



# 50 Years from now what could water look like?

**Richard Long**

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# What would our planet look like without water?



- 71% of the Earth's surface is covered by water
- Only 2.5% of the water on Earth is fresh water
- Only 0.075% of the water on Earth is fresh water in liquid form on the surface
- By 2065 that's a 46m cube each
- In the west we'll each use that in our life time



**Water is precious**

# Water is precious – so who is looking after it?



<b>Market Operator Services Ltd</b>	<i>Enduring market operator for water markets</i>
<b>Drinking Water Quality Regulator for Scotland</b>	<i>Checks quality of drinking water in Scotland</i>
<b>The Health Protection Agency</b>	<i>Part of Public Health England</i>
<b>Regional Flood and Coastal Committees</b>	<i>12 in England - manage flood risk</i>
<b>Lead Local Flood Authorities</b>	<i>152 County Councils and Unitary Authorities</i>
<b>Owners of flood and coastal erosion risk management assets</b>	<i>Statutory responsibilities for maintenance</i>
<b>Land owners</b>	<i>Land drainage responsibilities</i>
<b>Highways England</b>	<i>Responsible for motorways and trunk roads in England</i>
<b>Risk Management Authorities</b>	<i>A term grouping some of the above</i>
<b>Department of Communities and Local Government</b>	<i>Ensures flood risk is managed in the planning process</i>
<b>Regulatory Policy Institute</b>	<i>Promotes study of the regulation of economic activity</i>
<b>The UK Regulators' Network</b>	<i>Cross-sector network for collaboration</i>
<b>Natural Resources Wales</b>	<i>Protects the natural resources of Wales</i>
<b>Drinking Water Inspectorate</b>	<i>Checks drinking water in England and Wales</i>
<b>Water Services Regulation Authority (Ofwat)</b>	<i>Economic regulator in England and Wales</i>
<b>Northern Ireland Department for Infrastructure</b>	<i>Improves quality of life in NI</i>
<b>Utility Regulator for Northern Ireland</b>	<i>Regulates gas, electricity and water in NI</i>
<b>Northern Ireland Water</b>	<i>Provides water and sewerage services</i>
<b>Local Government</b>	<i>Manage flood risk through the planning process</i>
<b>Internal Drainage Boards</b>	<i>Manage flood risk</i>
<b>Consumer Council for Water</b>	<i>Voice of water consumers in England &amp; Wales</i>
<b>Competition and Markets Authority</b>	<i>Promotes competition to benefit consumers</i>

# Regulation of Water in the UK

## Regulation of principal water actors, MMXXVII

# Fifty years ago...



Available new from £500

Englebert Humperdinck  
No1 in the UK charts  
with 'Release me'



Harold Wilson  
Prime Minister



UK a member of the  
European Free Trade  
Association



Sandi Shaw won the  
Eurovision Song Contest  
for the UK singing  
'Puppet on a String'



The Beatles release  
Sgt. Pepper's Lonely  
Hearts Club Band

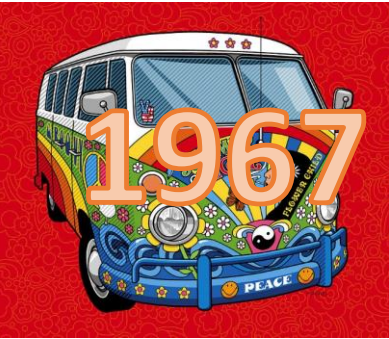
Donald Campbell killed on  
Coniston Water



Manchester Utd won the League Cup



# 50 years is a long time...



# So how did we get here?



THE BRITISH GAS PROSPECTUS WILL BE PUBLISHED ON NOVEMBER 25TH.

*If you see Sid tell him*



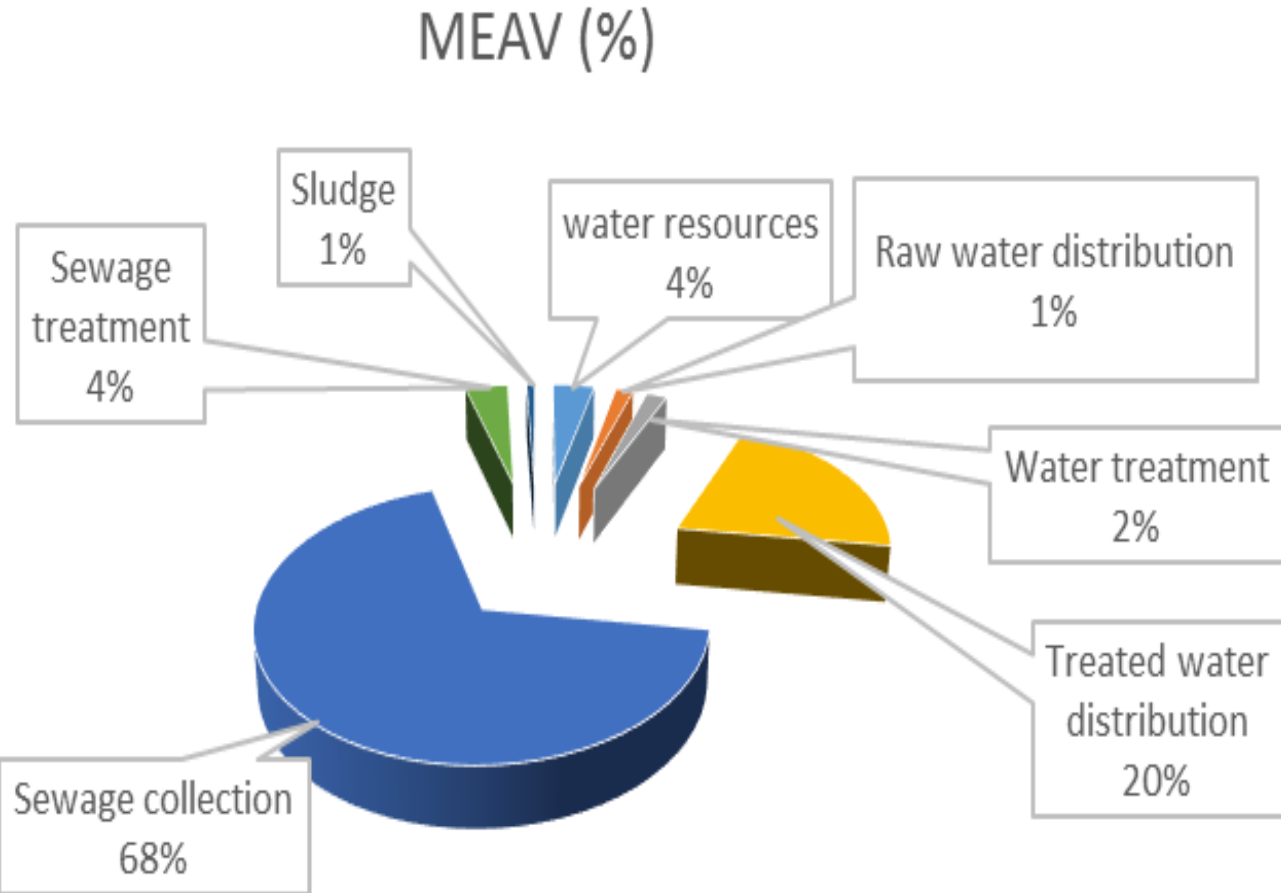
EU ENVIRONMENTAL LAW  
GEERT VAN CALSTER  
LEONIE REINS



ELGAR EUROPEAN LAW



# Financial realities of water privatisation in England and Wales



**Modern Equivalent Asset Value**  
**£224bn at privatisation**  
**£450bn today**

**Ofwat calculate the necessary return on capital invested based on Regulatory Capital Value, which is much less than MEAV.**

**£9bn at privatisation (1/25<sup>th</sup>)**  
**£65bn today (1/7<sup>th</sup>)**



# Water – a political issue?



There are increasing allegations that the water companies are using debt to lower their tax obligations. Tory MP, Charlie Elphicke, claims that the water companies have used debt interest to avoid tax adding up to over a billion pounds lost to the Exchequer in just three years. He terms the avoidance “staggering”.

China Investment Corporation  
中國投資有限責任公司



Some analysts believe the most highly leveraged water companies could be in danger of going bust if asked to pay back a significant proportion of that debt. In this sense, English households are now, often unknowingly, part of the somewhat risky financialisation of water.

Sir Ian Byatt, formerly of Offwat, himself makes the link between high dividends, high debt, and trouble getting finance. He states: “In practice, many companies, especially the private equity infrastructure funds, have paid out excessive dividends to their owners.”



CPP INVESTMENT



love every drop  
anglianwater



Global Asset Management



a YTL company



SINCE 1955



NORTHUMBRIAN WATER



Cheung Kong Infrastructure Holdings

# The reality of today...Wales, Scotland and Northern Ireland



**Scottish  
Water**  
Always serving Scotland

# Water is a political issue – so who is looking after it?

## Secretaries of State in the UK Government

Home Secretary	Defence	Justice	Education	Brexit	Internat'l Trade	Business, Energy..	Health	Work & Pensions	Transport	Comm & Local gov	Scotland	Wales	Northern Ireland	Eviron't, food & rural affairs	Internat'l develop't	Culture, media & sport
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**Therese Coffey**  
**Parliamentary Undersecretary of State for the environment and rural life opportunities**

- Natural environment
- Rural Life Opportunities
- Flood, water and waterways
- Air quality
- Resource and environment management



**Lord Gardner of Kimble**  
**Parliamentary Undersecretary of State for Rural Affairs and Biosecurity**

- rural ambassador and rural affairs
- biosecurity strategy
- animal health and welfare
- commercial projects
- landscape, including litter and national parks
- climate change adaptation
- National Pollinator Strategy



**Secretary of State for Environment, Food and Rural Affairs**

**Andrea Leadsom**



**George Eustice**

**Minister of State for Farming, Food and the Marine Environment, Food and Rural Affairs**

- Food and farming
- Fisheries
- Better regulation
- Science and innovation





# What might happen in the next 50 years?

## Politics

- UK will leave the EC
- Financial crises
- Economic power move
- Left/right swings
- War

## Technology

- Internet of Things
- The technological singularity
- Resource recovery
- Social media
- New utility delivery models



## Social change

- Famine
- Political and social unrest
- Resource wars
- Mass migration
- Ageing population

## Environmental change

- Climate change
  - Drought
  - Flood
- Sea level rises

# How are other utility industries owned and regulated in the UK?



## Gas

Assets privately owned by companies such as National Grid and gas distribution network companies. Competitive retail market Regulated by Ofgem.

## Rail

Infrastructure assets owned by Network Rail, an arms-length public body. Trains owned and operated by Train Operating Companies with limited-term franchises. Regulated by the Office of Road and Rail.



## Electricity

Assets privately owned by regional transmission companies and 14 distribution network operators. Competitive retail market. Regulated by Ofgem.

## Highways

State-owned, operated by Highways England (motorways and major A roads) and local government. Highways England is a government company. Monitored by the Office of Road and Rail.



# How do other countries manage water?

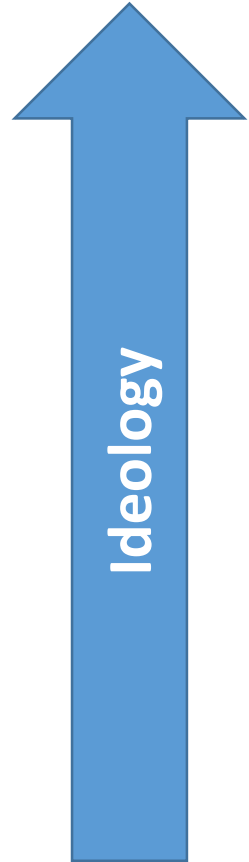


**Publically owned and  
privately operated**  
Management contract  
Concession

**Publically owned  
and operated**  
Municipality

**Privately owned  
and operated**  
Divestiture

# Scenarios



## Renationalisation

For ideological reasons but without understanding of or commitment to long term needs. Return to the bad old days.

## More of the same

Water provided by a few privately owned offshore monopolies for an antagonistic public. Regulatory capture. Too big to fail. Costs fall to future generations.

## Community

Water run by and for the local community. No bigger than it needs to be. Balances economies of scale with local determination. Long-term view.

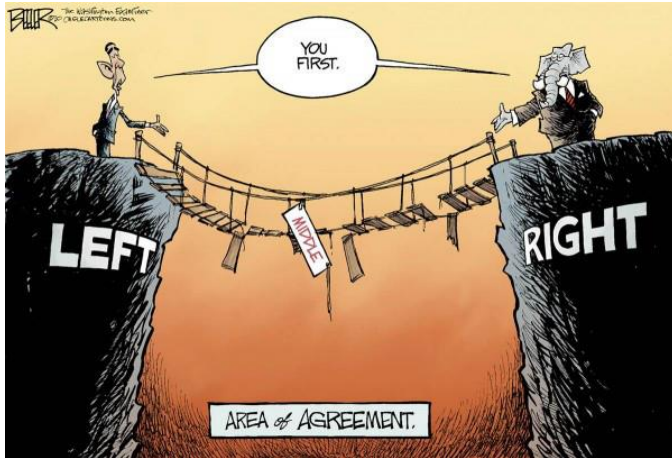
## Institutional restructuring

Infrastructure ownership returned to the communities it serves. Retail in private hands with competitive letting of contracts. Resource recovery.





# Who decides?



Political ideologues?



Bureaucrats?



Private Equity Investors?



You and me?

So, can we fix it?



HAPPY NEW YEAR

2067!!





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