



# NATIONAL URBAN WATER GOVERNANCE PROGRAM

## E-Mail Newsletter

JULY 2006

NUMBER 3

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### Program Leader's Message

Dear Colleagues,

We have had a number of changes, successes and additions to the Program since our last eNewsletter in February 2006.

We sadly say goodbye to Jean Brennan [Research Fellow] who has just returned to her hometown of Sydney. We thank her for significant contribution, and her positive outlook and warm personality will be missed by many. We also thank André Taylor for his terrific work with managing the communication and Steering Committee of the Program. The great news is that we have not lost André, as he has now started his PhD research with us focusing on the water cycle champion phenomena. We also welcome a new Research Fellow to the team, Nina Keath, and we have a section introducing Nina later in the newsletter.

In addition, Professor Chris Cocklin, co-research leader to the Program, has just been appointed by the Victorian Minister for the Environment, to the Victorian Catchment Management Council [CMC] for a term of 3 years. Chris will be advising the Minister on land and water management issues. Congratulations to Chris on this significant appointment.

I am delighted to also announce that the Program has just been awarded an 'Australian Research Council' Linkage grant. This grant will contribute substantially to the research agenda. The ARC is the most competitive research funding scheme available to Australian university researchers, with each application being subject to international peer review. On behalf of Monash's research team, I would like to offer our sincere thanks for all the valuable support we have had from our industry partners.

In this eNewsletter edition we provide a quick background on the scope of the Program for our new readers and contributions from each of our Industry Liaison Officers from Brisbane, Melbourne and Perth. We also present some of the interesting 'institutional capacity' highlights from the recent International Water Sensitive Urban Design conference in Melbourne, and an associated International Interdisciplinary Research workshop. We finish with an announcement of a new Research Fellow position we are seeking to fill.

Once again, we welcome your contribution to our next newsletter.

**Dr Rebekah Brown**  
Program Leader

#### The National Urban Water Governance Program

Is a group of social research projects that aim to provide a credible knowledge base that will effectively inform and assist urban water managers to build institutional capacity, improve water governance and deliver more sustainable forms of water management.



## Background to the Program

It has been a little over nine months now since the research program officially started, and research is well under way. Over the last few months we have had a number of new people request to join our e-newsletter, so we thought it may be timely to give our new readers a short background on the rationale for the Program and a quick overview of the research areas.

The Program is focused on investigating the changing governance of traditional urban water management. New thinking including the Australian innovation of Water Sensitive Urban Design, and Integrated Urban Water Management has gained prominence across Australia, and we are starting to see various changes and reform agendas. However, at the same time there is a growing and diverse group of commentators that suggest that this change has, at best, been slow and that many of the impediments to change are institutional and social, rather than technical.

Therefore, the Program has been founded on the basis that there is a critical need for applied social research of a number of recognised knowledge gaps in relation to:

- understanding the current institutional, organisational and professional impediments and their relationships to advancing more sustainable urban water management; and
- understanding how to effectively enable institutional development and organisational change that advances the wide-spread implementation of more sustainable forms of urban water management.

A key objective is to provide a credible knowledge base that will effectively inform and assist urban water managers in addressing key issues such as the capacity development of institutional and organisational structures, cultures and relationships.

Below is a brief reminder of the three research themes of the Program. We are currently in the middle of the Theme A. Themes B and C are dependant on the outcomes of Theme A, however the text below describes their currently envisaged scope.

### Theme A (Institutional Barriers)

This theme aims to identify and contrast institutional impediments to more sustainable forms of urban water management across each case study region. It draws on theories of sustainable governance, institutional development and organisational change. This has been the focus of work to date and is expected to be completed by mid-February 2007.

This theme will provide a solid and comprehensive understanding on institutional barriers. This includes the current review of the international and local literature concerning barriers to advancing sustainable urban water management. It also includes the analysis we are currently conducting of institutional impediments as experienced by urban water professionals across different stakeholders within Melbourne, Perth and Brisbane.

It is important to note that institutional systems are products of historical values, events and decisions, and inertia is typically experienced when there are any proposed changes to the status quo, such as the introduction of sustainable urban water management into the traditional urban water management paradigm. We have completed a phase of collecting oral histories from key people involved in the urban water sector across the three cities to capture insights of these values, events and decisions in history.



## Research Program Overview (continued)

We will be shortly entering into our next data collection phase within Theme A, where we will be interviewing people from water businesses, state government [including regulators] local government, consultants, developers, architects, community representatives, manufacturers, technology suppliers, research and education institutions and others across the three cities. We will be exploring these different stakeholder perspectives with particular reference to the uptake of alternative water sources for fit-for-purpose use, and sustainable stormwater quality and quantity management. We specifically want to capture views on the current drivers and barriers for these activities, as well as ideas around how the current context could be improved.

Unfortunately there is never enough time or resources to interview everyone. To partly address this, as well as to map statistical response trends within and across the three cities, we will be launching an industry-based on-line questionnaire in August. This will be very important to supplement the findings of our interview field work.

Planned Formal Reporting Outcomes from Theme A	Date
<b>Report 1</b> Report on findings from both the local and international literature concerning barriers to advancing sustainable urban water management.	February 2007
<b>Report 2</b> Comparative report on barriers to more sustainable forms of urban water management identified across each of the three case study regions.	February 2007
<b>Report 3</b> An overview report for Theme A written specifically for industry stakeholders presenting research outcomes and the detailed design of research planned for Theme B and C.	February 2007

## Theme B (Institutional Capacity Development)

This theme primarily aims to develop a sound knowledge base and practical, evidence-based management strategies in three areas of research:

a□Water cycle champions: core competencies.

Key research questions include: *What are the core competencies of successful urban water cycle champions? How do we measure this success? What are the organisational systems and cultures that best attracts and supports them?*

b□Organisational dynamics: structure, culture and relationships.

Key research questions include: *What are the inter and intra organisational structures, key systems/processes and cultures that best enable more sustainable urban water management practices within a given geographic area? Does this differ between local government, state agencies, land development organisations and community organisations? And if so, how?*

c□Institutional rules: system incentives and disincentives.

Key research questions include: *What are the broader institutional incentive and disincentives [e.g. capacity building programs, innovative regulative/economic incentives] that need to be enabled to substantially improve the capacity of all organisations that have a role in the water cycle?*



## Research Program Overview (continued)

### Theme C (Transformative Organisational Change)

The final theme primarily aims to explore opportunities for mobilising transformative organisational change. It will involve:

- International and local literature reviews.
- Development of management strategies for each case study region.
- Scoping potential trials in each case study region [in consultation with local stakeholders]

## Thoughts from the Industry Liaison Officers – Brisbane (Gavin Blakey)

Brisbane City Council [BCC] is fortunate to have responsibility for managing the whole water cycle on behalf of Brisbane’s one million residents. “Water for Today and Tomorrow” is Brisbane’s integrated water management strategy. Water for Today and Tomorrow is Council’s plan to provide a sustainable water future for Brisbane.



One thousand people a week are moving into the Brisbane region. It’s an exciting period in South East Queensland [SEQ] as many water initiatives [e.g. involving alternate water supplies, waterway health and flood management] are progressing at a rapid rate.

In Queensland, local authorities are responsible for the water supply and wastewater treatment. We are also responsible for stormwater management, flood risk management, and catchment / waterway management. We work closely with a number of Queensland government departments, which are responsible, for example, for the regulation and licensing of wastewater treatment plants. Queensland government along with BCC and a number of other local authorities are also owners of the bulk water supply corporation, SEQ Water.

With such a broad responsibility, BCC has the ideal opportunity to deliver outcomes in sustainable water management by working with Queensland government, the community and other stakeholders. The future of water resource management will require visionary leadership, partnership, collaboration and an interdisciplinary approach.

Every jurisdiction is unique. The solutions need to be designed to meet the needs of the place [e.g. Melbourne, Perth, Brisbane] but the principles can be applied to all. The experience of the past and learnings by others can be used to help guide us into the future and improve the speed and quality of implementation of water resource management initiatives.

The National Urban Water Governance Program [NUWGP] will help us achieve the best possible outcomes for the people of SEQ by providing insights on what has worked in the past [learn from the successes of others] what has not [do not need to go down that dry gully!] and some potential strategies for moving the agenda forward.

This fits neatly with the three themes of the research program: Institutional Barriers, Institutional Capacity Development, and Transformative Organisational Change. The NUWGP research will provide templates / processes / frameworks for implementation of findings right here in SEQ.

We are committed to the National Urban Water Governance Program because we see real value in application of the research being undertaken.

*Gavin Blakey*  
**Brisbane City Council**



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## Thoughts from the Industry Liaison Officers – Melbourne (Chris Lee)

The National Urban Water Governance Program is a vital piece of research that will advance our collective knowledge for creating a more coordinated approach to the management of water resources.

Whether the resource is groundwater, surface water, stormwater or recycled wastewater – sustainable water management will only occur when the interrelationships between the source waters and human activity are considered together – through the interrelationships we must find ways to secure enough water for the cities, the regional towns, agriculture and the environment.

To date, in so many jurisdictions, many institutional arrangements have been framed on a source water basis – managing each source water element in isolation.

All facets of life are evolutionary. We know that the natural environment evolves over time, as does the built environment [with redevelopment, infill development and new greenfield development continuing to occur]. Societies also evolve over time with changing expectations and social norms.

So it should come as no surprise that institutional frameworks must also evolve over time to align with the shifting paradigms in which they exist. The key question is - with the speed at which both the environment and social norms are changing – can we create institutional arrangements that are adaptive and responsive to these changes?

This research, through its historical review [inclusive of an analysis of institutional barriers to sustainable water management] its consideration of institutional capacity and recommendations for change interventions will serve Melbourne and indeed broader Victoria well as we, as an industry, grapple with climate change, reducing yields from catchments and population growth. We know that life is complex and with it institutional arrangements. The challenge is to learn how to deal with the complex environment in which we operate – we know that change will continue and in turn recognise that informed consideration based on thorough analysis will position the industry well to meet the challenges of the future.

*Chris Lee*

**Smart Water Fund**



## Thoughts from the Industry Liaison Officers – Perth (Alison Luobikis)

Climate change has meant that the water resource sector has needed to turn to innovative solutions to not only meet the community's water needs but also balance this against the needs of the environment. At the same time Western Australia's economy is booming and consequently WA is experiencing significant population growth. In response to this, the Water Corporation has adopted a "Security through Diversity" approach to assist in meeting the needs of our Customers. This includes:

- Demand management.
- Water trading.
- Improved catchment management.
- Increased use of recycled water.
- Boosting supply through alternative sources – such as desalination.

Technically, just about anything is possible! Successful resolution of governance and institutional issues related to these initiatives make them a reality.





Perth is not alone on this journey. The National Urban Water Governance Program’s research gives us an opportunity take a good look at the institutional and governance framework of cities and to see what is going on in our own sector with ‘fresh eyes’ and to look at why. It also builds a toolbox of strategies to bring about change. It is a really valuable program to be part of.

*Alison Luobikis*  
**Water Corporation**

Highlights from a recent WSUD conference in Melbourne

## Institutional Capacity Building Features Strongly at the 4th International Conference on Water Sensitive Urban Design

From 3 - 7 April 2006, the *Joint 4th International Conference on Water Sensitive Urban Design [WSUD]* and the *7th International Conference on Urban Drainage Modelling* was held in Melbourne. Staff and students from the National Urban Water Governance Program were heavily involved in the organising committee, planning and running workshops, facilitating sessions and presenting papers.



Relevant highlights included:

- A welcome speech by Cheryl Batagol [Chairman, Melbourne Water Board] who painted a clear picture of the institutional challenges Melbourne Water is facing, as well as the many positive strategies the organisation has employed. Cheryl saw the move towards more sustainable urban water management practices by Melbourne Water as a “quiet revolution” where managing organizational change was the biggest challenge. Other critical elements for Melbourne Water’s success included leadership, networks of champions and taking a partnership approach.
- Attendance of respected researchers from the United Kingdom [e.g. Professor Richard Ashley and Dr Liz Sharp], New Zealand [Professor Jenny Dixon and Viv Heslop] and the Netherlands [Dr Govert Geldof] who have similar research interests to Program staff.
- A full day workshop titled “*Inter-disciplinary urban water research: lessons in how to integrate the social and physical sciences*” [described in more detail on page 8]
- Presentation sessions on “Capacity building and policy programs” and “Overcoming institutional and socio-economic impediments to WSUD”, as well as a specialist forum on “Understanding institutional capacity and organisational change”. All of these sessions were highly relevant to the core research of the Program. Papers presented by Program staff and students included:
  - Brown, R.R. and Davies, P. [2006] Understanding Community Receptivity to Water Re-use: Ku-ring-gai Council Case Study.
  - Clarke, J.M. and Brown, R.R. [2006] Understanding the Factors that Influence Domestic Water Consumption within Melbourne.



- Coppock, M.H. and Brown, R.R. [2006] Advancing Sustainable Water Futures for Melbourne: Analysis of Expert Opinion on Structural and Non-structural Approaches.
- Keath, N. and White, J. [2006] Building the Capacity of Local Government and Industry Professionals in Sustainable Water Sensitive Urban Design.

To order a copy of the conference proceedings, see: [www.wsud.org/seminar.htm](http://www.wsud.org/seminar.htm).

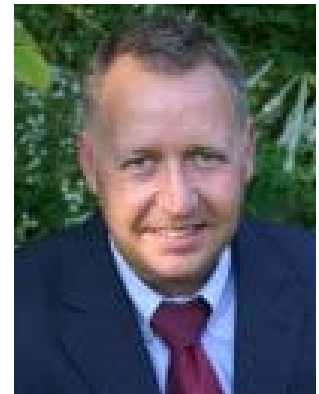
## Feedback from the Steering Committee

### Second Steering Committee Meeting

The second Program Steering Committee meeting was held on 6 April 2006 in Melbourne to coincide with the 4th International Conference on Water Sensitive Urban Design. The main aims of the meeting were to review progress on the Program's research and administration, as well as provide representatives from the Program's funding bodies the opportunity to raise suggestions on future directions.

Highlights of the meeting included:

- Vera Lubczenko from the Victorian Water Trust joined the Committee [as a result of the Trust agreeing to fund a project within the Program]
- Dr Govert Geldof from TAUW in the Netherlands was a guest presenter. Dr Geldof was one of the keynote presenters at the 4th International Water Sensitive Urban Design Conference and delivered a presentation to the Committee titled "From optimising to adapting".
- An explanation was provided on how the Program's core research being done in Melbourne, Brisbane and Perth linked with a number of related research projects that were being directly funded through funding sources in Victoria, including the:
  - *Victorian Water Trust* [[www.dse.vic.gov.au](http://www.dse.vic.gov.au)] and the
  - *Facility for Advancing Water Biofiltration* [FAWB] [[www.monash.edu.au/fawb](http://www.monash.edu.au/fawb)]
- A proposal was raised to hold the Program's first two-day annual forum in early December 2006 in Melbourne. At this time, results from the research involving barriers and drivers for the adoption of more sustainable forms of urban water management will be outlined [i.e. results from Theme A of the research program]
- Dr Rebekah Brown provided a summary of the historical context of water management in Melbourne based on recent research. Gaining a sound understanding of how water has been managed in the past provides important insights into why today's organisational structures and cultures, key processes and systems, behavioural norms, and networks operate the way they do. This historical knowledge may also provide an insight into change strategies that can be designed to achieve more sustainable management of our water resources.



Dr Govert Geldof



Recent workshop facilitated by the Program

## International Workshop on Inter-disciplinary Urban Water Research

Dr Rebekah Brown facilitated an interdisciplinary workshop at the recent *Joint 4th International Conference on Water Sensitive Urban Design (WSUD) and the 7th International Conference on Urban Drainage Modelling*, held in April at the Grand Hyatt in Melbourne. The workshop, entitled **'Interdisciplinary Urban Water Research Lessons in How to Integrate the Social and Physical Sciences'**, focused on sharing insights from high profile projects around the world that are employing, and attempting to integrate, the social and physical sciences for addressing contemporary sustainable urban water management problems. The workshop was an activity of the International Working Group on Water Sensitive Urban Design (WSUD) part of the IWA/IAHR (International Water Association and International Association for Hydraulic Research) Joint Committee on Urban Drainage.

Local and international experts were invited to speak on the day, drawing from their own experiences with interdisciplinary urban water research projects. The presentations provided important experiential insights into some of the challenges and benefits associated with integrating the social and physical sciences, creating a platform for interactive and open discussion.

The workshop was well-received, attracting a diversity of local and international participants from the UK, South Africa, the Netherlands, New Zealand, Nigeria and Germany. The disciplinary mix provided for engaging discussions between engineers, social scientists, environmental scientists, regulators, policy experts, economists, planners and landscape architects representing research institutions, water authorities, government organisations (national, state and local) and regional capacity-building organisations. A number of our Steering Committee members actively participated, with Gavin Blakey (Brisbane City Council) being one of the invited speakers.

### Highlights From The Speakers

Note: A copy of the following presentations including a short written outline and PowerPoint presentation is available at: [www.arts.monash.edu.au/ges/research/nuwgp/news.html](http://www.arts.monash.edu.au/ges/research/nuwgp/news.html).

- Dr Liz Sharp from the Pennine Water Group, United Kingdom, discussed whether, when and how engineering and social science could or should be combined in large projects. Liz drew on her involvement in the WaND (Water Cycle Management for New Developments) project in the UK, highlighting numerous challenges with the development of closer interdisciplinary working relationships, and providing important lessons for how these may be overcome.
- Dr Govert Geldof from Tauw, the Netherlands, conducted an interactive presentation that considered the philosophy needed to organise interdisciplinary processes in practice. Govert emphasised the importance of embracing complexity as a precondition to change, and discussed the potential benefits with adopting a 'parallel' model of practice in the urban water industry, in contrast to the traditional 'serial' approach. The parallel approach is interactive and demands an interdisciplinary problem focus.
- Professor Jenny Dixon from the University of Auckland, New Zealand, presented a comprehensive overview of the challenges and benefits experienced with conducting long term interdisciplinary research, and provided useful insights and 'lessons learnt' from her experience with the Low Impact Urban Design and Development (LIUDD) program.



**Recent workshop facilitated by the Program (continued)**

- Mr Alan Gregory from the CSIRO, Australia, gave an insight into the Urban Waterscapes Program, part of the CSIRO's Water for a Healthy Country National Research Flagship Program. Alan highlighted the social and physical dimensions of the research, and provided an overview of the issues with applying interdisciplinary approaches to urban water research projects.
- Mr Gavin Blakey from Brisbane City Council, Australia, discussed Brisbane's Flood Risk Management Strategy, highlighting the social impacts of flooding, the complexity of flood event management and the clear benefits with taking an interdisciplinary approach to flood risk management in Brisbane.
- Dr Jonathan Chapman from the Environment Agency, United Kingdom, discussed the development of a new Government Strategy for flood and coastal erosion risk management in England, called 'Making Space for Water'. Jonathan discussed moving from individual reactive approaches to common, shared approaches and the issues with shifting from a technical to social focus in relation to achieving better flood management across England and Wales.

**Group Discussion Sessions**

Two group-wide discursive sessions were held focussed on interdisciplinary thinking and how to integrate the social and physical sciences. The first group discussion considered the most important elements for achieving successful interdisciplinary research projects, which produced a number of ideas around the importance of trust, relationships and communication in interdisciplinary research, and the types of approaches that should be applied. In the second session, the group brainstormed possible scenarios for 2025 if we did not pursue interdisciplinary approaches to urban water management and went 'back into the silos'. Here, the group found that delivering better water systems require interdisciplinary efforts that incorporate trust, meaningful communication, respect, a shared vision, new institutional incentives, adaptability and flexibility, and the adoption of a 'learning by doing' approach to streamline these efforts.



**Professor Richard Ashley and Dr Rebekah Brown facilitate a group-wide discursive session about the most important elements for achieving successful interdisciplinary research projects**



## Funding

### Victorian Water Trust Grant Success

On 28 April 2006, the Program was amongst four recipients to be awarded funding through the Victorian Water Trust. The Minister for Water, John Thwaites, presented the team with a certificate of recognition at the Rosedale Golf Club, which is the site of an aquifer and storage and recovery project funded by the Smart Water Fund. The purpose of the \$320 million Trust is to provide a secure source of funding for investment in Victoria's water resources by funding major innovative projects that help set a new direction for water use in Victoria.

The funding has been provided to the Program to establish the *Advancing Organisational Receptivity to Alternative Water Supplies* Research Project. This three-year research project examines the critical factors that prevent or encourage the use of alternative water sources by Victorian urban water management organisations. It will use this knowledge to develop practical guidelines for managers within organisations so that they can deliver the intent of the Victorian Government White Paper 'Our Water Our Future'.



Recipients of Recent Victoria Water Trust Awards with the Victorian Minister for Water, John Thwaites

For more information, see [www.urbanwatergovernance.com](http://www.urbanwatergovernance.com) [Under 'Research Projects']

## Staff

### Nina Keath Joins the Program

The Program is delighted to announce that Nina Keath has joined the team as a Research Fellow.

Nina is a social scientist who has worked closely with local government, industry, water authorities and State government agencies to identify current impediments to sustainable urban water management as well as options for improving implementation practices. She has been responsible for managing a range of capacity building projects involving in-depth stakeholder research, targeted interviews and case study development in addition to resource and training development and delivery. Nina has also provided policy advice to State and Federal governments, particularly around local government capacity issues and the role of knowledge brokering and capacity building to achieve sustainable urban water management.



Nina Keath

Nina's addition to the team helps the Program achieve its objective of securing the services of two full time Research Fellows to help deliver the core research.



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## Research Fellow Position

### Research Fellow Position Available

A Research Fellow is sought to join the National Urban Water Governance Program within the School of Geography and Environmental Science, Monash University, Clayton Campus.

The successful applicant will have a higher degree within the field of environmental sustainability, as well as applied social research experience. The position will involve conducting literature reviews, organisational and stakeholder analysis, as well as assessment of broad program and policy initiatives.

The researcher will work closely with professionals from the urban water sector, including water authorities, local government, catchment management authorities and state regulatory bodies across Melbourne, Perth and Brisbane. The successful candidate will be joining a small and energetic team of social researchers that are committed to advancing more sustainable urban water management.

Salary range: \$44,747 - \$60,728 pa Level A, plus superannuation.

Duration: Two-year appointment, with potential for extension.

Contact: Dr Rebekah Brown on ph. 03 9905 9992 or email [rebekah.brown@arts.monash.edu.au](mailto:rebekah.brown@arts.monash.edu.au).

Applications close: Friday, 28<sup>th</sup> July 2006.

Applications: By mail addressed to Mrs Sue Drummond, School of Geography and Environmental Science, Monash University, Building 11, Clayton Vic 3800 or email [sue.drummond@arts.monash.edu.au](mailto:sue.drummond@arts.monash.edu.au) by 28<sup>th</sup> July 2006.

For further information on the position description – see the link to download position description at <http://sssd.adm.monash.edu.au/employ/job.asp?refnumber=A067001&work=&staff=Academic&faculty=&keyword=&whichpage=4&pagesize=5http://>

## Visit the Program's website for more information



[www.urbanwatergovernance.com](http://www.urbanwatergovernance.com)

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