

New WAter Ways Water Sensitive Cities Speaker Series

# From 'dung hill' to 'water sensitive city'?: Perth's anxious water history

Ruth Morgan

Monash University

## 1. Society

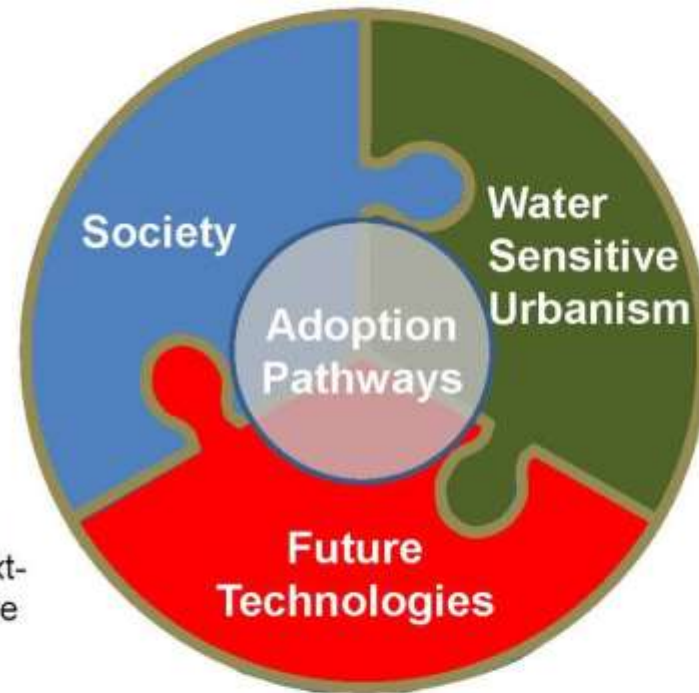
will focus on understanding and delivering the social transformations needed to support water sensitive cities, including community attitude and behavioural change, planning & development practices, economic valuation, institutional and urban water governance reform.

## 2. Water Sensitive Urbanism

will focus on improving the sustainability and liveability in urban environments. It will apply a new paradigm in urban planning and design that captures the many aspects of urban water management including water security, flood protection, climate-responsive design, terrestrial and aquatic ecological landscapes, and productive landscapes.

## 3. Future Technologies

will focus on the use of multiple water sources integrated at a range of scales to support context-specific fit-for-purpose uses. Taking the perspective of cities as urban metabolisms this research will develop tools and techniques to manage urban resource flows, minimise waste streams and recover energy, nutrients and other valuable materials.

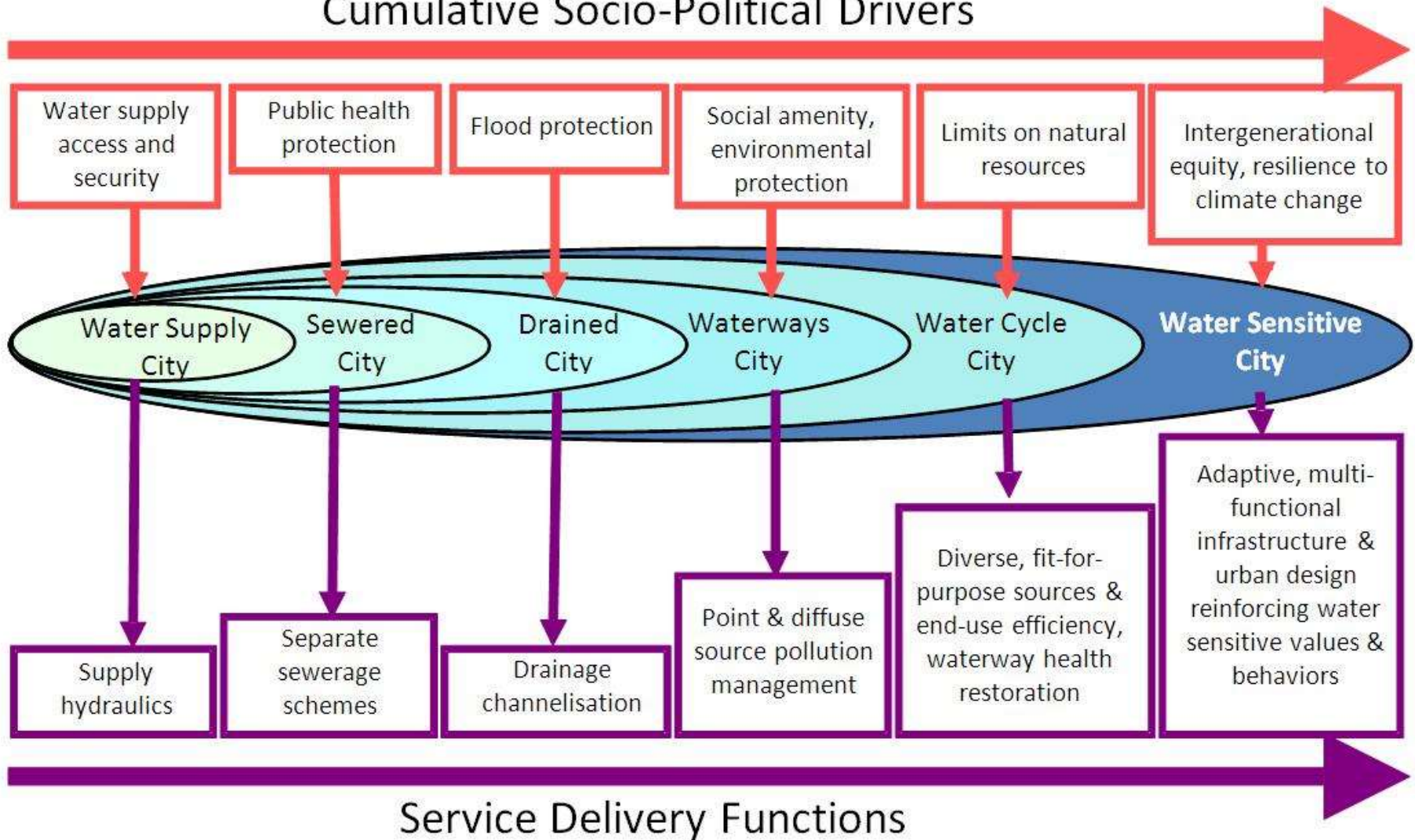


## 4. Adoption Pathways

aims to develop an enduring partnership between government, industry, the water sector, and the community that is informed by the evidence drawn from our research that is freely available, scientifically-rigorous, and open to public examination and comment.

## Research Programs

## Cumulative Socio-Political Drivers









RUTH A. MORGAN

**RUNNING  
OUT?**  
**WATER IN  
WESTERN  
AUSTRALIA**

<http://uwap.uwa.edu.au/products/running-out-water-in-western-australia>









A paddle wheeler and a small motorboat sail on Lake Mead, North America's largest man-made reservoir. The water is at its lowest level since the Hoover Dam was built in the 1930s. The white "bathtub ring" of mineral deposits on the rocks marks past water levels.  
PHOTOGRAPH BY ETHAN MILLER, GETTY IMAGES









Engineer C Y O'Connor (1843-1902)  
(Perth artist and graphic designer Miles Noel)

**“they made a way in the wilderness,  
and rivers in the desert”**

(Sir John Forrest, 1903)











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**George Hayman and family in the front garden of their home Chinti, 49 Clotilde Street, Mt Lawley, 1919 (SLWA)**

Houses in Floreat Park, 1949





One of the channels in which water is distributed through the settlement, 21 June 1916, Opening of the Harvey Irrigation Works (SLWA)



**Aerial photograph of wheat harvesting south  
of Merredin, Richard Woldendorp, SLWA,  
1985**



**A boy kicks a build up  
of salt off a dead tree,  
on the Goomalling-  
Wyalkatchem Road  
east of Goomalling, 18  
July 2012, Philip  
Gostelow, SLWA**

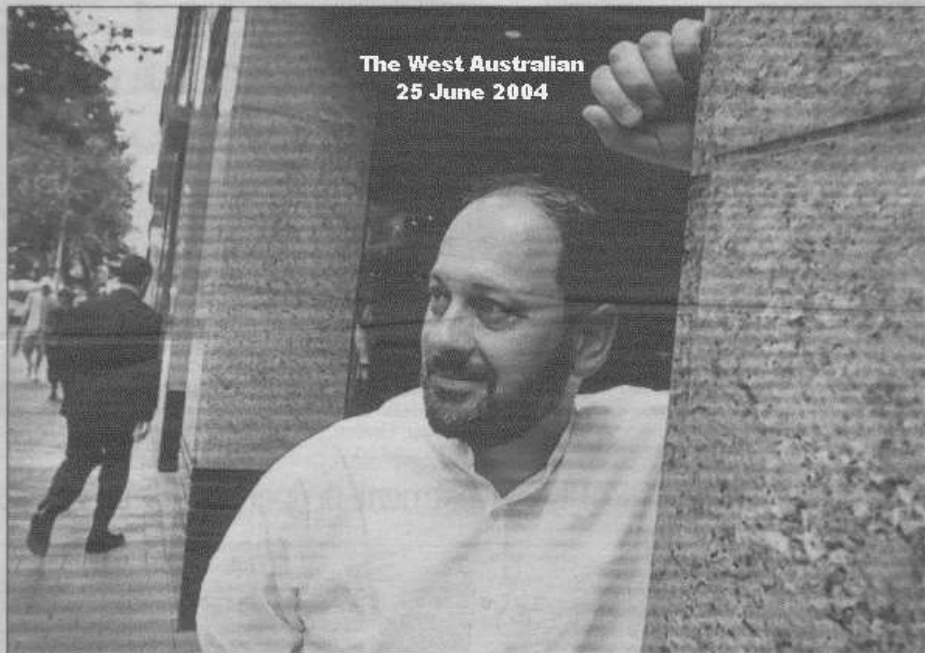


**Suburbs**





<https://au.news.yahoo.com/thewest/wa/a/15935382/barnett-now-a-desal-fan/>  
<http://www.perthnow.com.au/news/western-australia/m-desalination-plant-expansion/story-e6frg13u-1226106183002>



Dry argument: Scientist Tim Flannery says Perth will be perched on the edge of a desert within decades.

## Perth will die, says top scientist

CARMELO AMALFI

Perth will become a ghost city within decades as rising global temperatures turn the Wheatbelt into a desert and drive species to the brink of extinction, a leading Australian scientist warns.

Australian palaeontologist and popular author Tim Flannery said Perth was a city on the edge — isolated, dependent on energy and declining water supplies and more likely to feel the effects of global warming because of its geographical position.

"You're going to suffer faster and harder than any other State in Australia," Dr Flannery said yesterday.

"My hypothesis is Perth will become a ghost metropolis over the next few decades unless governments acknowledge that global warming is a reality."

He said a global temperature rise of less than 1C last century had robbed the State of over half its

annual rainfall run-off. Global temperature rises of up to 6C would transform Perth into an arid city unable to feed itself.

A 1C rise was enough to wipe out an estimated two-thirds of WA's native flowering plants.

The South Australian Museum

**'Perth will become a ghost metropolis unless governments acknowledge global warming.'**

DR TIM FLANNERY

director and author of the best-selling *The Future Eaters* said a major shift from coal to renewable fuels such as solar and wind energy was needed in WA.

"Coal is the enemy," Dr Flannery said, adding that one tonne of coal produced three tonnes of the greenhouse gas carbon dioxide.

"WA could become the cradle of a vibrant new energy industry. It is one of the windiest and sunniest places in the world," he said.

Dr Flannery described State Government plans to build a carbon dioxide-emitting desalination plant as an expensive bandaid solution. It was a massive investment of taxpayers' money to meet a small percentage of Perth's water needs.

Jorg Imberger, head of the University of WA's centre for water research, agreed, saying the plant would produce about 30,000 tonnes of carbon dioxide a year.

"Building such a plant is the worst thing we can do when we have Yarragadee, with 1000 years of water in it," he said from Singapore yesterday.

But Dr Imberger said Dr Flannery was wrong to suggest WA was heading for an arid future when overall the world was getting wetter, not drier. He said his forecast was alarmist.





**“Water forever,  
whatever the weather”**

(Water Corporation)



Tim Brick (center) from the Metropolitan Water District of California visits the massive desalination plant recently built to supply Perth, Australia. Photo: Chad Briggs, National Geographic, 10 April 2012





# The Sea

# The Sand







A



Merredin Native Reserve, 1964, SLWA













Joanna Zyliniska, *Topia daedala* 9, 2014

# Thank you

**Acknowledgement and thanks:**

CRC for Water Sensitive Cities

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