



# Background

Bathing Waters Directive (2006)

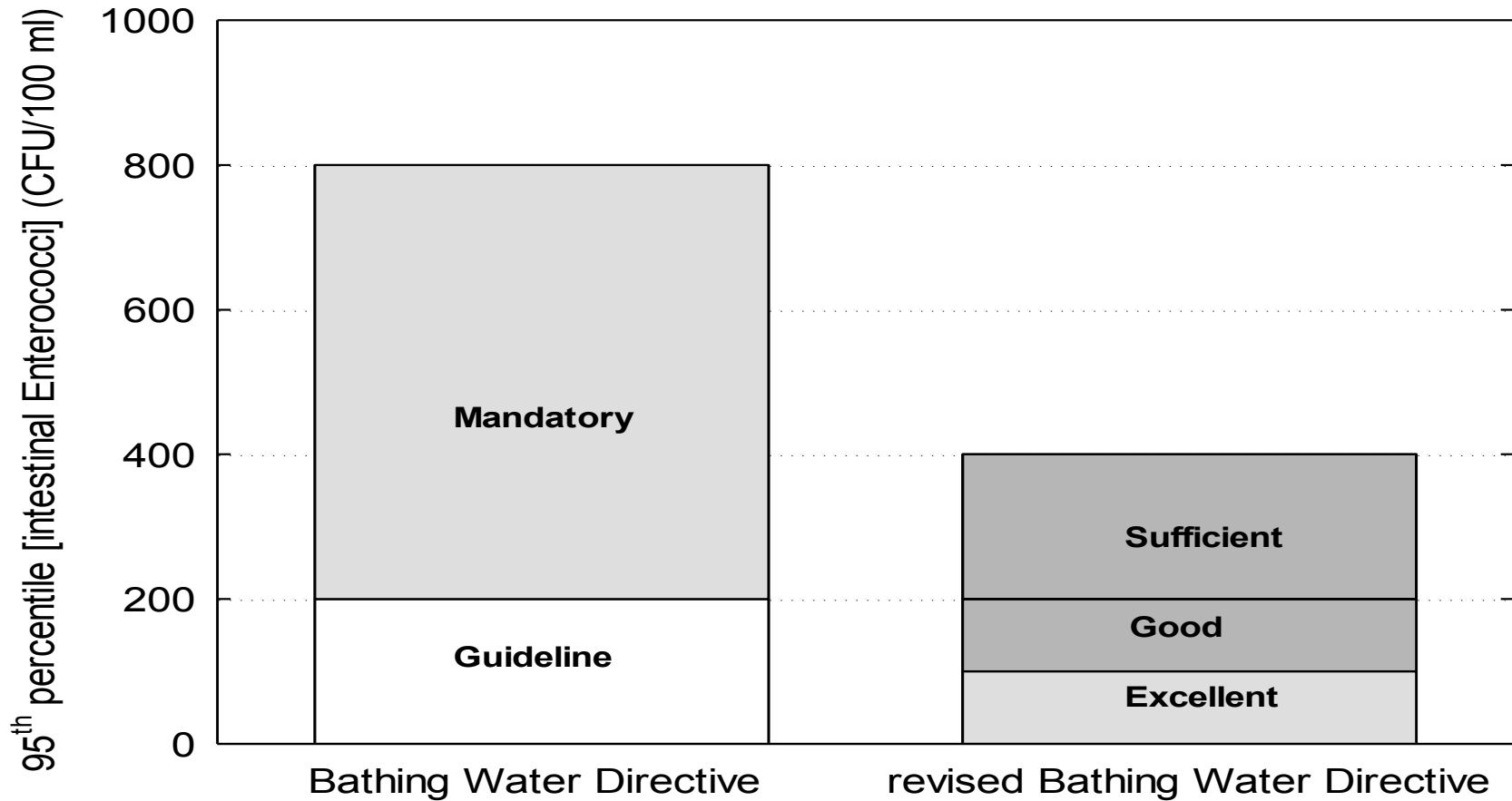
New classifications: **2015**



Photo courtesy of Andy Cummins



UNIVERSITY OF  
STIRLING



*Courtesy of Defra*

# Background

Bathing Waters Directive (2006)

New classifications: **2015**

Immediate focus: healthy debates  
across academic, policy & regulatory  
boundaries ...

... but a more subtle yet equally  
complex debate also taking shape



Photo courtesy of Andy Cummins



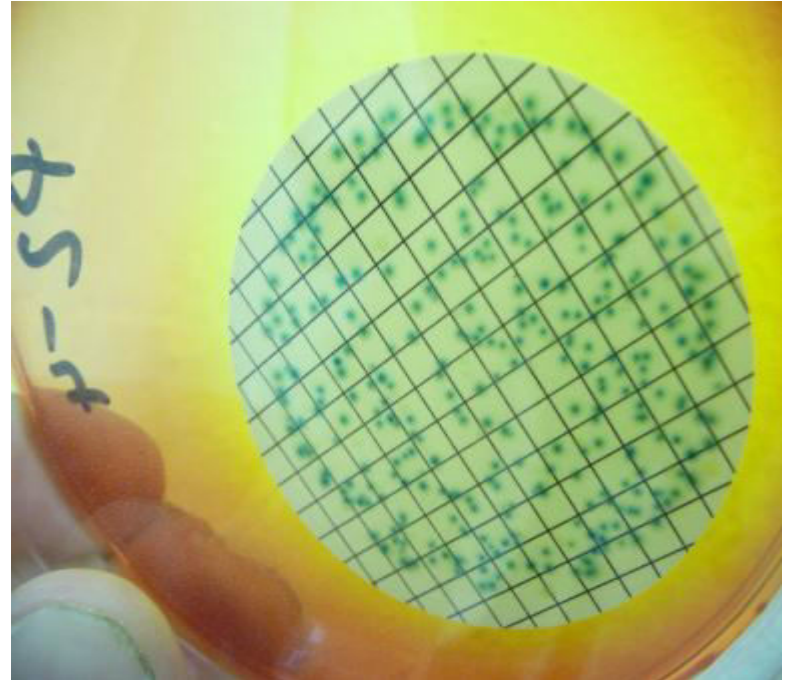
# The debate?

‘The need for speed’?

New recreational water quality  
criteria in the US

Translate technological innovation  
into up-to-date regulation?

Delivering Healthy Water:  
Working Group



# Overarching aim of DHW

Promote shared understanding of the environmental & social science evidence-base underpinning current & emerging microbial quantification techniques & wider implications of their application



# Key to this process:



1. Regulatory, policy & stakeholder needs
2. How science providers can align with these needs
3. Immediate & wider social & economic impacts



# 1) Direct cost implications: investment, infrastructure & logistics

- High upfront costs
- Training / specialist staff
- Concurrent analysis (equivalence)
- Infrastructure re-organisation
- Benefits –  
long term & difficult to estimate



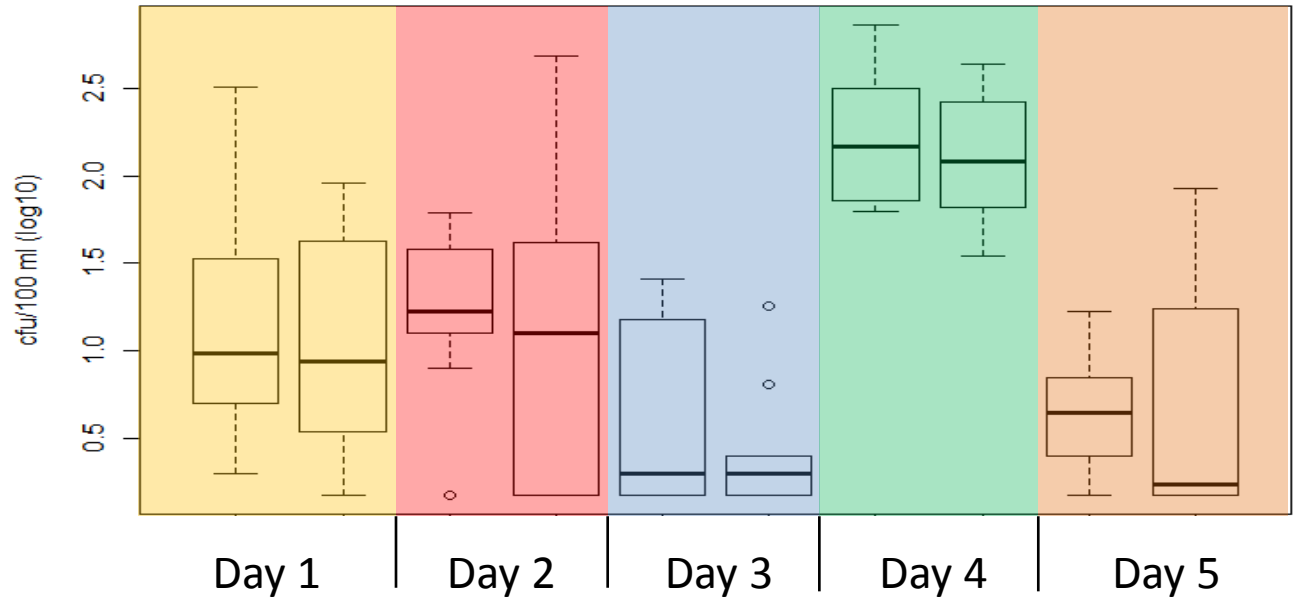


## 2) Types of information: the what, when & how

Long-term & macro-scale vs micro-decisions of individuals

Know fast – once  
a week?

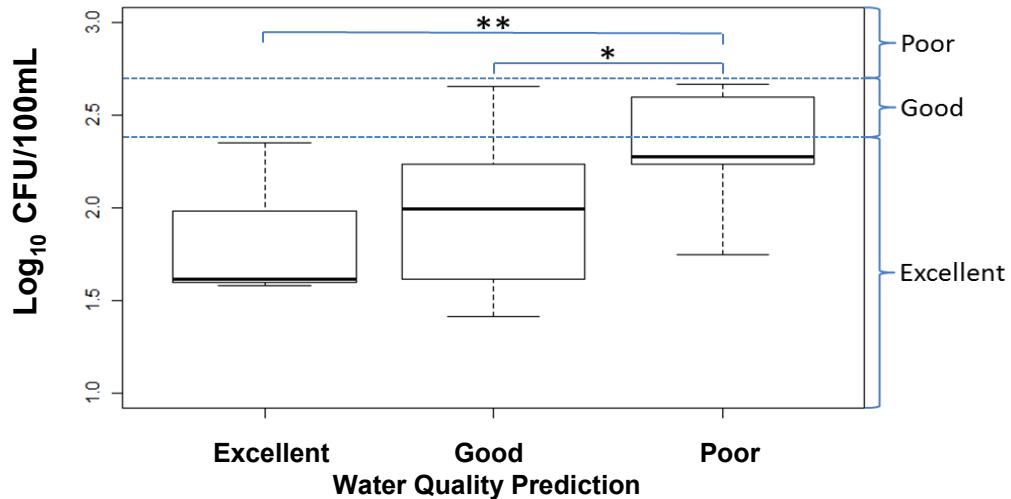
Predictive  
modelling an  
alternative ‘rapid  
method’?



# Public perception

Excellent – Good –  
Sufficient

Beach-user acceptability  
threshold?



- Form, timing & method of rapid info provision
- Variability of effectiveness across different groups

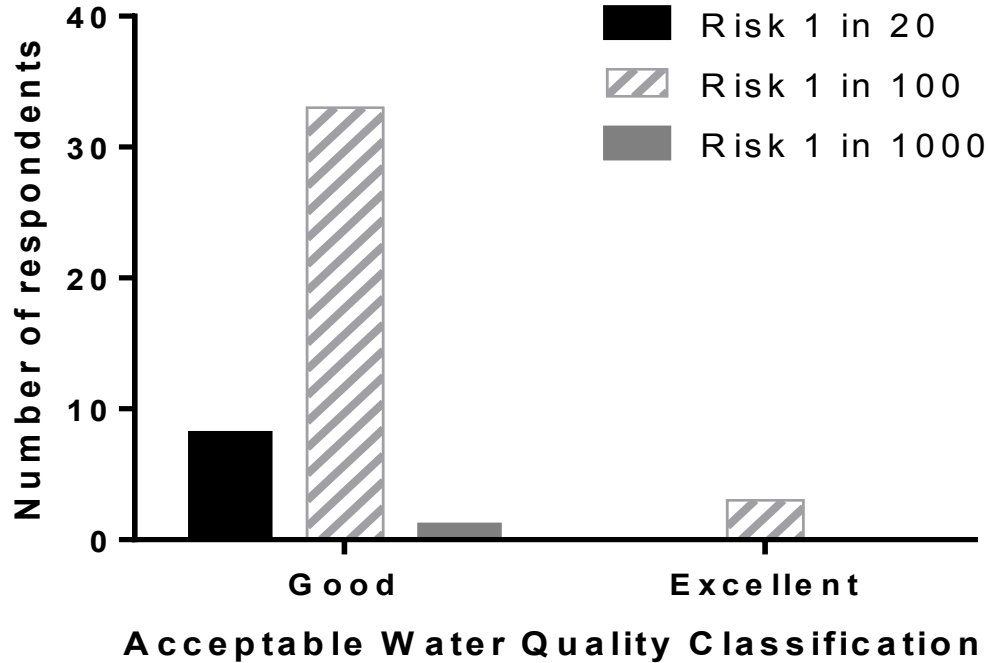
# 3) How to measure & communicate risk



## Symbols for informing on bathing prohibition or advice against bathing



# 3) How to measure & communicate risk



Water quality rather than health-based classifications are used

# 4) How to measure the success of rapid methods?

Alternative interpretations & measures against backdrop of WQ results

Visitor behaviour & activities

Transfers of visitor spending

Other cultural & ecosystem services



# 5) How to value a day at the beach & the cost of illness

Does investment needed to deliver rapid methods  
=  
Large enough benefits over time ?

Healthcare savings &  
reduction in lost working  
days?

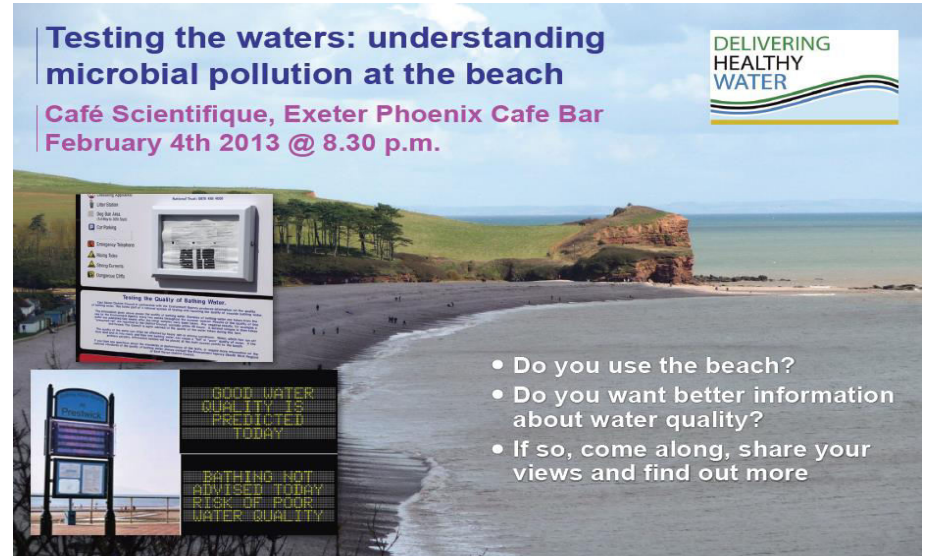
WTP of public for receiving  
rapid info?



# 6) Changes in Beach Visitor Behaviour

Regional variations in local economic structures & beach-user attitudes

Local awareness vs visitor knowledge



**Testing the waters: understanding microbial pollution at the beach**  
Café Scientifique, Exeter Phoenix Cafe Bar  
February 4th 2013 @ 8.30 p.m.

DELIVERING HEALTHY WATER

- Do you use the beach?
- Do you want better information about water quality?
- If so, come along, share your views and find out more

Opportunities for novel participatory approaches

# A 'culture' change in beach management?



What information do people require, how quickly do they need it & how is it best distributed?

Does prediction of water quality have more value to beach users than “real” water quality data?

Rapid methods don't need to be lab-based





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