

Regulatory Renovation for Managed Aquifer Recharge using Alternative Water Sources

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CRC for Water Sensitive Cities

Better Regulatory Design for Water Sensitive Cities

1. Access to alternative water sources

- Waste water: collection, treatment and disposal are exclusive functions of Water Corporation
 - Water Corp owns the infrastructure & waste water
 - 3rd party access requires consent of Water Corp
 - No independent public resource allocation
- Storm water: focus on public drainage
 - Minister & DWER planning functions
 - Local Gov't & Water Corp management functions & control access to infrastructure
 - Common resource & insecure allocation framework

1. Access (cont) – Reforms

- 3rd party access regime:
 - Especially for Water Corp's waste water infrastructure, including transparent pricing regime for contracted access to waste water resource
 - E.g. Water Industry Competition Act 2006 (NSW)
- Secure public resource allocation
 - Especially for storm water; ?? Override for waste w
 - water resource could be vested in drainage managers & subject to ministerial planning power
 - Environmental & public interest allocation

2. Regulation of Recharge

- Common law rules protecting quality and quantity
- RiWI Act quantity controls unsuitable
 - Infiltration works may not be wells
 - Well licensing written in terms of ‘use’ of water
 - Take & use licensing leveraging strategies for storage and extraction but offence provision provisions could not be used against injection
- Health Act controls on processing sewage
- EP Act controls on ‘discharge’ of ‘waste’
 - Licensing can apply to sewage works
 - Duty to minimize emissions inconsistent with injection

2. Recharge regulation reforms

- Better to bring recharge regulation under water legislation for both quantity & quality, with
 - Referral for consent by Env & Health Departments
 - secure metering / monitoring for both purposes

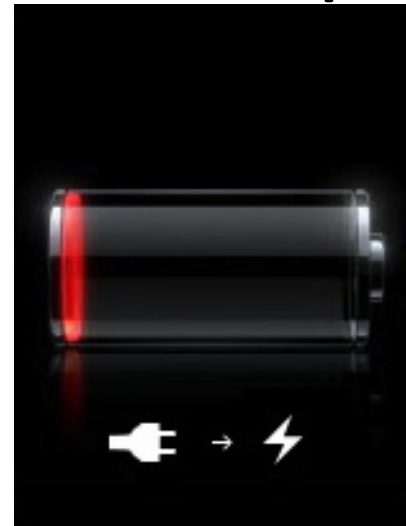
3. Security of Extraction

- MAR policy claims Departmental annual licensing discretion for extraction quantity
 - Reform: better to have secure, long term license with recognition of metered storage & annual adjustments to volume
 - Example of natural gas storage
- Water agency can't provide protection to land use threats to quality, except in declared reserves and catchments
 - Need greater involvement of water & env't agency in land use planning.

3(b) Novel approach to property rights in water recharged into aquifers



vs



- Discharge vs Recharge ...
- Effect of public vesting provisions on recharge water
- High Court of Aust: property is a “*legally endorsed concentration of power over things and resources*”

Conclusion

The new water resources management laws will:



set the rules for storing water in aquifers and later abstraction



provide security of ownership of stored water



deal with inconsistencies with other legislation e.g. *Environmental Protection Act 1986*



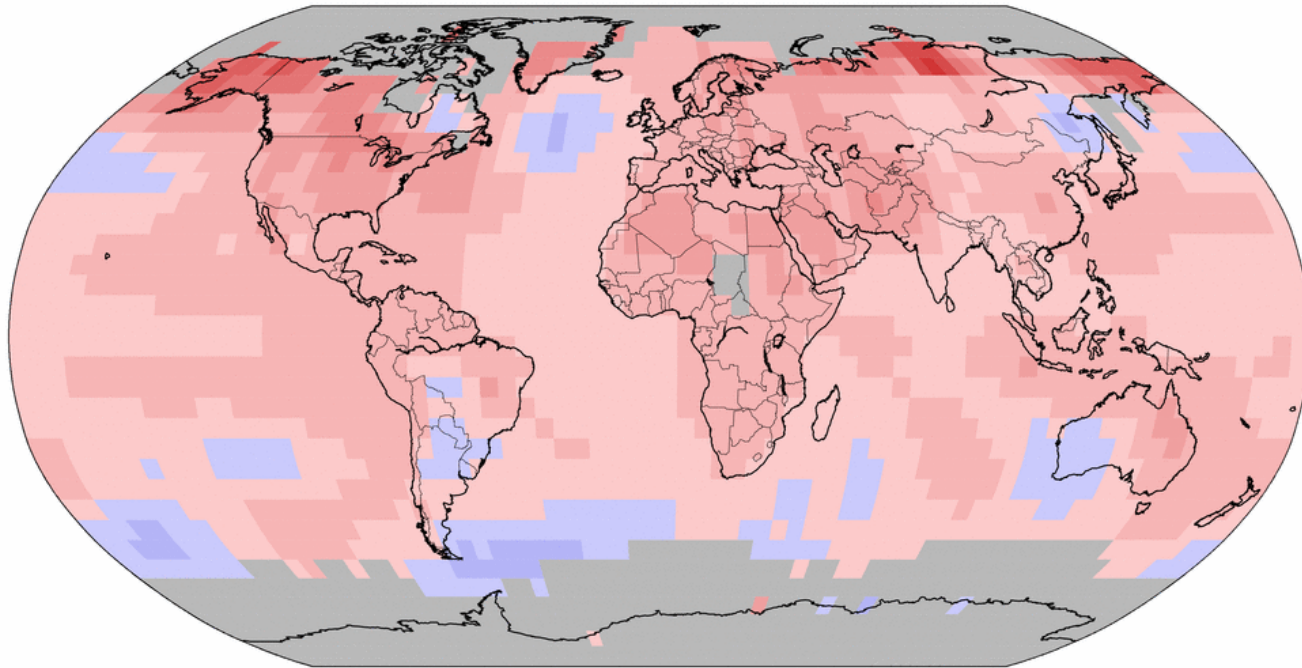
expand the available water options e.g. stormwater/ wastewater re-use

Environmental Water Allocations, especially to Ramsar Wetlands
Legal Duties to Provide Environmental Water

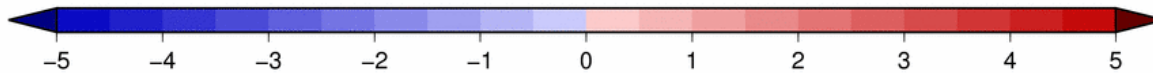
Global Average Temps, SW of WA, 2016

Land & Ocean Temperature Departure from Average Jan–Dec 2016
(with respect to a 1981–2010 base period)

Data Source: GHCN–M version 3.3.0 & ERSST version 4.0.0



National Centers for Environmental Information
Wed Jan 11 07:07:27 EST 2017



Degrees Celsius

Please Note: Gray areas represent missing data
Map Projection: Robinson

Hartfield Park Managed Aquifer Recharge Project

- Daniel Nelson -
Coordinator of Project
Delivery,
City of Kalamunda

