National Urban Water Governance Program
www.urbanwatergovernance.com

October 2006 Number 4

MONASH University

Inside this issue

Program Leader's Message

Dear Colleagues,

Once again it has been a busy few months for the *National Urban Water Governance Program* since our last eNewsletter in July.

As Program Leader, I would like to formally welcome **Maroochy Shire Council** as a valued partner to the Program. We are delighted to have Council's support, and closer interaction with **Damian McGarry**, as a recognised industry champion for sustainable water management. Damian will sit on the Program Steering Committee and has kindly written a contribution later in this newsletter.

We would also like to extend a warm welcome to **Professor Barry Hart** to the Program, as the new Independent Chair of the Steering Committee. Barry is well recognised for his high profile role in the water industry and his significant scientific contribution over the last 30 years. We are delighted to be associated with someone of Barry's calibre.

Currently, our research team is approaching the end of a major phase of data collection in Melbourne, Perth and Brisbane, looking at the current 'barriers' and 'drivers' experienced with advancing sustainable urban water management (SUWM). This has involved in-depth interviews with urban water professionals in each city, and we have also developed an on-line questionnaire, which we would like to invite your participation. More details are provided later in the newsletter.

Over the last few months, members of our research team have also been busy presenting at events including the *VicWater 2006 Annual Conference* in Geelong and the *Hydropolis Conference* in Perth. These events were both attended by a large number of professionals, representing a range of disciplines within the urban water industry, and provide important opportunities for our Program to learn from and contribute to current thinking around SUWM in Australia.

In other news, a number of research students and staff have joined the Program over the last few months. **Adriane Pollard** commenced as a Research Fellow in July, and has since been undertaking detailed research into the current context and institutional history of urban water management in Brisbane. For those of you who have not yet met Adriane, you can read her brief profile in this newsletter.

I am delighted to announce that **Peter Morison** and **André Taylor** have joined a growing number of PhD students within the Program, and they provide introductions to their PhD research later in this newsletter. You can also read contributions from a visiting student from the Netherlands, **Jeroen Rijke**, and an honours student, **Richard Roberts**, who are both currently investigating SUWM case studies in Melbourne.

In another exciting development, you may have noticed our 'new look' with the design of a logo for the Program (see above-left). Our logo represents the nested and interactive spheres of institutional capacity that can be associated with promoting Water Sensitive Urban Design, which features in the 2006 publication: *THF Wong (Ed) Australian Runoff Quality: A Guide to Water Sensitive Urban Design*, *Engineers Australia.*

Finally, we would also like to congratulate one of our Steering Committee members, **Vera Lubczenko**, who has left the Victorian Water Trust to become General Manager, Community and Customer Service, at Sustainability Victoria. Congratulations from us all, Vera.

We hope you enjoy this edition, and we welcome your contribution to our next eNewsletter.

Dr Rebekah Brown
Program Leader

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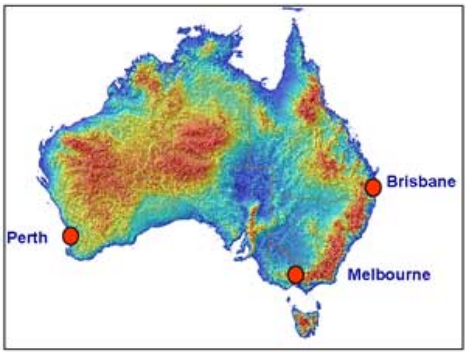
Brief Project Background

Brief Background to the Program

Once again we have had a number of new people request to join our eNewsletter, and we thought it might be useful to include a brief summary of the Program for the new readers.

The *National Urban Water Governance 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.



Three Case Study Regions

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.

For more information, see our website www.urbanwatergovernance.com or contact Rebekah Brown (contact details are at the end of this newsletter).

Brief Research Update

Update on recent research activities

Our research team is coming to the end of a major phase of qualitative research in Melbourne, Perth and Brisbane, looking at the current 'barriers' and 'drivers' experienced with advancing sustainable urban water management (SUWM). This involved **in-depth interviews and focus groups** with over 170 urban water professionals across the three study regions, allowing us to gain key insights into the institutional arrangements, cultures and capacity levels across each system.

This research is expected to contribute to improved examination of the various institutional and governance reform ideas and initiatives that have been raised among national and international urban water stakeholders.

In tandem with these interviews, we have also administered an **on-line 'sustainable urban water management' questionnaire** across each region. This questionnaire looks at future water sources and stormwater quality management in each city. The purpose of the questionnaire is to quantifiably assess urban water professionals' perceptions in relation to some of the broader challenges and opportunities associated with advancing more sustainable urban water management. Additionally, this questionnaire will help us to confirm and expand our interview findings around these practices.

The questionnaire is currently active, and we are aiming to collect a minimum of 100 responses per region, representing different stakeholder groups. It would be terrific if you could spare 30 minutes to participate if you represent one of the three regions (see information below).

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On-line *'Sustainable Urban Water Management'* Questionnaire

On-line Questionnaire

As mentioned above, we are currently conducting an anonymous on-line questionnaire. This questionnaire focuses on the perceived 'barriers' and 'drivers' experienced by urban water professionals with advancing sustainable urban water management across Melbourne, Perth and Brisbane. If you represent one of these regions, it would be fantastic if you could spare 30 minutes to participate.

The links to the on-line questionnaires for each city are below (you may need to copy and paste the appropriate link into your internet browser):

Melbourne: http://www.surveymonkey.com/s.asp?u=278542711579 (open)

Perth: http://www.surveymonkey.com/s.asp?u=397852607006 (open)

Brisbane: http://www.surveymonkey.com/s.asp?u=333352731917 (will open on 30 October)

By completing the questionnaire, YOU HAVE A CHANCE TO WIN one of three prizes:

- **APPLE iPod Nano 2GB MP3 Player** (RRP $299)
- **OLYMPUS Mju 600 Digital Camera** (RRP $399)
- **Professional home "Spring Clean"** to the value of $300.

*Please note: The questionnaire closes on 10 November, 2006 (the Brisbane questionnaire will close in late November).

Research findings will be disseminated in March 2007 via a series of workshops as well as written reports, which will be available on our website www.urbanwatergovernance.com.

We appreciate your support!

Maroochy Shire Council joins the Program

Welcome Maroochy Shire Council!

We are delighted to welcome **Maroochy Shire Council** as a funding partner to the Program. Maroochy Shire Council is located in South East Queensland and is strongly committed to advancing water recycling and Water Sensitive Urban Design in its municipality.

In addition to Maroochy Shire Council, the *National Urban Water Governance Program* has a number of other partner organisations that are leading the field in more sustainable urban water management, including:

- Brisbane City Council (QLD)
- City of Armadale (WA)
- City West Water (VIC)
- Department for Planning and Infrastructure (WA)
- Healthy Waterways (Moreton Bay Waterways and Catchments Partnership) (QLD)
- Melbourne Water (VIC)
- South East Water (VIC)
- Victorian Water Trust (VIC)
- Water Corporation (WA)
- Yarra Valley Water (VIC)

Damian McGarry, Principal Engineer, Integrated Water Management at Maroochy Shire Council has joined the Program as a Steering Committee member. Damian provides a little bit about Maroochy Shire Council and his role within the organisation below.

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Damian McGarry, Maroochy Shire Council

Maroochy Shire Council takes water management very seriously. We are a beautiful coastal and rural hinterland community on South East Queensland's Sunshine Coast approximately 1 hour drive north of Brisbane.

Maroochy Shire enjoys a rich array of natural assets such as creek and river systems, coastal plains, rainforests and rich agricultural and pastoral lands. These natural assets are also experiencing the accelerated pressures of population growth due to the sea change phenomenon. Our population of 140,000 is forecast to double in the next 20 years. Our major river system, the Maroochy River, continues to show signs of decline in its ecosystem health. Increased urban runoff, agricultural land use management and treated effluent discharge are the main contributing factors to or River's health.

In Maroochy Shire we promote the values of a water aware lifestyle. We encourage sustainable use of our limited water resources. We aim to preserve and protect our creeks and rivers and to ensure our communities are safe from flooding. Coordinating the water management of all these goals in a rapidly developing region is a major challenge. It is for this reason that Maroochy Shire has joined the National Urban Water Governance Program. Through the Program we hope to gain an insight into water management strategies around the country and to share our own experiences.

On a personal level, I am a civil engineer with 15 years of water engineering experience and a background in stormwater planning, design and construction and flood plain management,

My current role as Principal Engineer Integrated Water Management for Maroochy Shire Council involves strategic planning for water quality and water quantity infrastructure as well as the coordination of the Shire's flood strategies.

Maroochy Shire Council is excited by the opportunity to participate in the National Urban Water Governance Program. We recognise the value this research will bring to national water management.

We are very pleased to be supporting this Program and encourage all local government authorities seeking to be progressive with their water management strategies to participate.

Damian McGarry
Principal Engineer, Integrated Water Management
Long Term Infrastructure Planning Branch
Maroochy Shire Council

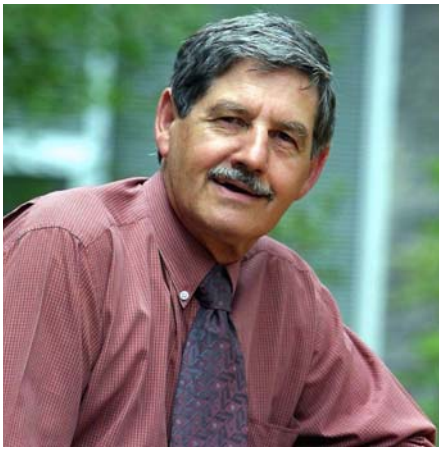
Professor Barry Hart is our new Independent Chair

Welcome our new Independent Chair

Professor Barry Hart has recently joined the Program to chair the *National Urban Water Governance Program* Steering Committee.

Barry is Director of the environmental consulting company – Water Science Pty Ltd, having recently retired from Monash University. He is still associated with Monash University as an Emeritus Professor. He also served for 10 years as Deputy Director Research of the CRC for Freshwater Ecology.

Barry has established an international reputation in the fields of water quality management, environmental risk assessment and environmental chemistry. He is well known for his sustained efforts in developing knowledge-based decision making processes in natural resource management in Australia and south-east Asia. We are delighted to be associated with someone of Barry's calibre.



Professor Barry Hart

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New Research Fellow joins the Program

Adriane Pollard, new Research Fellow

Adriane Pollard

Adriane Pollard is a recent Master's graduate of the Corporate Environmental and Sustainability Management program at Monash University. Adriane joined the Program in July 2006, investigating the current context and institutional history of urban water management in Brisbane.

Prior to this new role, Adriane was the Manager of Environmental Services for a local government in Canada after a long career as a consulting ecologist. Her main areas of expertise are local government environmental sustainability policy and planning, urban ecology, community capacity building, and environmental management. Adriane is a professional member of both the Canadian Institute of Planners and College of Applied Biology of British Columbia.

Community Sustainable Water Planning Project wins SIA award

Sustainable water project wins award

Rebekah Brown was involved in the *RiverLife Urban Storm Water Integrated Management (USWIM)* project which has recently received an award from the Stormwater Industry Association (NSW).

This research project was a joint initiative of Marrickville Council and The School of Geography and Environmental Science, Monash University, funded by the NSW Government through the Department of Infrastructure, Planning and Natural Resource (DIPNR). It aimed to gain insight into alternative planning approaches for sustainable water in New South Wales, building on previous research that identified a number of key problems with conventional and expert-led urban stormwater planning which often resulted in poor levels of on-ground implementation.

This project involved trialling a 'bottom-up' local community planning process at the neighbourhood level for sustainable water management. It focused on in-depth involvement of the community for the identification of local water issues and the design of solutions. Through this project, a 'community water vision' for 2050 was planned and developed for a sub-catchment within the Marrickville local government area, the Illawarra Road sub-catchment.

July forum – group work

Using this community water vision, as well as ideas and information from the community, a set of draft goals for 2050 were developed in a community forum. To reach these 2050 goals, community and technical interim goals for 2015 were created so that Council and the community can come up with a 10 year Community Water Plan. These goals now form the basis of actions being prepared to drive and guide the Illawarra Road Community Water Plan for a sustainable water future.

July forum – group work

Jan Orton, Manager of Environmental Services at Marrickville Council, needs to be commended for involvement in this project and her commitment and leadership to advancing sustainable urban water futures and partnering communities.

For more information about the project, see:
www.marrickville.nsw.gov.au/csc/environment/riverlife/sustainablewaterplanning.htm

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Project Partnership with Delft University, the Netherlands

Collaboration with Netherlands urban water research project

The *National Urban Water Governance Program* at Monash University has recently entered into a new research partnership with the *Living with Water* Program at Delft University of Technology in the Netherlands. The project is called 'Urban Water Sustainability Case Studies' and aims to compare sustainable urban water management practices in new developments across Australia and the Netherlands.

Both countries are representative of the environmental pressures facing many urban areas around the world, and both have experienced similar development towards more sustainable urban water management. In addition, both research programs recognise that the most important challenges to realising sustainable urban water systems are of an institutional and organisational nature. Therefore, exchanging knowledge on this topic in this project will be very beneficial and is expected to provide further advancement of knowledge and implementation in the practice of sustainable urban water management in both countries.

Currently, we are hosting a visiting Masters student, **Jeroen Rikje**, from the Delft University of Technology in the Netherlands, looking at Melbourne case studies of Water Sensitive Urban Design. Jeroen arrived in September and will be here until December. Jeroen's visit will be the first of many student transfers between the two universities and an ongoing sharing of knowledge and research findings between the two programs. Jeroen provides a summary of his research project below.

leven met water

National Urban Water Governance Program

Jeroen Rikje, Delft University, the Netherlands

When I was given the opportunity to visit Melbourne as part of my final MSc thesis in Water Resources Management in the Netherlands, I didn't have to think for a second. What a great chance to travel to the other side of the world and join the National Urban Water Governance Program - one of the frontrunners of what the Dutch call 'transition' management!

I am visiting Melbourne within the scope of the new extension project 'Urban water sustainability case studies' between Delft University of Technology in the Netherlands and the National Urban Water Governance Program at Monash University. This cooperation started early this year and aims to compare urban water management practice and developments towards advancing more sustainable practice across the Netherlands and Australia.

Jeroen Rikje

In this project, I will conduct a comparative case study with a focus on urban stormwater management. Firstly, standard practice will be compared in each region, regarding both the techniques that are being used and the governance of the urban water system. Secondly, innovations and the way innovations are being introduced and upscaled will be analysed. It is hoped that this research will provide an indication of the enabling factors that are associated with advancing more sustainable water management, which could be used in both Australia and the Netherlands.

Jeroen Rikje,
Masters Student
Delft University of Technology

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The Program welcomes new research students

Andre Taylor, PhD student

You can contact André on (02) 6582 0762 or andretaylor@iprimus.com.au for more information.

Welcome new students

Over the last few months, a number of new students have joined the Program to investigate various aspects of urban water governance. We thought that this newsletter would be a good way to introduce **André Taylor**, **Peter Morison** and **Richard Roberts** to you all, and they have each provided a summary about their respective research projects below.

André Taylor has started his PhD research with the Program under the supervision of Professor Chris Cocklin. André was previously a part-time research fellow, and we are delighted that as a student he remains a valuable member of the program.

André Taylor

In his PhD project, research is underway to investigate 'the champion phenomenon' in the context of attempts within Australian urban water management agencies to deliver widespread adoption of more sustainable practices.

These champions are *thought* to be emergent leaders and change agents with a strong personal commitment to their cause. Their emergence appears to relate to resistance they face from institutional inertia, as well as the adoption of specific behaviours that occur outside of their official role description. It is *possible* that they also have a characteristic set of personality traits, leadership styles, skills and professional experiences. It is also *possible* that a wide range of contextual factors affect champion emergence and effectiveness.
Although very little is certain about these water champions, numerous industry and academic commentators have highlighted their importance as catalysts for change.

The PhD research project (2006-2009) aims to:

1. Understand this phenomenon, with a focus on its expression in Melbourne, Perth and Brisbane.
2. Characterise effective champions in terms of the factors previously mentioned.
3. Determine which, if any, of the many leadership theories best explain the champion phenomenon in this context. And if they don't provide a good explanation, develop a suitable theoretical framework.
4. Develop practical guidance on how staff in Australian urban water management agencies can strategically and effectively: recruit and identify potential champions at a range of organisational levels; enhance their potential using world's best practice leadership development programs; and engineer a supportive organisational context for them to join the organization, stay and thrive.

Peter Morison, PhD student

For further information, Peter can be contacted by email at: peter.morison@gmail.com

Peter Morison

Peter Morison joined the *National Urban Water Governance Program* in September 2006 to undertake postdoctoral research focusing on the policy design and institutional implementation of stormwater programs that primarily involve local government. The research will be specifically evaluating program design for the implementation of an urban stormwater quality program in the Yarra River, Melbourne.

By applying an 'action research' approach that provides ongoing feedback and evaluation, the research would form a valuable tool for program delivery. This research is likely to require both qualitative and quantitative research techniques involving field work with water management professionals. Melbourne Water is funding this 3-year research project.

Peter comes to the Program with over 10 years experience in catchment management in NSW working for a number of local councils, state agencies and as a consultant. His passion for local government and the management of the waterways environment provides a solid foundation for this research project.

Richard Roberts, Honours student

Richard can be contacted be email at rmrob3@student.monash.edu.au for more information.

Richard Roberts

is currently completing an Environmental Science degree at Monash University with majors in 'Geography' and 'Environmental and Conservation Biology'. Richard has recently commenced an honours project looking at issues surrounding water use and urban water governance – an area that he has held a keen interest in over the past few years.

Richard Roberts

In Melbourne, potable water usage rates, rainfall levels and 'growth areas' outlined under the *Melbourne 2030* plan all contribute to the uncertainty of conventional water supplies being able to meet the city's needs in the future. Some emerging thoughts now centre on the use of alternative water sources in a more decentralised structure as a potential solution.

This project is looking at the theory of technology diffusion, and the barriers and incentives for the implementation of alternative water sources in Melbourne, specifically looking at the technologies.

Through analyses of Melbourne's water history, the policy and regulatory processes surrounding the use of alternative water sources, and an in-depth analysis of case studies of different scales and technology utilization, this research aims to develop a criteria to evaluate where Melbourne is in the process of the diffusion of these technologies. These technologies will be evaluated using a diffusion model, and Richard also hopes to look at the means by which to remove these constraints, and methodologies by which to further the implementation of these technologies and projects in the Greater Melbourne area, in order to further sustainable development and the more efficient use of potable water.

Third Steering Committee meeting, Perth

Steering Committee Meeting in Perth

The third Program Steering Committee meeting was held on 28 August 2006 in Perth. The main aims of the meeting were to provide an overview of the theoretical frameworks for the current research phase, and to provide an update on the Program's research on barriers and drivers to sustainable urban water management. The Steering Committee members had an opportunity to provide suggestions for the research and discussed a range of important issues.

Highlights of the meeting included:

- **Rebekah Brown** explained the distinctions between the social and physical sciences and how this informs the structure and methodology of the research program.
- **Nina Keath** presented preliminary findings of the research interviews conducted in Melbourne throughout August, and Rebekah followed with an explanation of some of the theoretical frameworks that will be applied in the analysis of these findings.
- **Jodi Clarke** presented insights from a social research project on community receptivity to alternative water sources that she conducted within the City of Bayside in 2005.
- **The Committee** discussed a plan for the two-day annual workshop that will take place in early December 2006 in Melbourne to reflect on the results from the research involving barriers to the adoption of more sustainable forms of urban water management. The main purpose of the workshop will be to:

- Validate the research findings and streamline the Committee's feedback
- Determine a 'research adoption' model that will be used for disseminating the findings to stakeholders.

After the meeting, the Steering Committee visited the **Kwinana Water Reclamation Plant** in Perth, which is the biggest water recycling plant of its type in Australia. The Committee was given a guided tour of the Plant by an employee, and explained the operation, maintenance, delivery and disposal of the treated water.

Call for your Contributions

Message to eNewsletter subscribers

We hope you have enjoyed reading this eNewsletter edition. We would like to thank you all for your ongoing support, and hope that you will be able to complete the on-line questionnaire we have designed testing current 'barriers' and 'drivers' for more sustainable urban water management practices.

Finally, we welcome your contributions in our future eNewsletter editions. If you would like to add your thoughts, any insights from your organisation or sector, or include information about upcoming events relating to urban water governance in Australia, please contact Jodi Clarke (contact details below).

We look forward to hearing from you!

Visit the Program's website for more information

www.urbanwatergovernance.com

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