagnosis, communication and response. We will overlay complex datasets for

		and around the GBMWhA		Trust, National Parks, Dept Primary Industries, University of Sydney UNSW NSW Health	wildlife, plant, human, livestock health, along with climate models and anthropogenic environmental change, to better understand the factors that lead to disease emergence and spread. The aim of this proposal is to construct and test a web-based One Health information and communication system with the following specific objectives: 1. Determine the extent that disease threatens the World Heritage values in the Greater Blue Mountains 2. Development, application and assessment of web-based information management and analytical tools to describe the dynamics of disease emergence and spread 3. Assessment of plant, wildlife and environmental pathogens as responders to and drivers of change related to other variables such as climate change and variability, invasive pests, fire, water usage, and land usage • i.e. what are the implications of climate change for disease expression (altered vector prevalence and distribution)? 4. Development and application of an adaptive management framework that delivers policy, management and communication outcomes to government and community.
--	--	--------------------------	--	--	---



# The Blue Mountains World Heritage Institute

## Catalogue of Forums and Events

Year	Event	Funding	Partners / Researchers	Overview
2004	1 day Research Planning Workshop	No funding. Held at the Australian Museum.	55 participants representing a range of expertise and organisations concerned with policy and management of the Greater Blue Mountains World Heritage Area (GBMWhA).	The aims of this workshop were to (a) delineate the key policy and management issues relating to the World Heritage Area; (b) establish which of the key issues the Institute should focus on over the next 5 years, and broadly define an integrated research program for addressing them; and (c) initiate an annual interdisciplinary forum for information exchange relating to science, cultures, policy and management in the GBMWhA. The outcome of the workshop was a discussion paper that positioned the Institute in the region, identifying needs for the Institute to address within broad categories of research (ecosystem management, social and governance issues, and development impacts along the edge). In particular, the discussion paper identified key policy and management issues relating to the GBMWhA, and a strategic research strategy for the Institute for the next few years, providing a framework for research projects and other activities.
2005	Climate Change and Fire in the GBMWhA: 1 day Workshop and Forum	No BMWhI funding	DECC, SCA, Rural Fire Service, BMCC, UWS, Australian Museum, USYD, Nature Conservation Council of NSW, World Wide Fund for Nature, BMCS and HNCMA	The workshop was organised by BMWhI and attended by thirty people from a range of organisations concerned with the potential impacts of climate change on the ecosystems of the greater Blue Mountains and in particular, the complexity of fire management. The purpose was to bring together a wide range of stakeholders to share information about current research efforts relating to climate change and fire in the region, and to identify existing gaps in knowledge. Recommendations were sought from the group regarding projects for BMWhI to facilitate or implement.
2005	Bushfire and Conservation Through Engagement	\$5,000	NSW Nature Conservation Council, BMWhI	A survey and workshop regarding bushfire and nature conservation was conducted in collaboration with the NSW Nature Conservation Council.
2006	Rock Art Lives On! Exhibition	\$8,500 BMCC Cultural Partnerships	Blue Mountains Folk Festival, BMCC, Cheryle Yin-Lo	Presented at the Blue Mountains Folk Festival, this exhibition included photographs highlighting the discovery of unique Aboriginal rock art sites and the various rock art forms in the GBMWhA as well as contemporary responses by local Indigenous artists.

2006	"Sustaining Our Social and Natural Capital" ANZSYS Conference	No funding	Co-hosts: BMWHI; ALARPM; SOLA; ISCE Events, Mansfield, USA	This conference sought to celebrate the initiatives we are involved in, while critically considering how we can learn from others' experiences to enhance our own practice. Plenary sessions and follow-on workshops were organised around the following thematic clusters: Resilience, ecology and governance; Cultural knowledge and heritage; Creativity, organisation and complexity; Systems thinking and dynamics; Social sustainability and community; Livelihood, innovation and opportunity; Language, learning and transdisciplinary practice; Engineering systems and infrastructure design.
2006	"Finding common ground": A day of dialogue about wilderness areas in the Greater Blue Mountains	No funding	Co-facilitators: The Blue Mountains Wilderness Network and the BMWHI.  Participants included: Indigenous and non-Indigenous community members, environmental groups, government agencies, and university academics.	This unique and significant forum was held at Blackheath Public School on Sunday 7 <sup>th</sup> May and brought together a broad representation of people to share dialogue around the various understandings of the term 'wilderness' and what this might mean for the long-term management of wilderness areas in the Blue Mountains. The forum titled 'Finding Common Ground' was jointly organised by the Blue Mountains Wilderness Network and the BMWHI. Fifty-five people attended the forum, which opened with a joint 'Welcome to Country' from Aunty Mary Cooper-King for the Gundungurra Nation and Carol Cooper for the Darug nation. Different perspectives on the use of the term 'wilderness' and its connotations were then presented by Traditional Owners David King (Gundungurra), Chris & Jactina Tobin (Darug), Shaun Hooper & Graham King (Wiradjuri), along with eco-philosopher Val Plumwood, anthropologist Deborah Bird-Rose, conservationist Peter Prineas and researcher Haydn Washington. The gathering then split into four groups to discuss common ground, differences and how to move forward, and the day was capped off by a final session bringing everything together, chaired by Stuart Hill from the University of Western Sydney. The shared motivation for protecting the wild natural areas of the Blue Mountains was highlighted. It was acknowledged that we have different ways of communicating, and to move forward we need to respect those differences. Suggestions for moving forward included further shared events such as forums to focus on enabling effective co-management, and preparing an art exhibition presenting historical and contemporary Indigenous and non-Indigenous perspectives of nature in the Blue Mountains. The meeting closed on the common ground of shared enthusiasm by Traditional Owners and conservationists to work together in alliance to protect the Blue Mountains.
2007	Grose Valley Fire Forum	\$9,100 DECC	DECC, Rural Fire Services, BMCC, BMCS, BMWHI, NCC, local community members, Blue Mountains World Heritage Advisory Committee, GBMWA Advisory Committee	BMWHI organised a forum of representative community members and fire authorities to address issues arising from management of a fire in the Grose Valley in the Blue Mountains in November 2006. The Institute was invited by the NSW Minister for the Environment, Bob Debus, to hold this forum with the following aims: to brief the community on the management of the Grose Valley fire and the framework and context for the management of fire generally within the World Heritage Area; to identify any issues that relate specifically to the management of the Grose Valley fire, and that haven't already been captured and/or responded to within the s.44 debrief report; to identify longer term and landscape scale issues relating to the management of fire in the GBMWA, particularly in this time of climate change; and to develop an action plan, which responds to any unresolved issues identified above. The forum report contains an action plan addressing issues and questions including: How does bushfire management need to adapt to the implications of climate change? How can bushfire management

				<p>policy better account for protection of World Heritage values? How adaptive is bushfire management and policy to the specific circumstances of the Blue Mountains? Better interpretation of ecological data into decision-making and practical fire-fighting procedures; Improvements in bushfire risk management planning; Better translation of legislated objectives for protection of natural and cultural values into operational guidelines; Improved information flow between fire authorities and the community during and after major fires, including more transparency and public involvement in the review processes; Increasing funding for fire-related research, planning, risk mitigation, and post-fire ecological rehabilitation. Full report available at <a href="http://www.bmwhi.org.au">www.bmwhi.org.au</a></p>
2008	Making Our Mark: Aboriginal Youth Art Exhibition	\$800 BMCC	Aboriginal Cultural Resource Centre (ACRC), Aboriginal artists and Cheryle Yin-Lo.	<p>To help celebrate 2008 National Youth Week in the Blue Mountains, the public was invited to view lino prints by young local Aboriginal artists. Local Aboriginal cultural practitioners, Graham King and Shaun Hooper worked with Aboriginal youth aged 9 to 18 years, helping them share their creative ideas about Aboriginal culture and explore their artistic talents by teaching them how to design, cut and produce a lino print.</p>

## Abbreviations

ACRC	Aboriginal Culture and Resource Centre
AHIMS	Aboriginal Heritage Information Management System
ALARPM	Action Learning Action Research and Process Management Association
ARC	Australian Research Council
BMCC	Blue Mountains City Council
BMCS	Blue Mountains Conservation Society
BMWHA	Blue Mountains World Heritage Area
BMWHI	Blue Mountains World Heritage Institute
CCD	Community Cultural Development
CRC	Cooperative Research Centre
DECC	NSW Department of Environment and Climate Change
DEW	Department of Environment and Water Resources
DRET	Department of Resources, Environment and Tourism
FATE	Future of Australia's Threatened Ecosystems
GIS	Geographic Information System
HNCMA	Hawkesbury-Nepean Catchment Management Authority
MCRN	Mountains Community Resource Network
MRA	Multicultural Residents Association
NHT	Natural Heritage Trust
NPWS	National Parks and Wildlife Service
NSW DPI	NSW Department of Primary Industries
PLDC	Penrith Lakes Development Corporation
RIRDC	Rural Industries Research and Development Corporation
SCA	Sydney Catchment Authority
SOLA	Society for Organisational Learning Australia
TCMS	Total Catchment Management Services
UNSW	University of New South Wales
UOW	University of Wollongong
USYD	University of Sydney
UWS	University of Western Sydney