

Ensuring buildings are fit for the long term purpose

Greg Davies

3rd December 2013

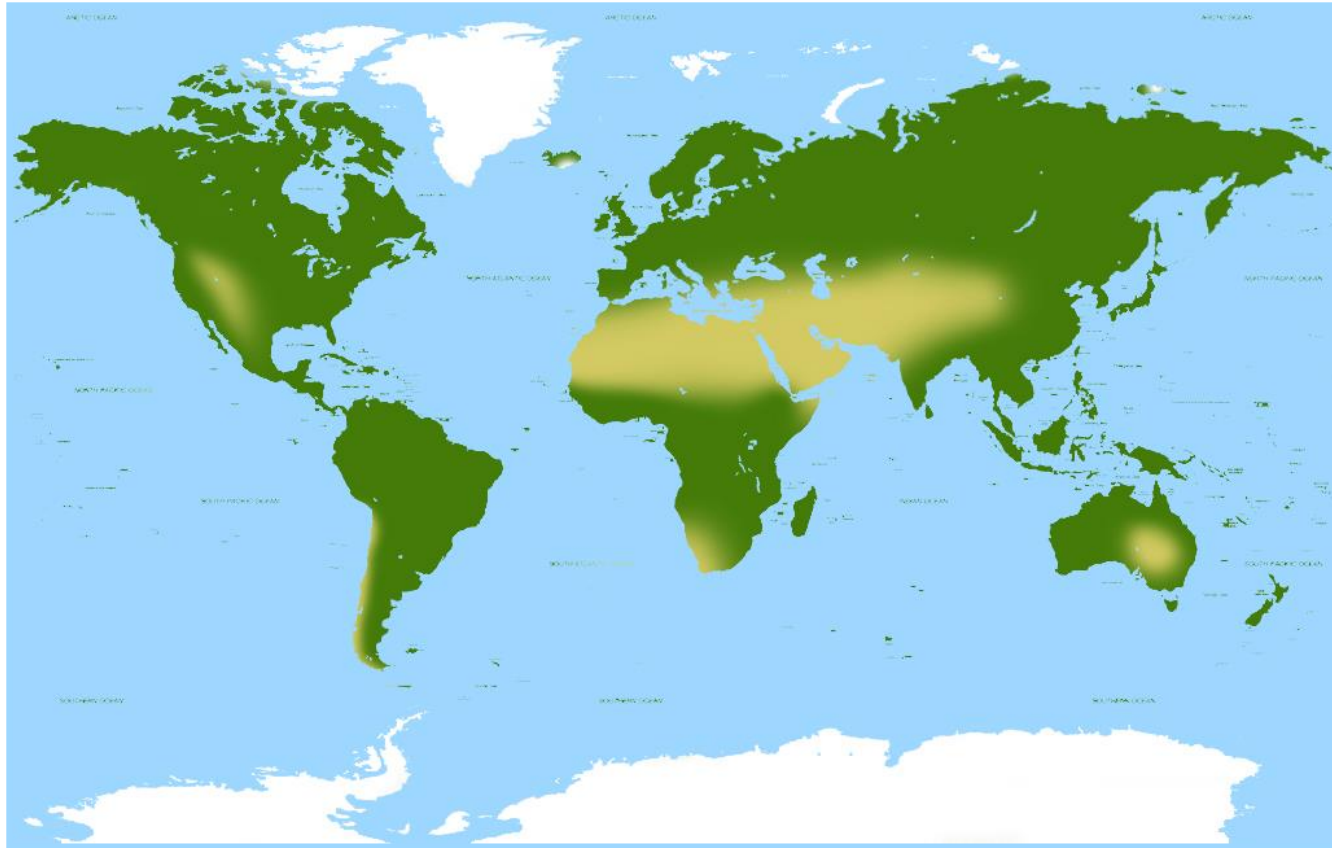


Ensuring buildings are fit for the long term purpose

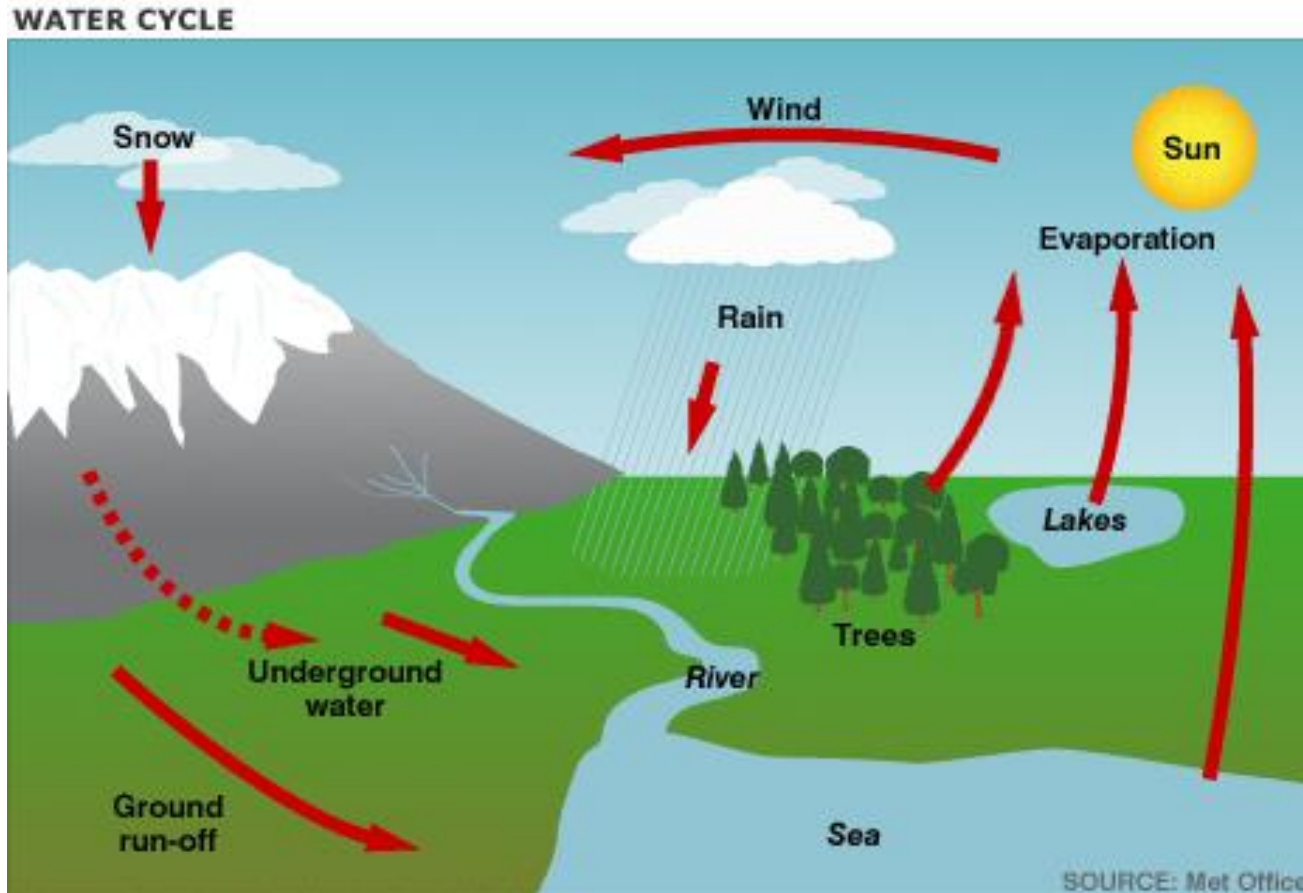
Agenda

1. Water - The big picture
2. Water and buildings

1. Water - The big picture



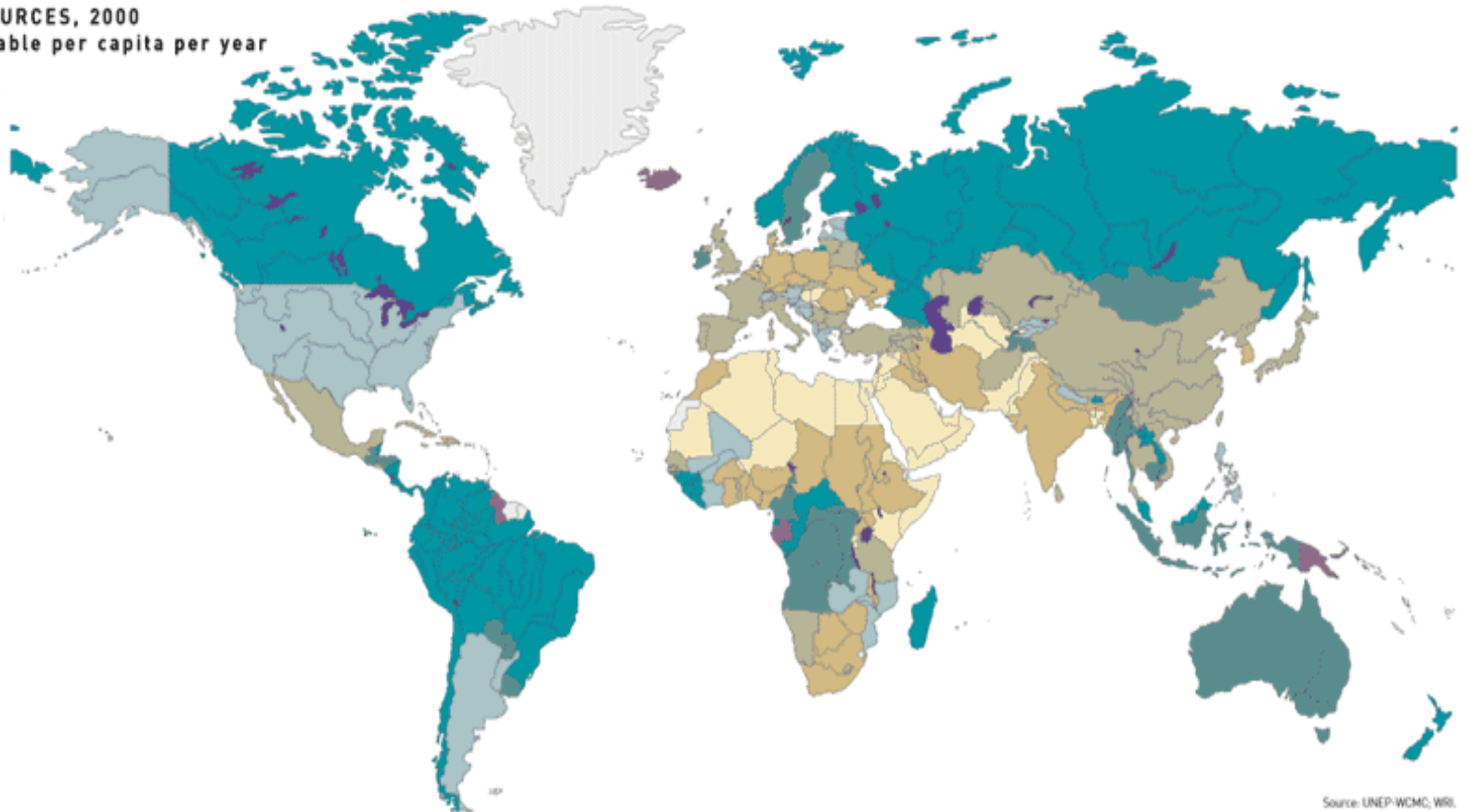
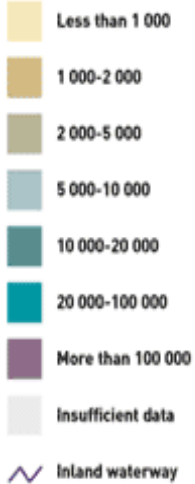
1. Water - The big picture



1. Water - The big picture

FRESHWATER RESOURCES, 2000

Cubic meters available per capita per year



Source: UNEP-WCMC, WRI.

1. Water - The big picture

1. Mozambique, Haiti, Kenya Cambodia, Bangladesh	Less than 50 litres/day
2. China	50 - 100 litres/day
3. India	100 - 150 litres/day
4. Germany, Brazil, Peru	150 - 200 litres/day
5. Austria, Denmark	200 - 250 litres/day
6. France	250 - 300 litres/day
7. Spain, Norway	350 - 400 litres/day
8. Italy, Japan, Mexico	400 - 450 litres/day
9. Australia	450 - 500 litres/day
10. USA	550 + litres/day

1. Water - The big picture



Note: The boundaries and names shown and the designations used on this map do not imply official endorsement or acceptance by the United Nations.

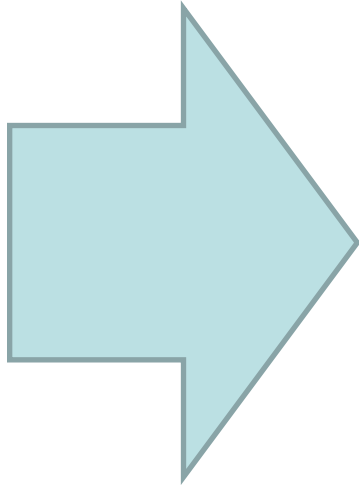
Source: Smakhtin, Revenga and Doll 2004.

1. Water - The big picture



Water UK figures

2. Water and buildings



2. Water and buildings

What comes in...



2. Water and buildings

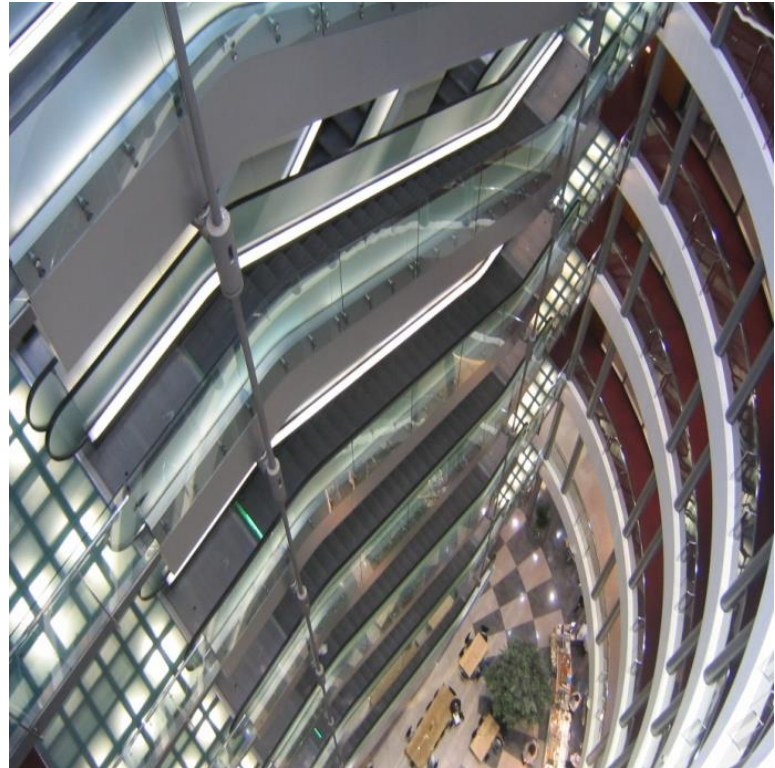
What comes in...



2. Water and buildings

What do we do with it...

1. Drinking
2. Sanitation
3. Washing
4. Cleaning
5. Catering
6. Heating/cooling
7. Humidifying
8. Landscaping/gardening
9. Fire protection
10. Laundry
11. Recreation
12. Aesthetics (water features/atria)



2. Water and buildings

What factors affect it? - Legal

Regulators and water

1. Water Services Regulatory Authority (Ofwat)
 - Regulators of water finance and economics
2. Drinking Water Inspectorate
 - Regulators of drinking water quality
3. Environment Agency (EA)
 - Regulators of the water environment
4. Health and Safety Executive (HSE)/Local authorities
 - Regulators of water health and safety

2. Water and buildings

What factors affect it? - Financial



Ofwat figures 2009

2. Water and buildings

What factors affect it? - Financial

- Two thirds of businesses don't measure or monitor water usage
- 85% have no water reduction targets
- Only 22% of members of Legal Sector Alliance have set water reduction target (2010 survey)
- Potential cost saving to business of £10 million per day

2. Water and buildings

What factors affect it? - Moral

Types of contamination

- Microbiological (Legionella, Cryptosporidium, Pseudomonas, coliforms and E.coli)
- Chemical (excessive chlorine, lead, sodium, nitrates)



Pollution

- Fuel oil, diesel, other storage/interceptors
- Processes?



2. Water and buildings

What factors affect it? - Moral



2. Water and buildings

What factors affect it? - Reputational

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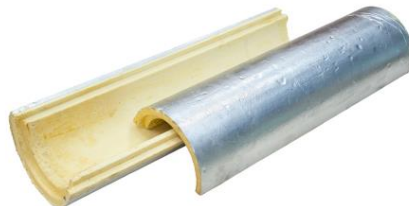
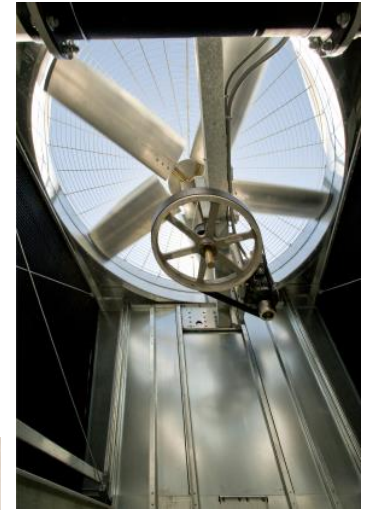


Leadership in Energy and Environmental Design

GREEN BUILDING

2. Water and buildings

What factors affect it? - Reputational



2. Water and buildings

In summary

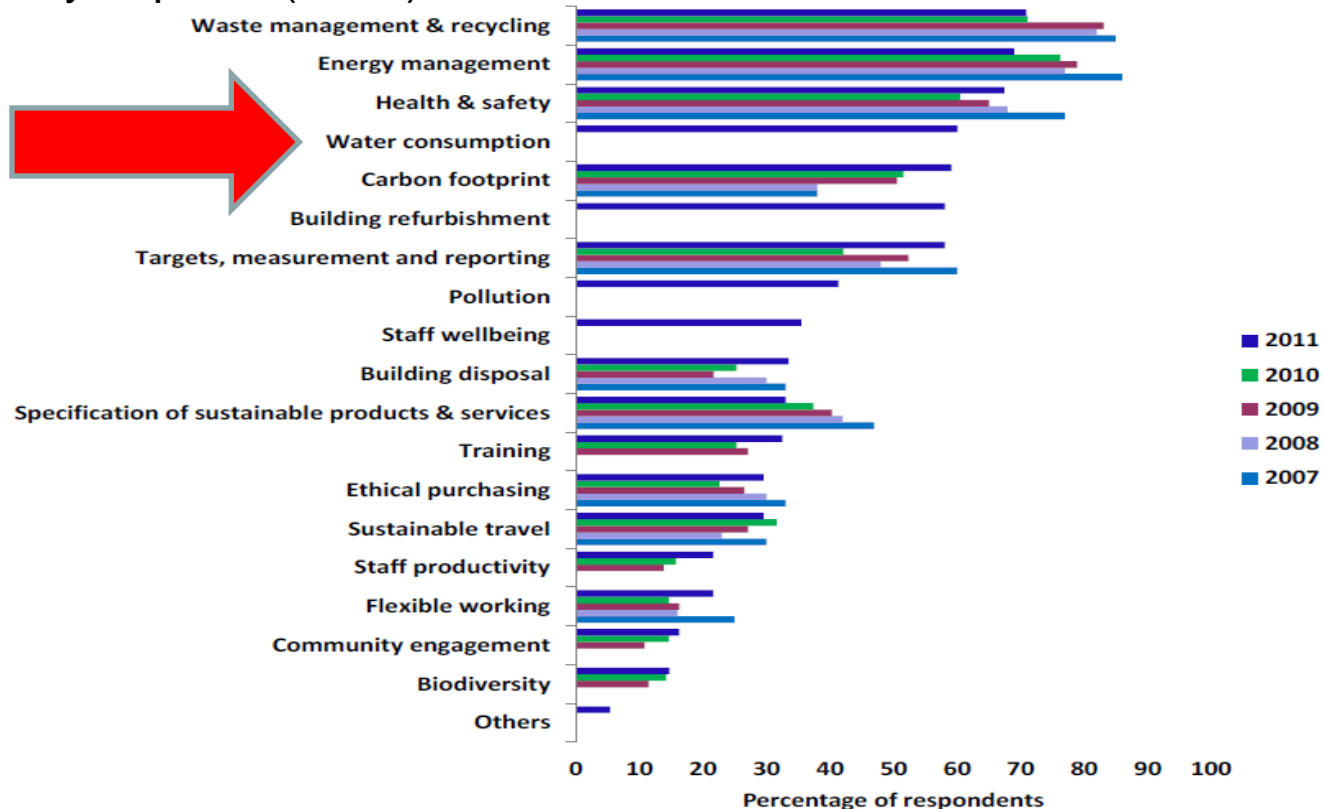
- Understand your risks
- Understand your water usage
 - Profile and educate users
 - Set combined targets
- Control water flow rates and water pressure
- Sub meter if you have a tenant
- Look at new technology in the long term
 - Manage and train
- Cooling tower rebates available
- Enhanced capital allowances for water efficient technologies
 - 100% of cost against taxable profits in first year
 - Eligible products in Water Technology List (WTL)



2. Water and buildings

In summary

The annual BIFM sustainability survey 2011/12 - Responsibility for sustainability aspects (trend)



Thank you, any questions?

“Only a fool tests the depth of the water with both feet!”

“The formula for water is H_2O . Is the formula for an ice cube H_2O squared!”

“When the well’s dry we know the worth of water!”

Greg Davies

Head of Service Development

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