

# Building climate resilience into decision making

Climate Change Partnership for Yorkshire &  
Humber

John Firth, CEO and co-founder

Acclimatise

23<sup>rd</sup> April 2010



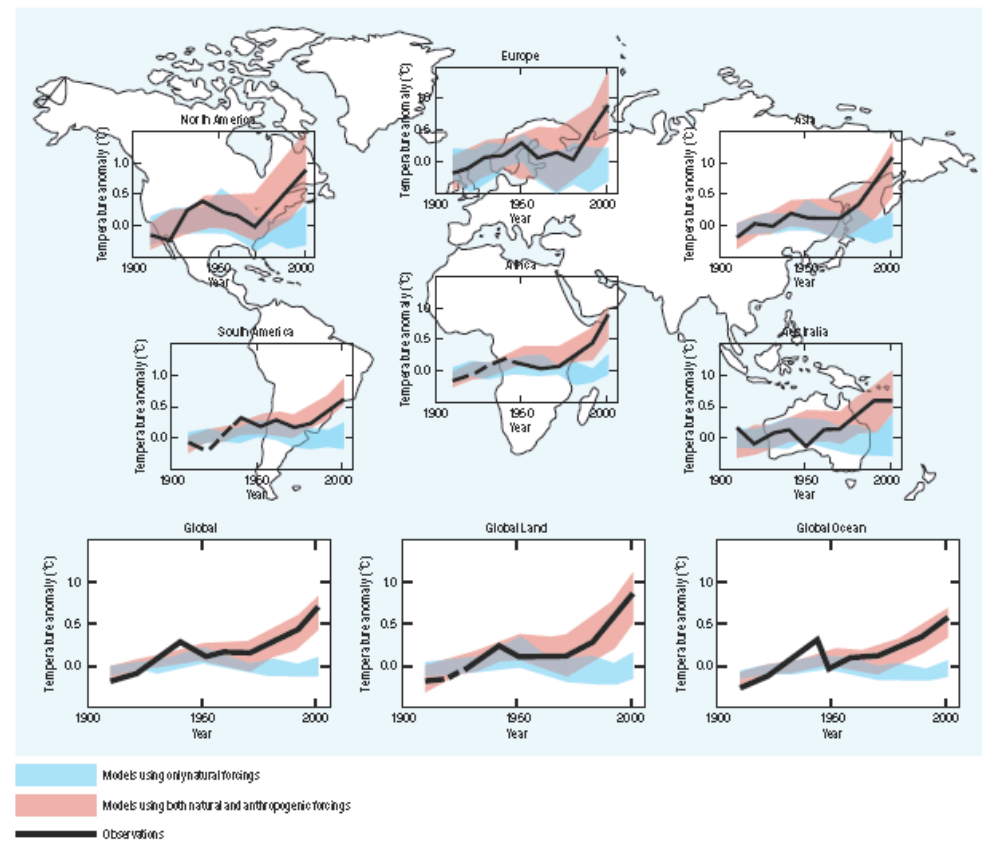
# Overview

- Context: climatic change is a mainstream business challenge
- Business challenges, impacts and responses
- Adaptation reporting power

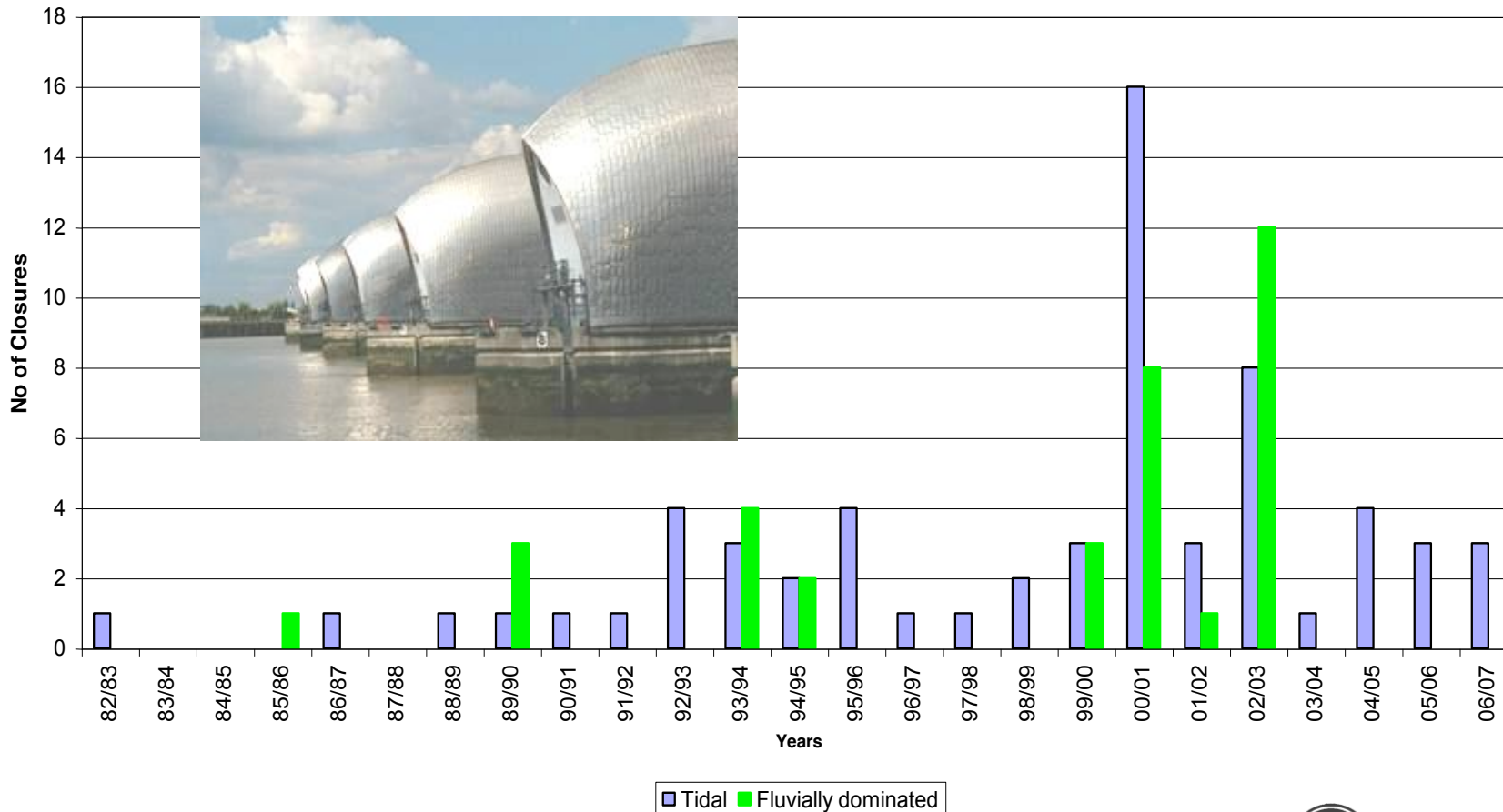
# Adapting to inevitable climate change

- Climate change is underway.
  - Whatever steps we take to limit GHG concentrations we are now faced with decades of increasing temperatures and possibly centuries of sea-level rise.
  - Limiting global average temperature rise to 2°C is looking increasingly challenging. If we fail the adaptation challenge becomes even greater.
- Significant impacts of extreme events and incremental changes in climate are already evident.
- Carbon neutrality does not create business resilience.
- Businesses face two climate challenges, not one. They must:
  - Reduce emissions to avoid the unmanageable**AND**
  - Adapt to the climatic changes already underway to manage the unavoidable

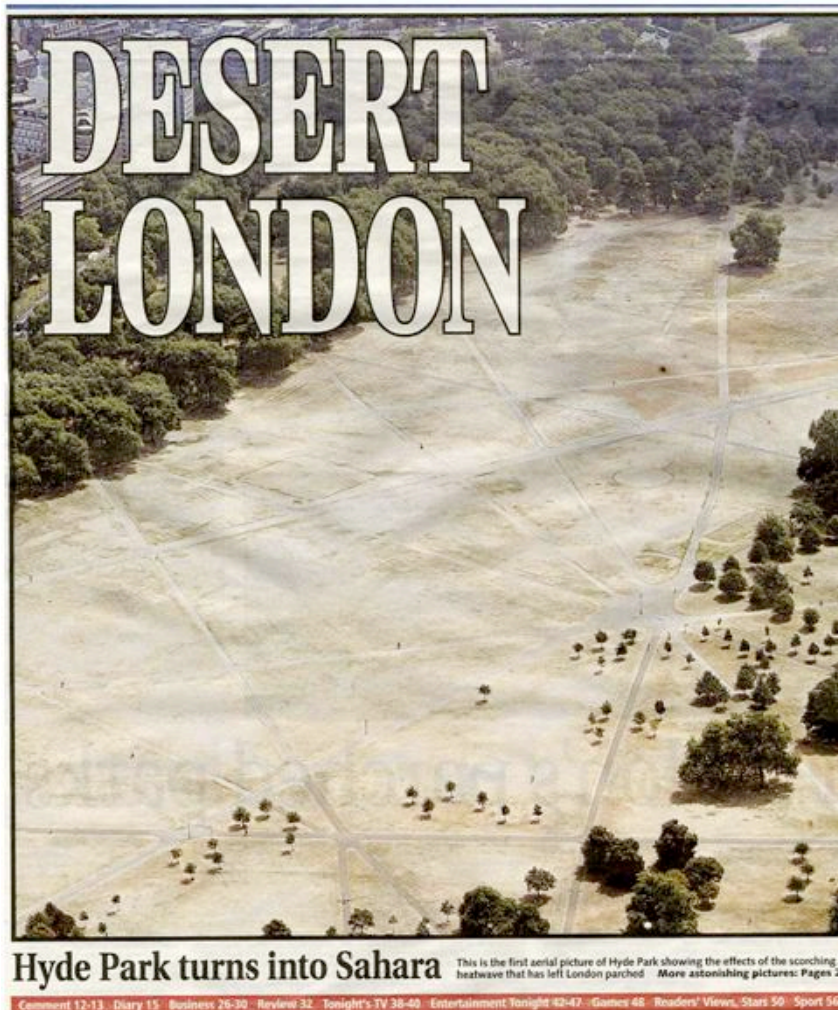
Figure 1: Comparison of observed continental- and global-scale changes in surface temperature with results simulated by climate models using either natural, or both natural and anthropogenic forcings<sup>10</sup>



# Thames Barrier closures: increasing flood risks



# Increasing risk of drought

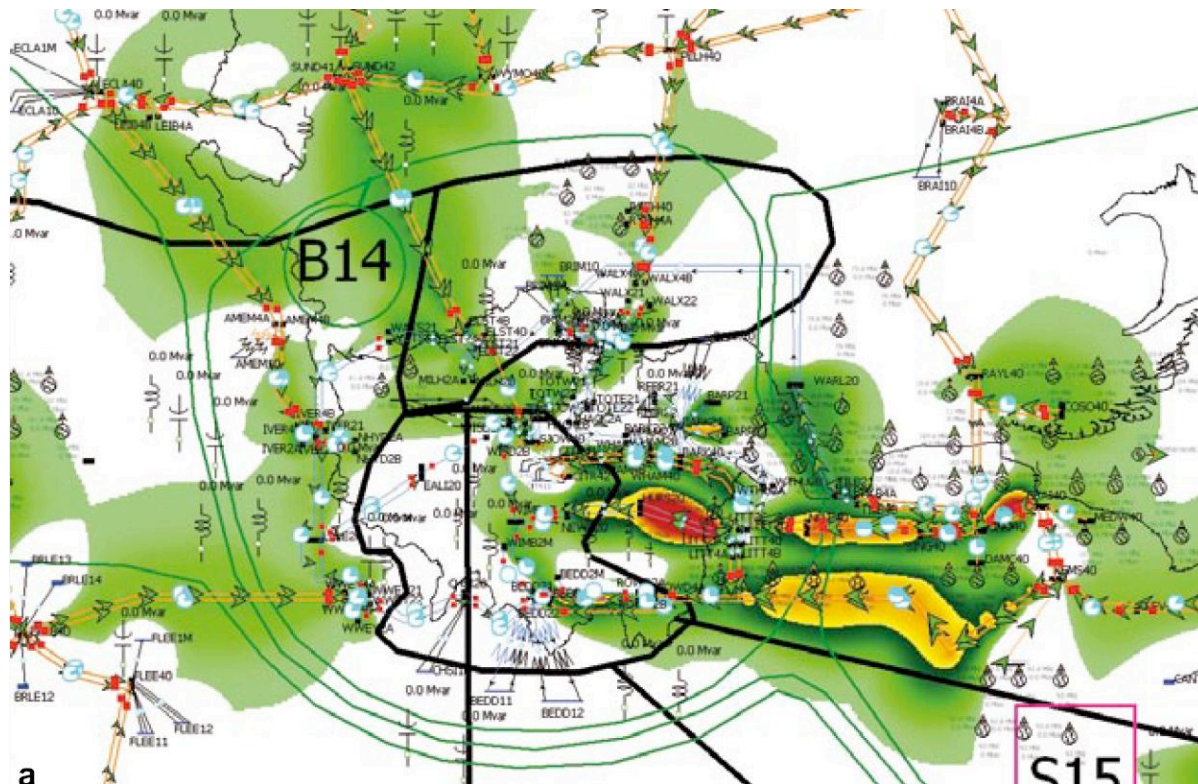


London's Hyde Park in the summer of 2006



# Demand for electricity on hot days could lead to grid overload and power failure

- Figure below shows areas of electricity grid in London overloaded at 12:00 – 15:00 during the 2020s, taking account of climate change
- Red areas are most badly overloaded, with green indicating marginal overloading



# Inevitable climate change

- Climate change is **underway**.
- Unless the risks are managed appropriately, climate change will increasingly create direct and indirect impacts **for the UK's critical infrastructure, on business value chain components and overall business, social and environmental performance**.
- A wide range of business stakeholders, including governments, investors, banks, insurers and NGOs are developing **climate change adaptation positions and policies**.
- Climate risk management should be integrated into **core business risk** management processes.



# Building climate resilience

acclimatise  
managing your climate risks



**European Bank**  
for Reconstruction and Development



**IBM**

**ASDA**



**BARCLAYS**

**e-on** UK

anglianwater

Insight  
INVESTMENT



**Henderson**  
Global Investors

RAILPEN *Investments*

**USS**  
UNIVERSITIES  
SUPERANNUATION  
SCHEME LIMITED

HBOS plc

**LLOYD'S**

**DFID** Department for  
International  
Development

**CARBON DISCLOSURE PROJECT**



Foreign and  
Commonwealth  
Office

**DE** DEFENCE ESTATES  
*Delivering Estate Solutions to Defence Needs*

Environment  
Agency

Consumer  
Focus  
*Campaigning for a fair deal*



CITY OF  
LONDON



Hampshire  
County Council

**WorleyParsons**  
resources & energy



**Business Council for  
Sustainable Development**  
United Kingdom

**LONDON**

**CarbonAction**  
Yorkshire  
low carbon leadership

east midlands  
development agency

**SKM**

UK Climate  
Impacts Programme



ПРАВИТЕЛЬСТВО МОСКВЫ



Isle of Man  
Government

English Partnerships  
The National Regeneration Agency

**CABE** ACCA  
Commission for Architecture  
and the Built Environment



Australian Government  
Department of Climate Change

**IWKRAMA**

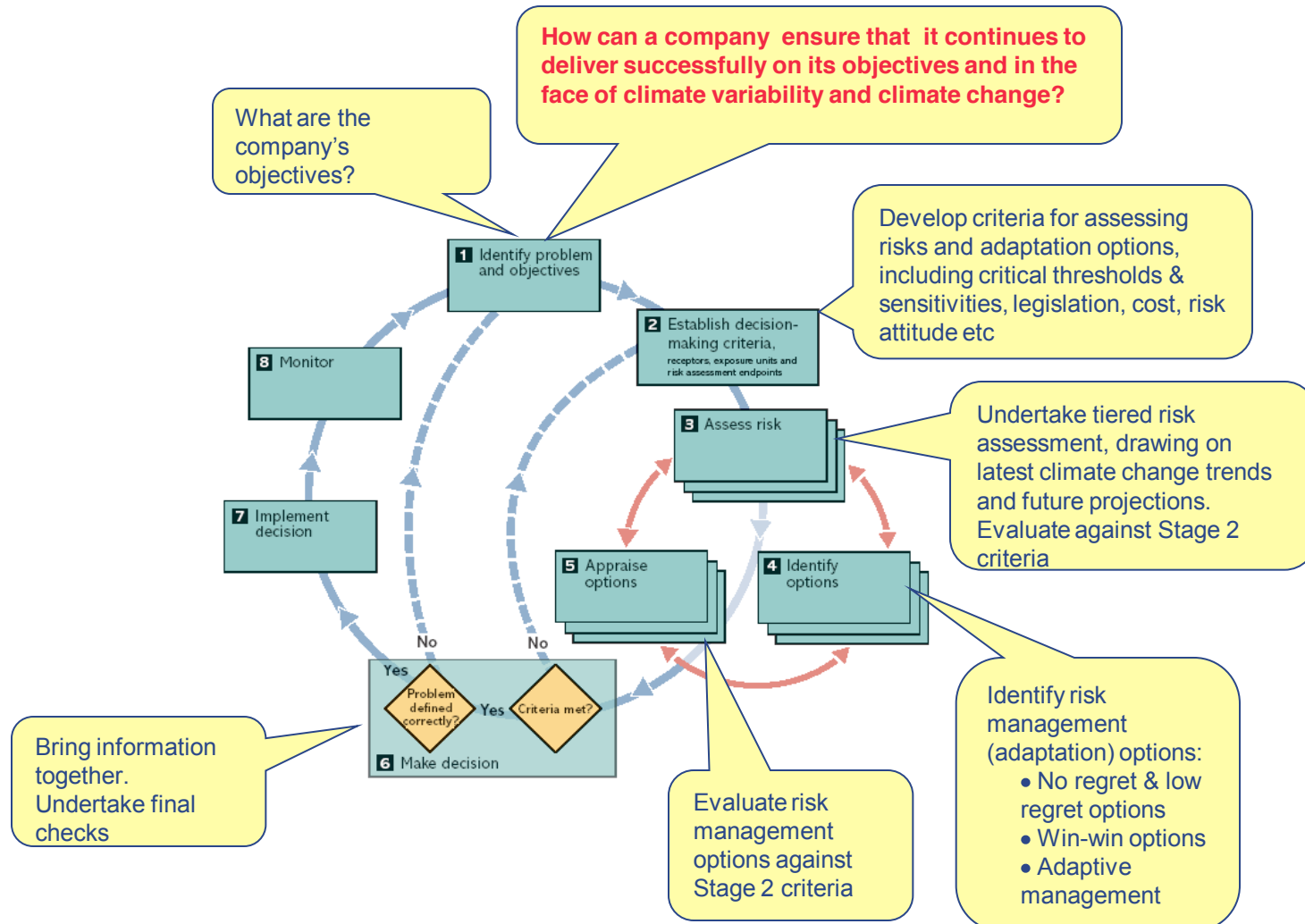
Norges forskningsråd

**VROM**  
Netherlands Government



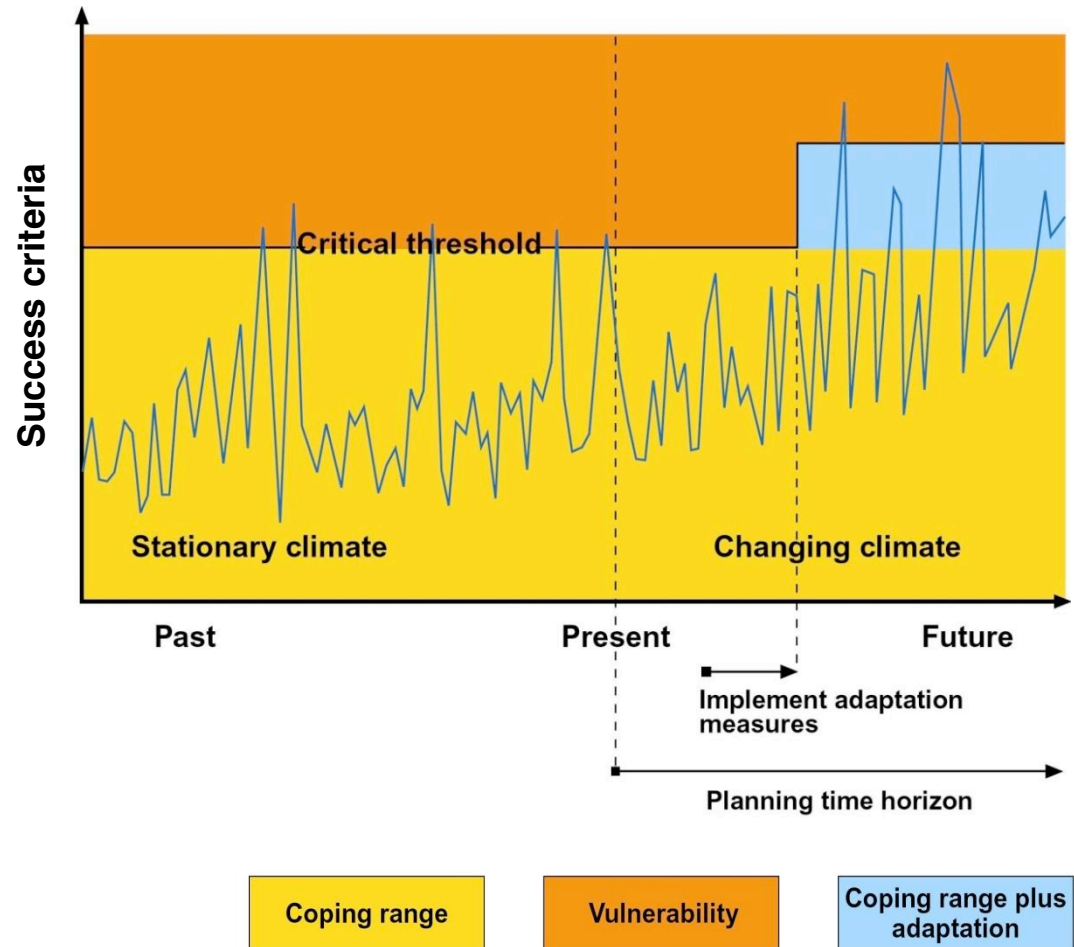


# Risk assessment framework



# Extreme (acute) and incremental (chronic) changes

- Important to evaluate impacts driven by:
  - Extreme (acute) events AND
  - Incremental (chronic) changes
- How will these changes affect critical thresholds, performance measures etc?
- Can the impacts be managed by business continuity measures, or are changes required to assets and business systems?
- Process, operational or capital investment response?
- Consider risk attitude e.g. are you 'risk averse'?



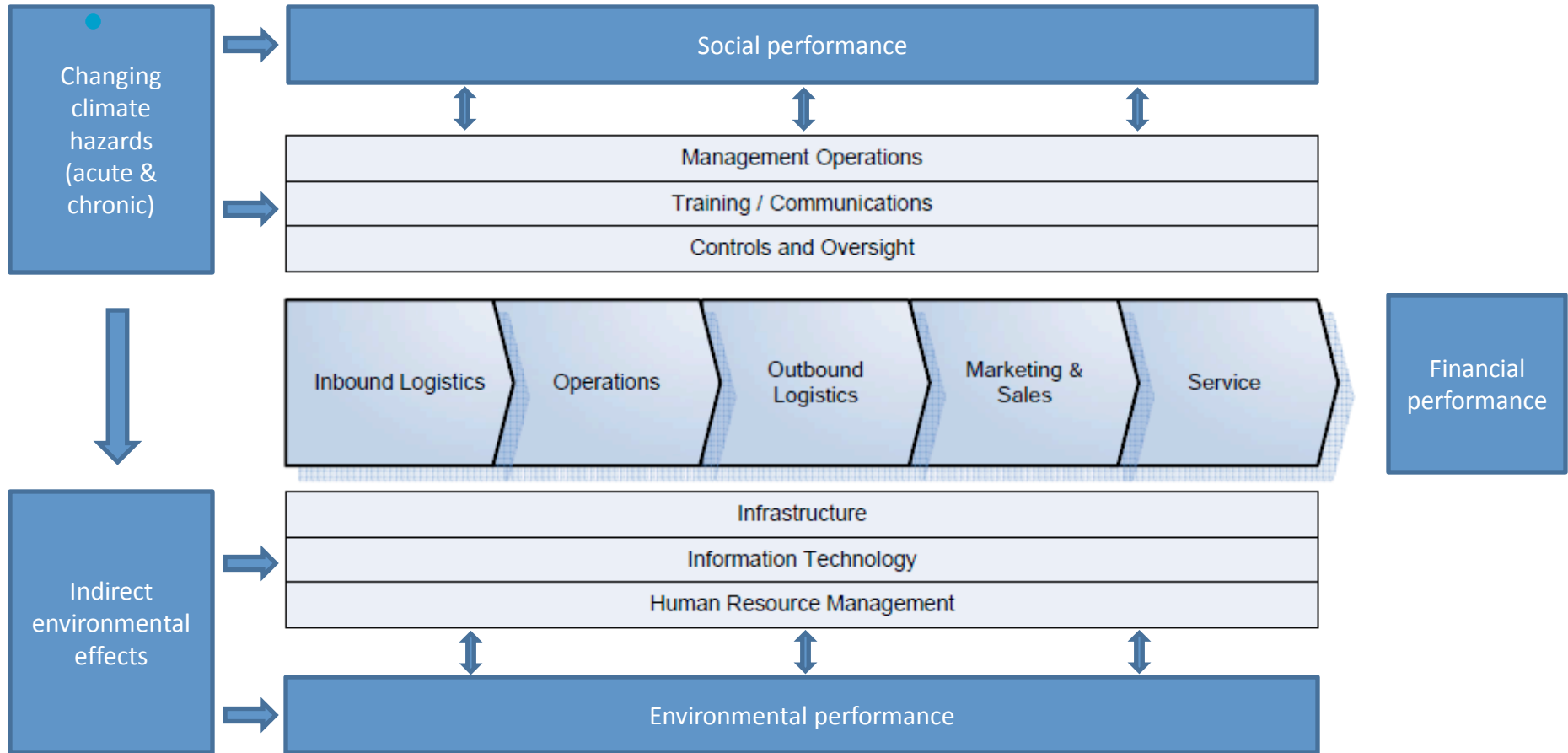
[Source: Willows & Connell, 2003]

# Carbon Disclosure Project: FTSE350 headline results



- Adaptation: work in progress
  - 87% of companies acknowledge exposure, only 38% indicate a quantified analysis undertaken.
- Companies are generally more aware of the risks than the opportunities.
  - Only 32% identified potential business opportunities.
- Implications for governance.
  - Only 15% provided evidence of integrating inevitable climate change into their internal corporate governance procedures.
- Water sector ahead of the game – setting the pace
- Building business resilience to climate change remains a new issue.

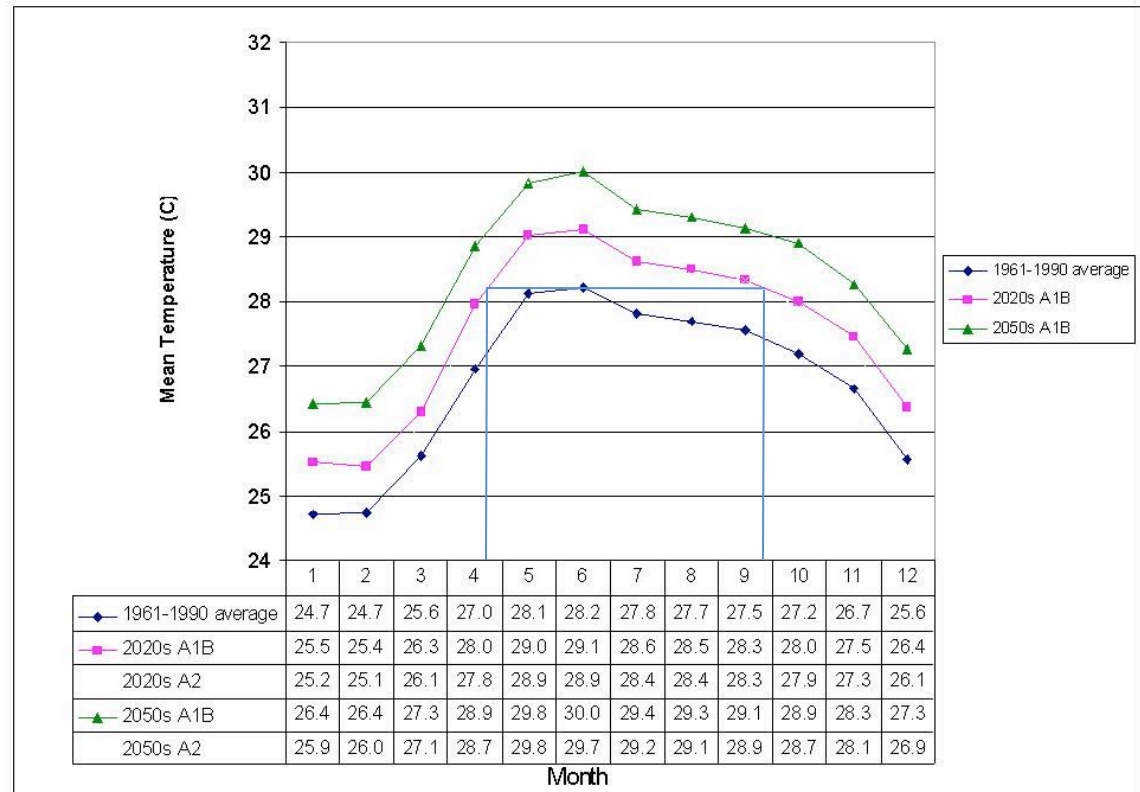
# Business model impacts



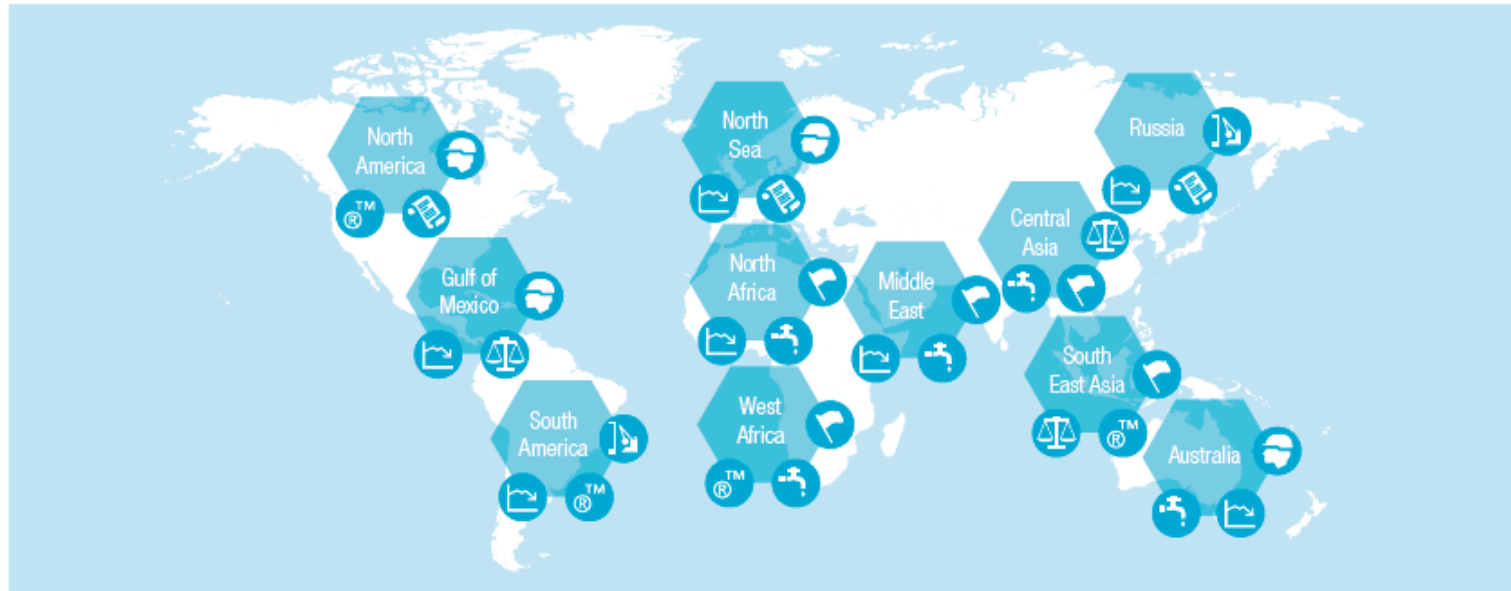


# Small changes can have major impacts

- Average temperature in Philippines.
- By 2020s the current June temp will be exceeded from April to September
- Q? What are the impacts on:
  - Agriculture
  - Water resources
  - Sanitation
  - Energy demands
  - Energy supplies
  - Health
  - **Your supply chains**



# A changing global risk landscape



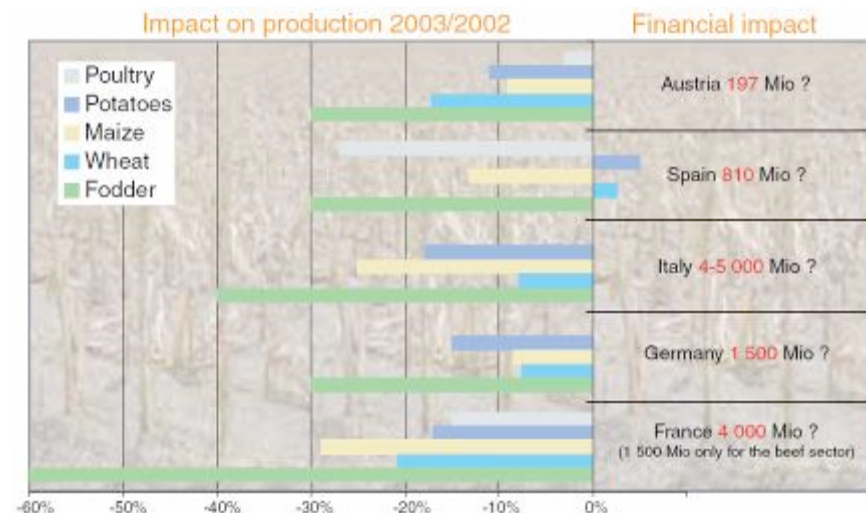
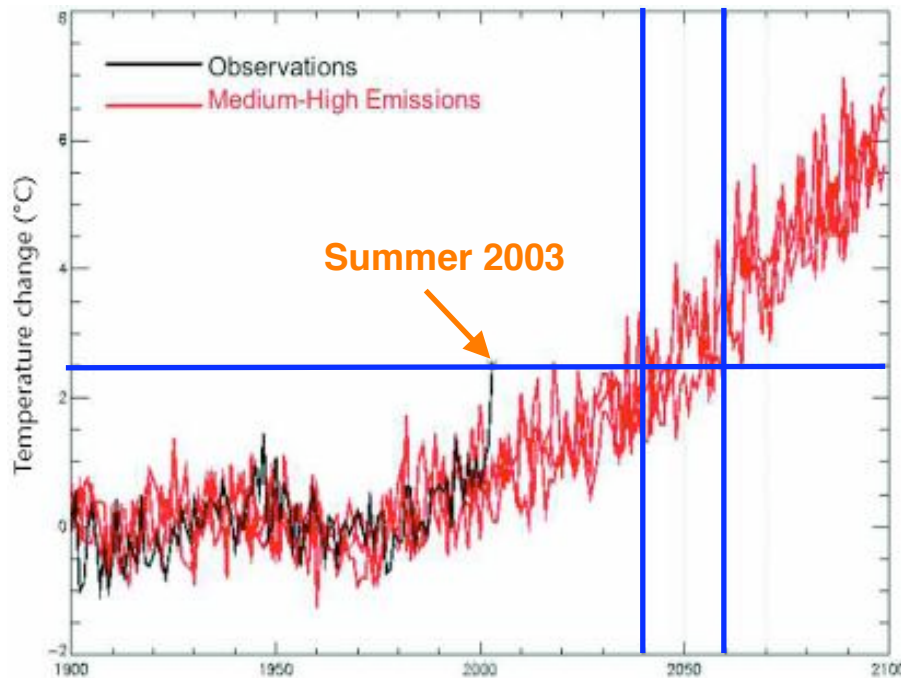
Risk		Impacts
Resource stress		Increasing stress on water resources particularly in central Asia and the Middle East will create operational problems for companies and possible conflicts with local communities and other water users.
Geo-political		Communities and nations under increasing stress will change the geo-political risk landscape. New challenges will arise for companies operations in new at-risk areas.
Reputation		Any failure to monitor and report on the impacts of climate change on social and ecological resources is likely to harm the reputation of a company.
Regulation		Changes in regulations in response to the impact of climate change could increase the operating and compliance costs for existing assets.

Risk		Impacts
Litigation		Business process failures, for example contractual relationships that do not adequately foresee and manage risks driven by climate change, could increase the risk of parties turning to litigation.
Workforce		Operating existing assets under changing conditions presents new and changing health and safety risks and challenges for employees.
Decommissioning		Current balance sheets may underestimate decommissioning liabilities by failing to recognise the climatic changes that have taken place since the decommissioning costs were assessed at the time assets were first created.
Asset performance		Existing plant and equipment were designed on the basis of historic climatic conditions. Their performance may be impaired under changing conditions, increasing the risk of downtime and system failures with HSSE and regulatory implications. Operational costs may increase.

# Climate change costs

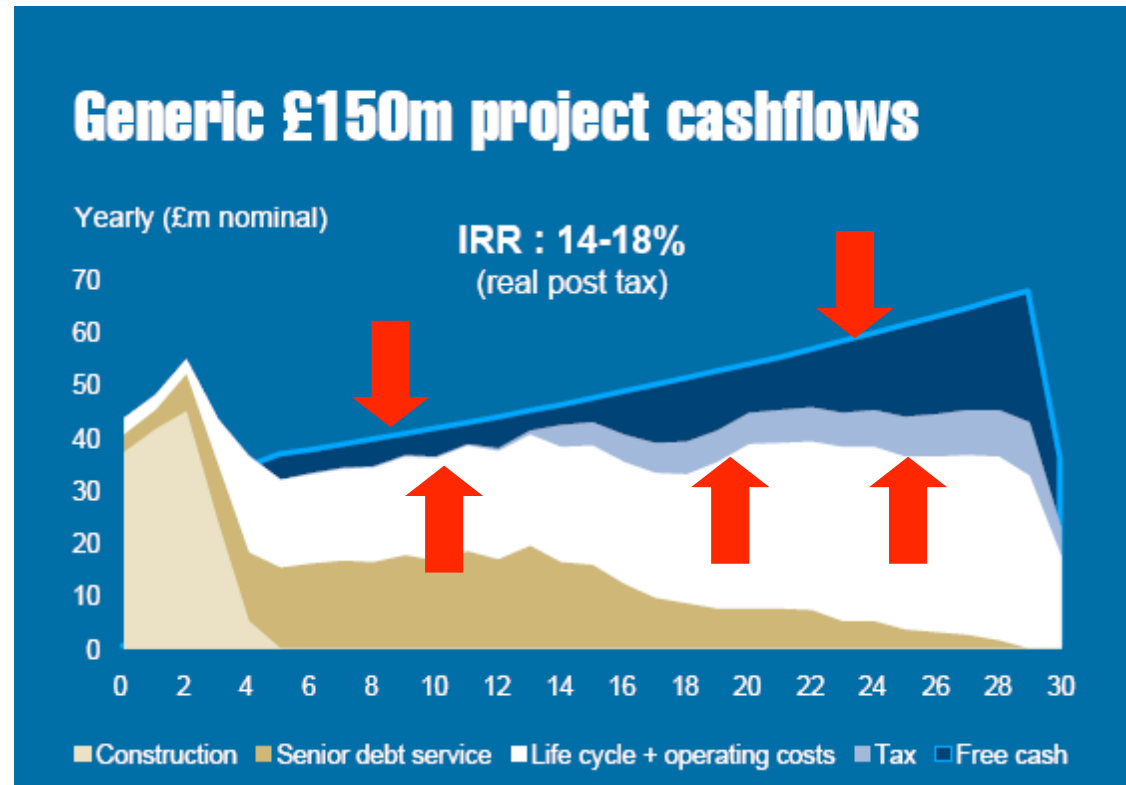
- Hot summer 2003 across Europe was a 1 in 500 year event
- By 2040 this will be a 1 in 2 year event, i.e. 'normal'

- Agricultural production fell by 10%
  - Financial impact estimated at €13 billion
- EDF had to shut down 25% of its 58 power plants
  - Lost €300 million



# Changing climate risks should be incorporated into financial models

- Importance of cash flow forecasting
- Impact on profit of small % increase in operating costs
- Impact on profit of decrease in income
- No provision for unplanned additional investment
- Effect on investor confidence





# Banking sector action

- *“EBRD considers that climate change may pose a range of risks to its investments .... This assignment will develop guidance and practical tools for integrating climate risk assessment and climate change adaptation into EBRD’s project cycle management.”*
- *“These impacts may be valid considerations in credit risk analysis for lending banks.”*



- Fiduciary responsibilities
- UK Companies Act 2006.
- In 2009 the Norwegian Government announced it was examining the implications of climate change on institutional investment and the strategy of the €260bn Norwegian Government Pension Fund.
- Ceres 2009 survey of 100 leading global companies
  - "These findings are strong evidence that investors are not getting the information they need ... even from industries facing clear, immediate risks from climate change"
  - "Only a handful of the companies provided an adequate account of the potential costs despite growing demands from financial regulators to disclose the risks of climate change"
- 2010 USA SEC guidance on climate change as a material issue for disclosure and reporting



# Institutional investors are asking difficult questions of companies



Universities Superannuation Scheme, Railpen, Hendersons, Insight Investment released a report earlier this year,

*“Managing the Unavoidable: Understanding the investment implications of adapting to climate change”*

- Peter Moon, Chief Investment Officer, Universities Superannuation Scheme



*“We need more and better information about how companies and other assets will be affected so that we can make better informed decisions as to how we allocate our long-term capital.”*

- Rory Sullivan, Head of Investor Responsibility, Insight Investment



HBOS plc

*“Adaptation has been the poor relation in the climate change debate. This project will provide us and other investors with a framework within which to analyse all of the risks - and opportunities - that a changing climate brings.”*



# Adaptation reporting power

- The Act gives the Secretary of State the power to direct reporting authorities (bodies with functions of a public nature and statutory undertakers) to produce reports on:
  - the current and future predicted impacts of climate change on their organisation; and
  - proposals for adapting to climate change
- The reports from reporting authorities should contain:
  - a summary of the statutory and other functions of the reporting authority – to ensure that they are taking into account the risks presented to all their functions;
  - an assessment of the current and predicted risks to that organisation, or its functions, presented by climate change; and
  - a programme of measures to address the risks highlighted above, including any policies or practices that are already being implemented.



# Reporting organisations

## Mandatory reporting organisations:

- Natural Environment
- Water
- Energy
- Health
- Transport
- Electronic communications
- Regional agencies

## Voluntary reporting organisations:

- Environmental organisations
- Transport executive agencies
- Petroleum companies
- Food sector
- Transport
- Electronic communications



# Potential consenting and regulatory challenges

- The Infrastructure Planning Commission is a new independent body that decides development consent applications for nationally significant infrastructure projects :
  - IPC Commissioners make their decisions within a framework of 12 National Policy Statements.
  - Adaptation reporting power reports recognised as key documents to be considered.
  - Consistency between Adaptation Reports and IPC development consent submissions – expect objectors to use Adaptation Reports!
  - Confidentiality – Freedom of Information Act requests by objectors?
- Other consenting provisions – similar issues – Adaptation Reports will be relevant, need to be consistent, and will be used by objectors.
- Regulators - and in particular regulatory business plan and price setting regimes:
  - Potential conflicts between Adaptation Reports produced by Regulators and those by the regulated companies.
  - Reporting power and regulatory price determination timetables.
  - Financial assessments and adaptation plans – it is not clear what weight Regulators will attach to the Reports. Inconsistency between reports and regulatory submissions will be damaging.



# Thank you

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