Sustainable Urban Water Management
– *without stealing rural water*

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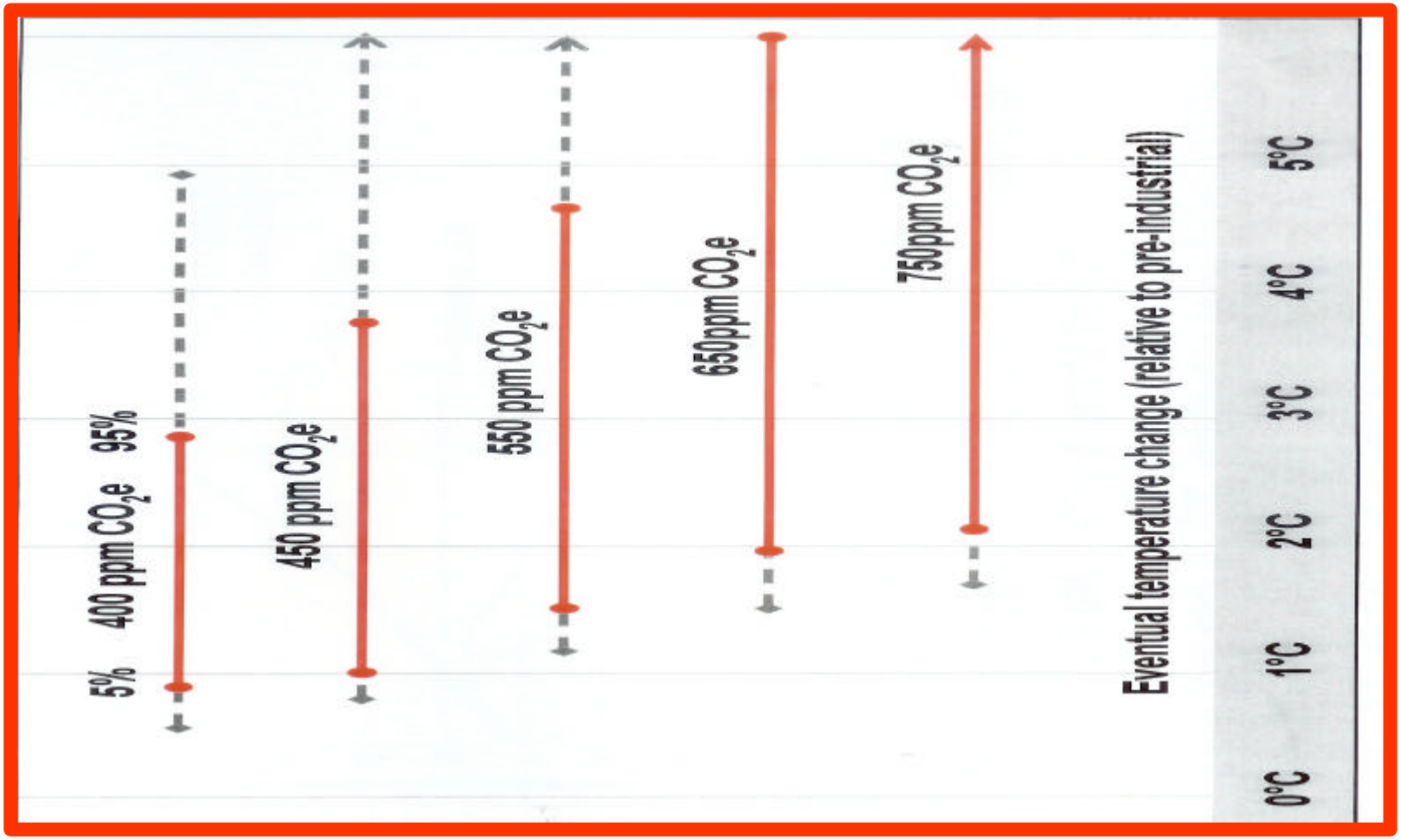
Australia urban water policy
- *litany of spin and failure*

- The climate excuse
- The crisis policy development
- The by-passing of due-process
- Policy is political, non-resource based and NOT based on sound economics and science.
- Community and non-urban users are isolated from decisions

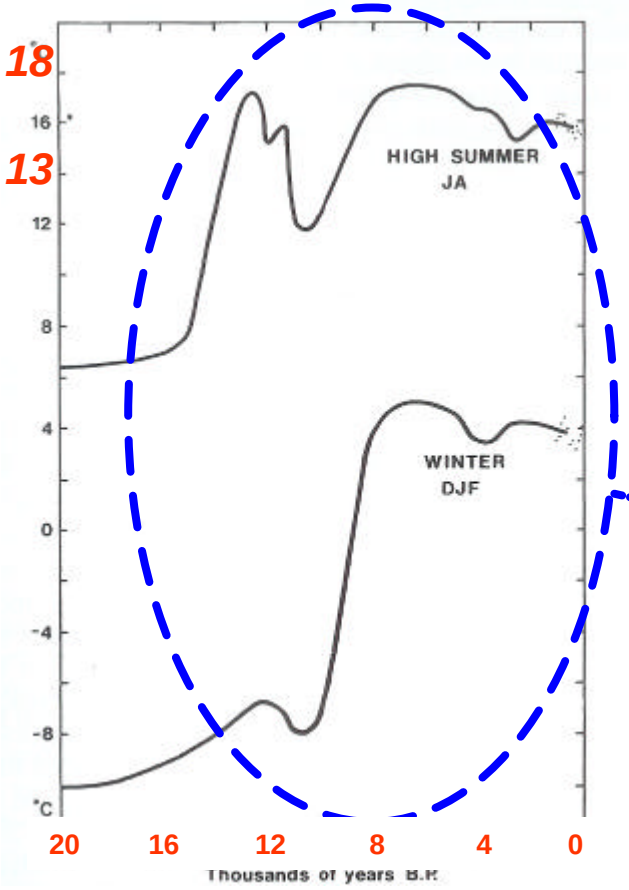
Sir Nicholas Stern's view

- the CO_2 economic crisis, 5^0C temperature rise

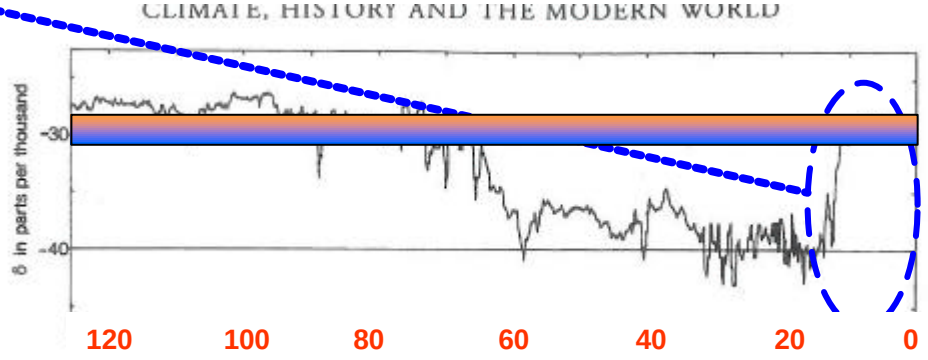


Climate variability

- *20,000 BP to now*



- ***Climate is not constant, never has been, never will be.***
- ***Current global climate pattern is on a natural cyclical high, has been for 9000 yrs***
- ***Human impacts are minor in the scheme of the earth's development***
- ***Policy and its associated planning, industry and development need a sanity check.***



Climate Change

the bureaucrats excuse for mis-management?

- **How many predictions have you seen that look at the consequences of 5ºC reductions in global temperatures and consequently water supply?**
- **In essence, climate is naturally variable & temperatures, rainfall etc vary up and down.**
- **The crisis humans face in urban areas is one of narrow, centralised, over-engineered solutions to water supply services overseen by weak urban water policy**

Societies which learnt the hard way

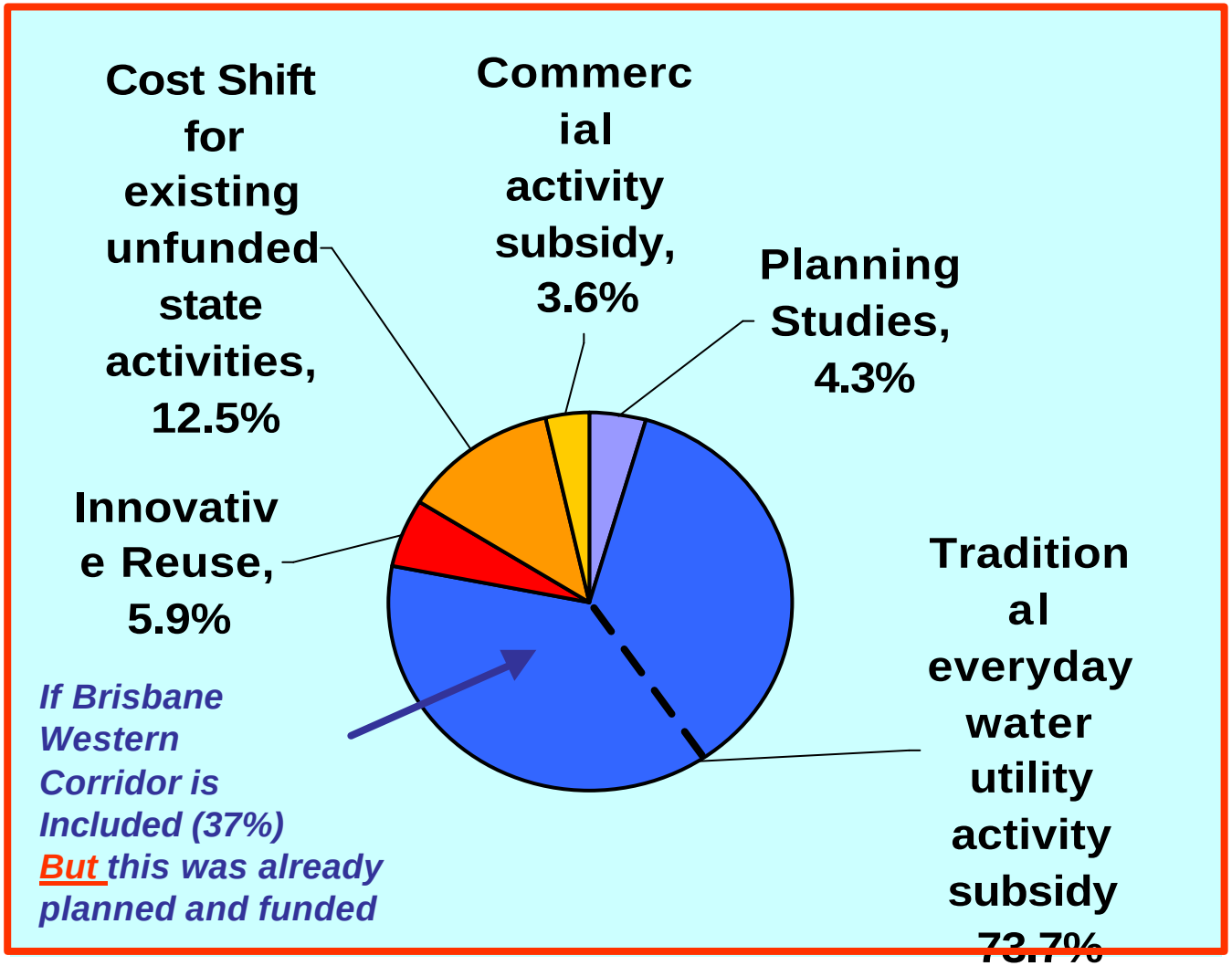
- **Mesopotamia** - Post-"Mini Ice Age" of 6200-5600BC explosion of population growth
- **Romans** - the climate driven plagues of 543-7 AD
- **Mayan, Central America** – 800AD collapse after 500 years of development driven by drought
- **Europe** - The late Middle Ages 1310-1315 AD
- **Europe** - The Black Death of 1348-9 AD
- **Europe** - The Little Ice Age 14th -18th Centuries
- **Ireland** - The Potato Famine of 1840's
- **The World** - in the 21st Century?

Current water policy solutions

- **Water trading**
  - Inaccurate Measurements
  - Losses in transmission
  - Impact of land value
  - Impact of regional economy
- **Recycling polluted seawater in coastal regions** (*e.g. Perth, Sydney, Gold Coast, Gosford & Wyong, Broken Hill……*)
  - Cost and energy
  - Inappropriate behavioural signal
  - Catch-up solution
  - Ignores receiving water impacts from the desal, waste and stormwater pollution
- **Water conservation and water restrictions**
  - Sydney and Perth failures…and now the lead-in to desalination plants
  - Water restrictions, the false economy & short-term solution

Pure, political distractions by old-style economists, Greens and the naïve who have access to the media!

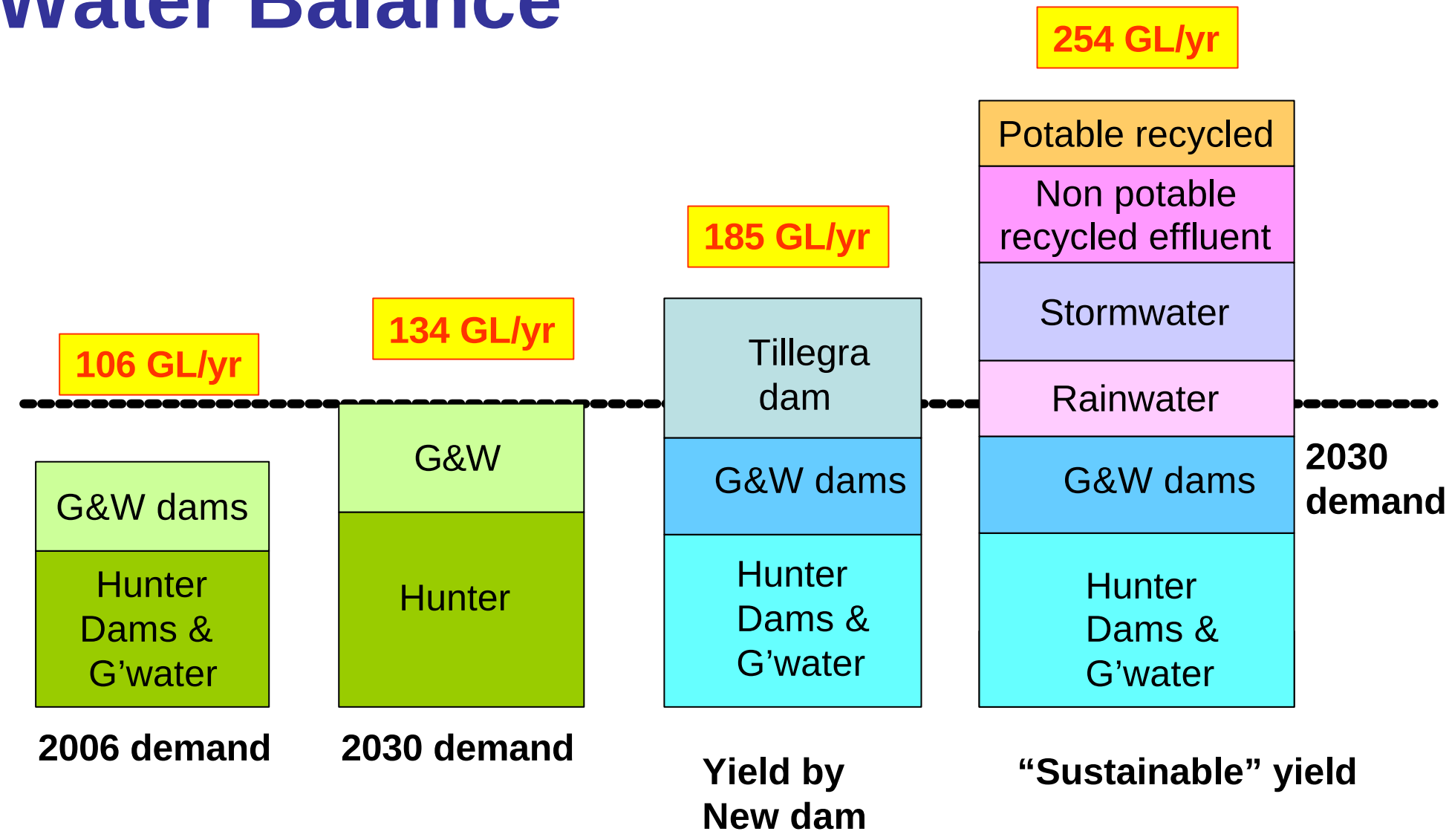
Breakdown in NWI funding by "reformist" impact.



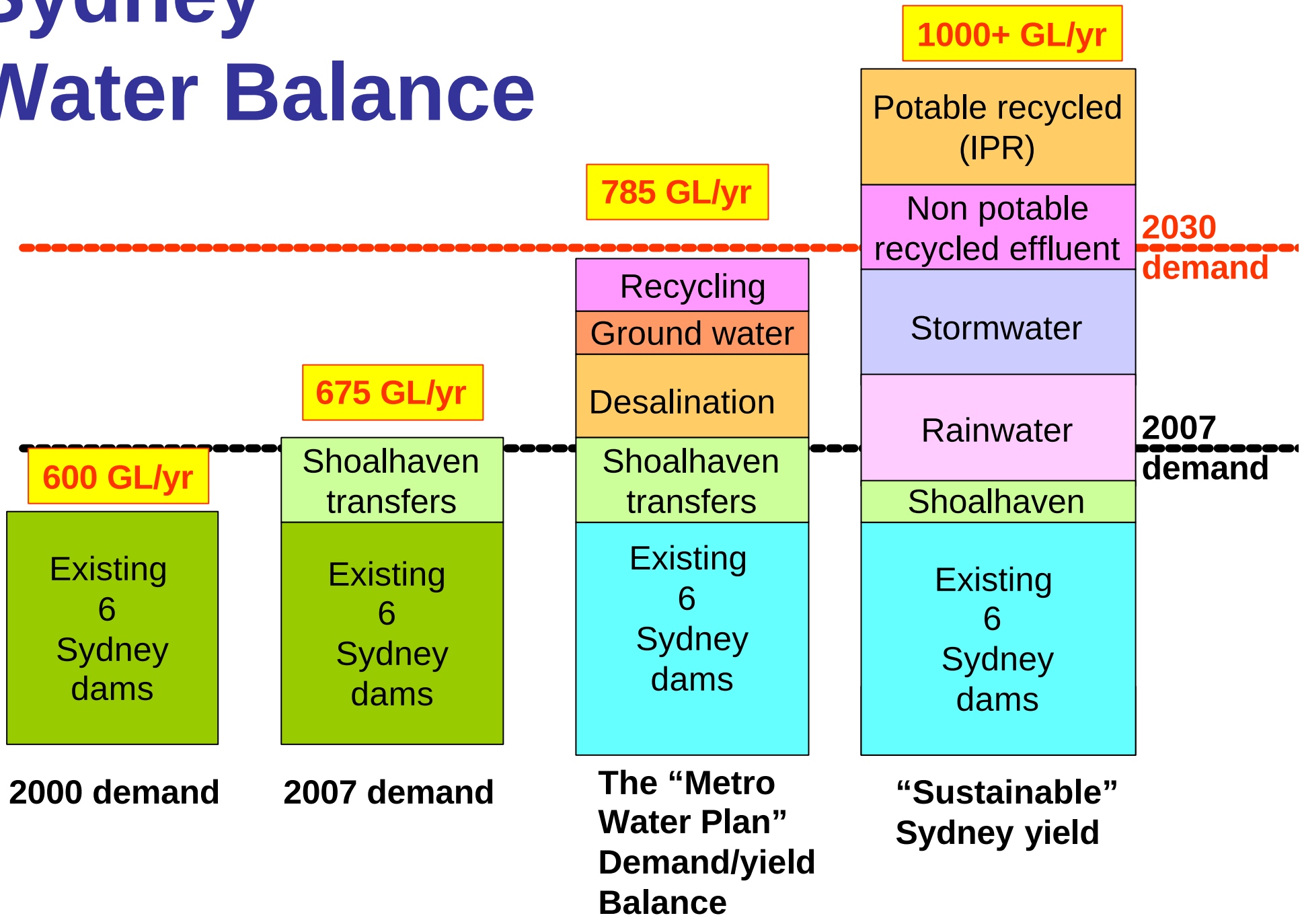
Examples of unsustainable urban water strategies

- **Sydney**
  - desalination & increased waterway pollution
  - Shoalhaven transfers
  - Groundwater extraction from S Highlands?
  - Lower Hawkesbury rural trading?
- **Central Coast & Hunter**
  - Build a new dam on prime agriculture land
  - Water trading

Hunter & Central Coast Water Balance



Sydney Water Balance



Establishing the low risk, “drought-proofed”urban water supplies

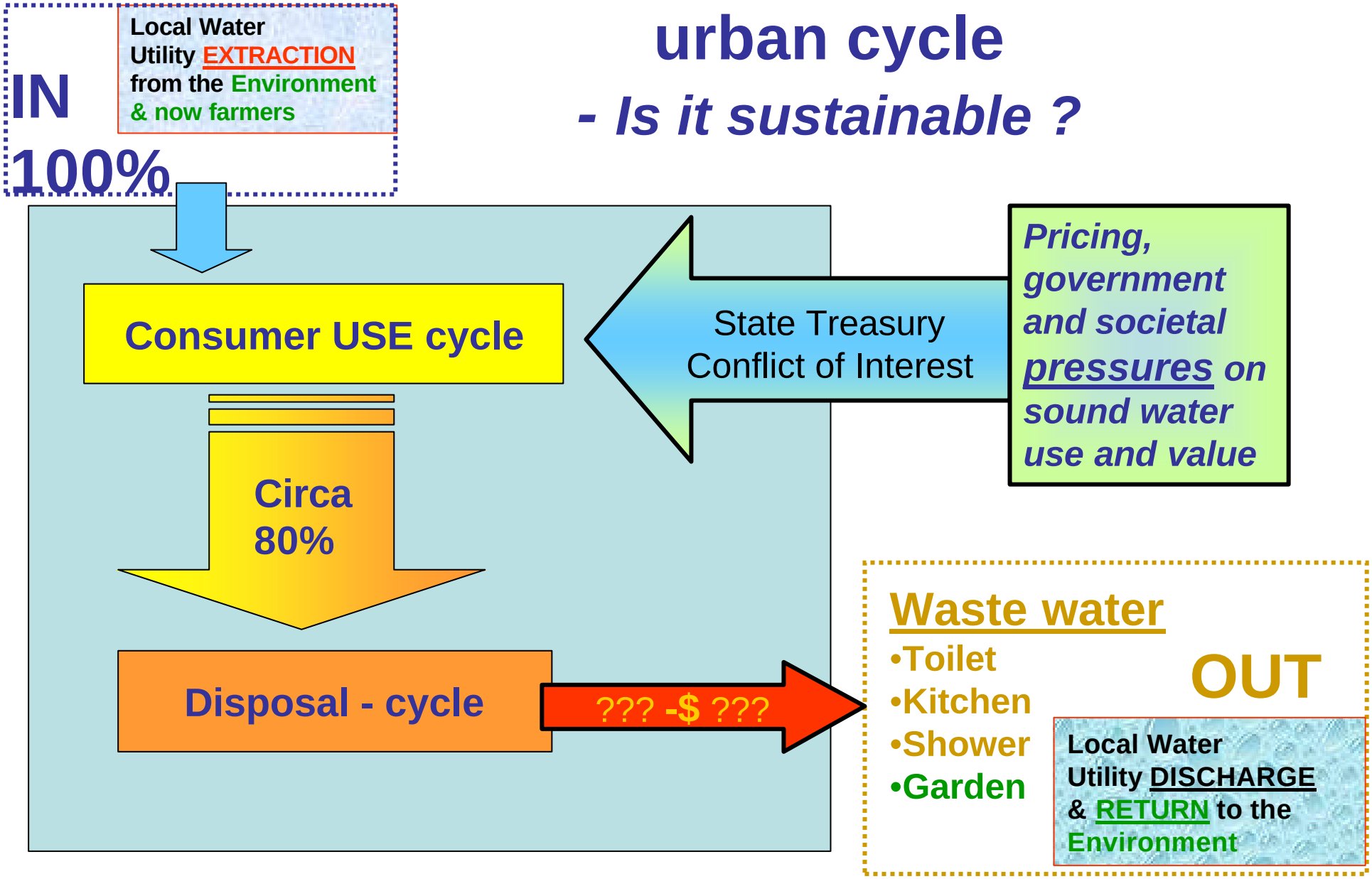
- Re-discovering “v*irgin*” sources
- Reforming mismanaged sources
- Addressing wasted sources
- Discouraging “d*umb*” water use
- Deleting “d*umb*” pricing

What can be done?

- Sensible, liveable water conservation
- Non potable recycling for industry & irrigation
- Potable recycling planned for future demand
- Urban water seasonally harvesting for new and existing buildings
- Pricing that is on & off-peak targeted
- Sustainable water cycle planning & management strategies that are auditable
- Improve understanding of water resources within global earth systems

The current water urban cycle

- Is it sustainable ?



Changes needed re previous diagram

- On-site harvesting of rainfall.
- On-site storage of rainfall.

40-70% supply

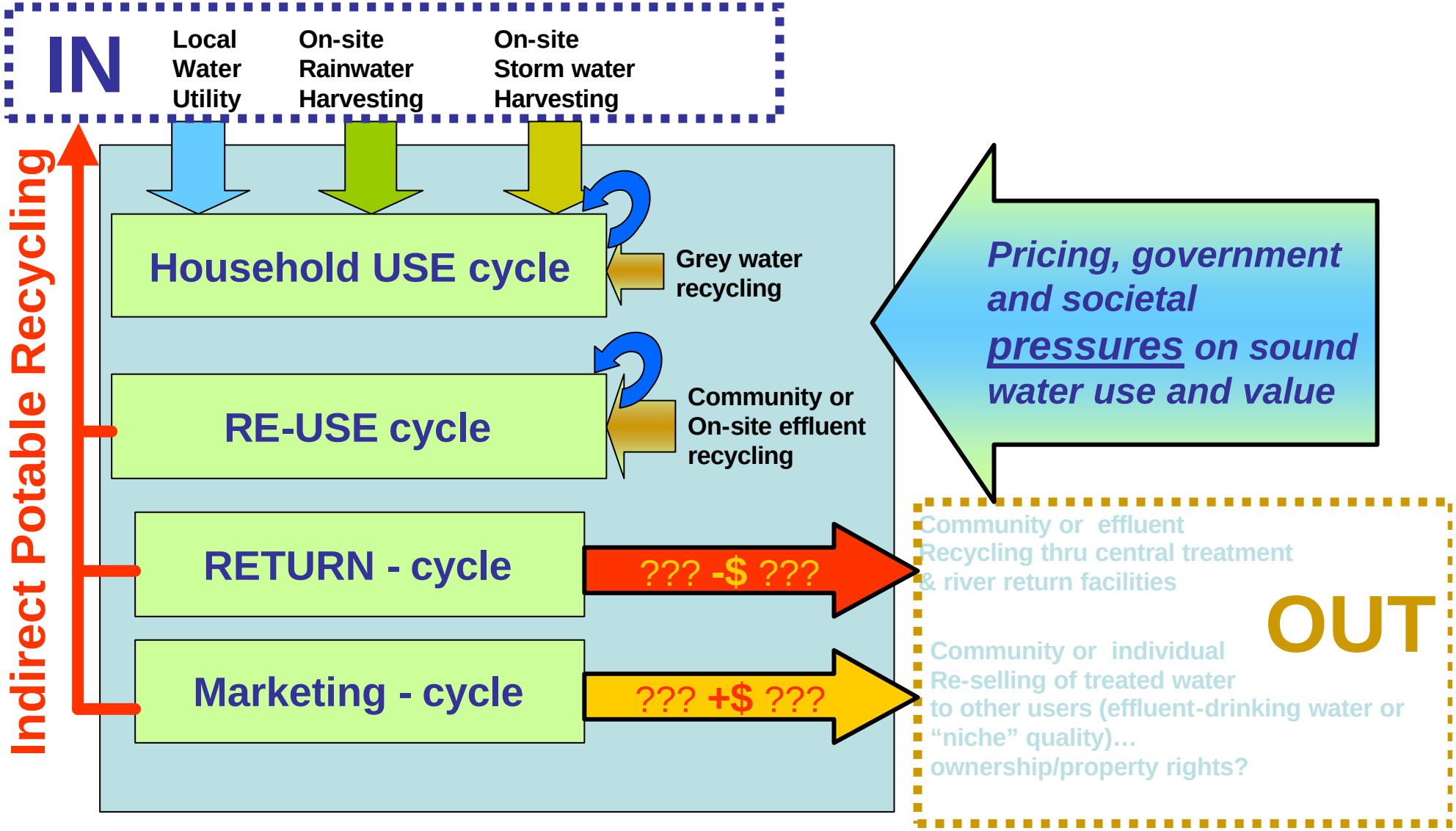
- On-site plumbing to water use in:
  - *Toilets (20% of current use)*
  - *Laundry(20% of Current use)*
  - *Hot water supply (15% of current use)*

40-70% demand

- On-site grey-water reuse (*10-25%, dependant on local/state government regulation*)
- On-site entry point for recycled water or adoption of IPR

The sustainable water urban household?

Example of the potential….if policy was soundly based!



100 year demand

(*twice current demand, minimum*)

Traditional

- Rural Water Theft
- No New dams
- Token urban harvesting
- Token non-potable recycling
- Desalination (DDPR)
- 50% energy increase
- 200% real price increase
- 100% increase in waterway pollution
- 200% water demand increase on water cycle
- No margin for extra growth

Sustainable

- No need for rural transfers
- No new dams
- 25% urban harvesting
- 25% Recycling (IPR)
- Desalination “fad” abandoned
- 25% energy increase
- 150-175% real price increase
- 50% reduction in waterway pollution
- NO increase on water demand from water cycle
- Excess capacity for growth/risk management

Current Urban Water Policy???

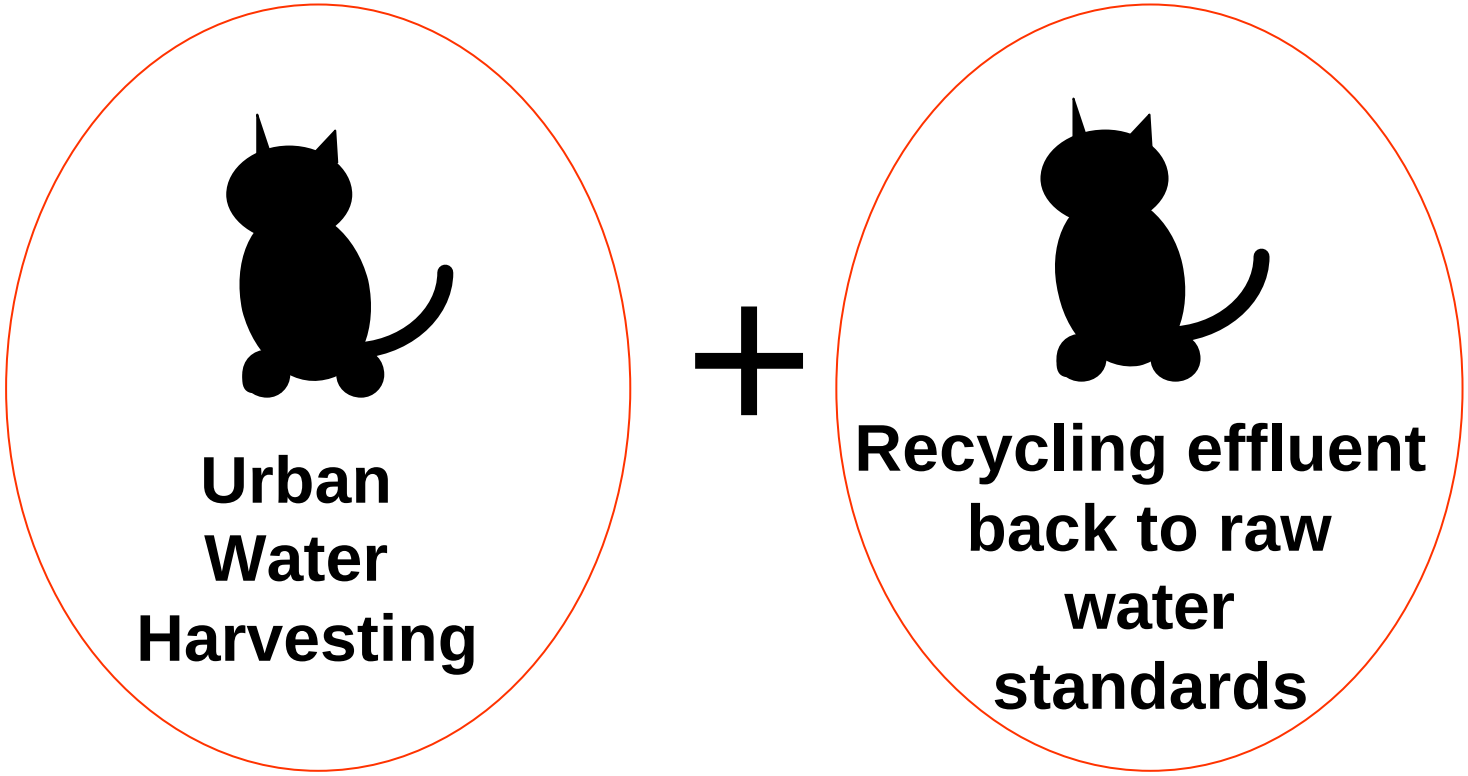
A Black Hole?

Behind closed doors?

or

Blindfolded bureaucrats,
under the orders of politicians
in a dark room,
looking for a black cat…..
that isn't there!!!

There are two good black cats in water security & sustainability



Can deliver 50% of existing demand

Can deliver 80% of future demand

Water for Sydney…. needs commonsense, transparency and the effective management the water cycles.

Environment

Society

Economy

We need to end water mis-management by the same *“old crisis managers”*