

# Climate Change: a Business Perspective

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## Overview

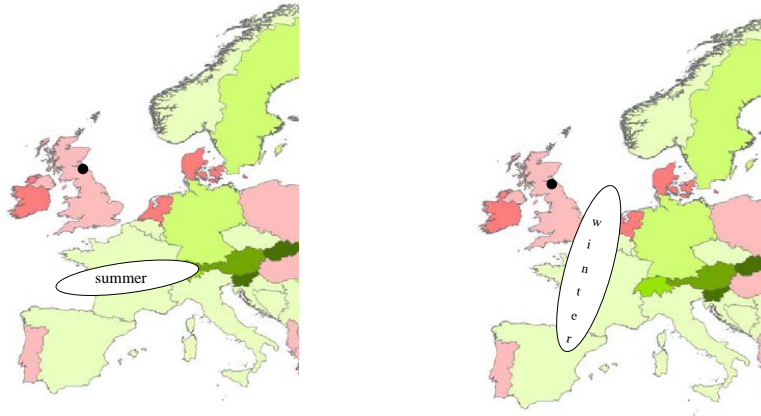
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- **Impacts** - operations/supply chain
- **Customers** - demand
- **Carbon** - costs/image

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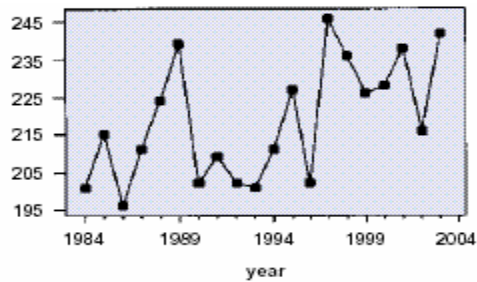


## Edinburgh 2080 = Bordeaux now



## The grass is greener for longer

Cutting season  
length (days)  
in Kirkcaldy



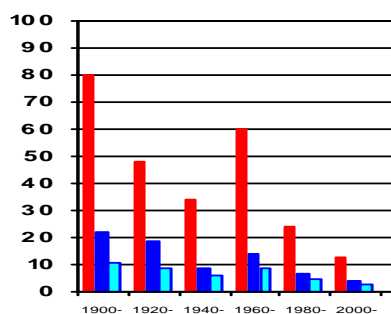
- Season now lasts from March 10th to November 1st

# Golfing

- R&A 2000 *“On Course for Change”*:  
*six key challenges for the 21st century*
  - Climate Change : *new conditions interacting with..*
  - Water: *restrictions*
  - Planning: *restrictions*
  - Chemicals: *restrictions*
  - Levels of use: *quality v revenue*
  - The environment: *many stakeholders*
- *Supplementary Survey ( Golf World)*
  - prestige courses under threat already

# High temperature trends (UK)

Return periods  
(years)

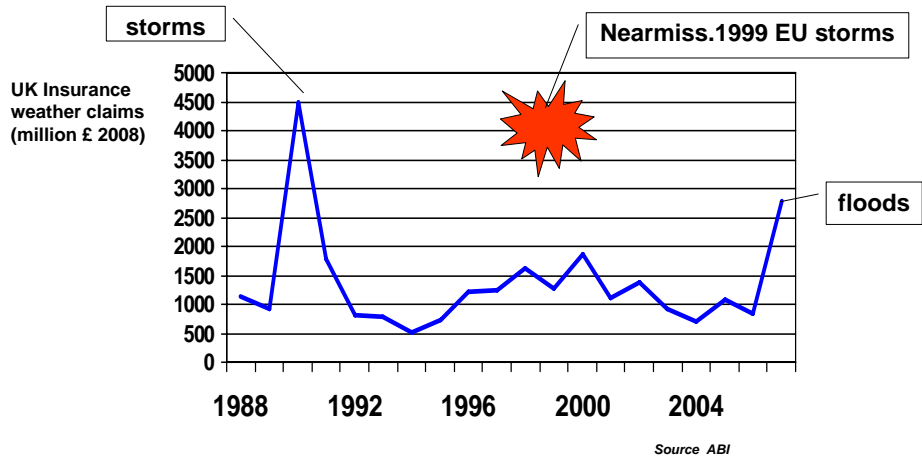


Historical R P (1659-1899)  
of hot months

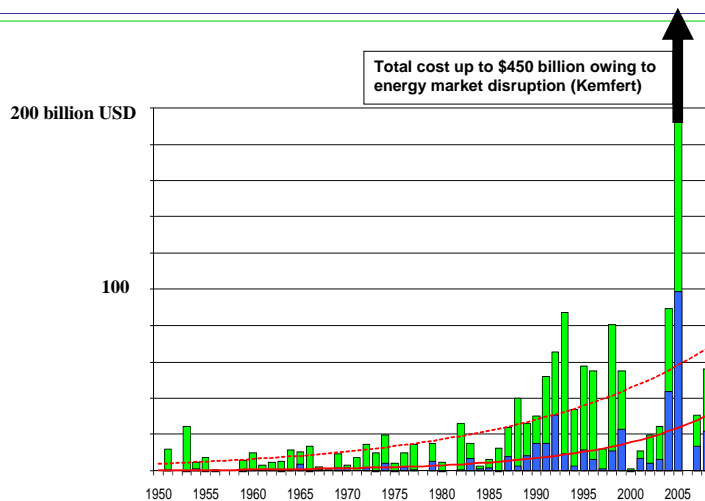
- Ten year
- Twenty
- Century

- The **“100-year”** summer will happen every 3 years
- Stormier, wetter winters

## Events come unevenly ...



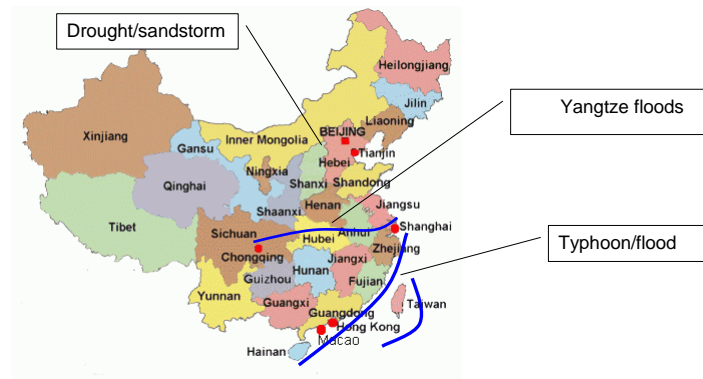
## And new intensities !



1950-2008 loss data. Source: Munich Re

Insured ■ Uninsured ■

## Climatic Risks in China



Source: CII 2009



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## Small Business Readiness

Employees	< 50	50-99	100-250
Effect of site closure > 1 month to recover	27%	26%	41%
No plans for flood	48	33	38
No plans for uninsured event ..	65	58	44
Too much time	58	69	75
Too expensive	28	23	19
Too difficult	34	23	19

Source: BIBA



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## Profit exposure: UK £10B (Met Office)

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**“like farmers praying for rain, merchants have begun scanning weather forecasts, hoping for a sudden drop in temperature to lift their sales.” - New York, 2006**

**Affected companies include:**

**Too wet** Salvesen (food), S&N, Monsoon, Dobbies (*esp irrigation equipment*), Blacks Leisure, Tesco

**Too warm** Air Berlin, Wacoal Holdings, Top Ten Leisure, Deep Sea Leisure, Gap (*winter clothes*), major energy firms.



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## Adaptation in action

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### **Australian wine-makers**

**Recycle water to clean machinery & irrigate golf courses.**

### **Retailers**

**Non-seasonal goods eg jewellery, electricals.**

### **Winter Leisure**

**Artificial snow. (!)**

### **Wacoal**

**Air-conditioned tights, based on thermal imaging of athletes' legs. Antibacterial fabrics, moisture wicking.**

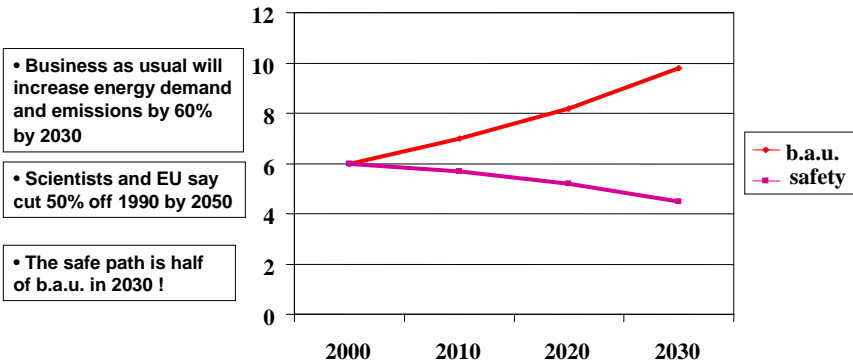


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## Carbon: the parting of the ways

Billion tonnes  
of carbon emissions



• Business as usual will increase energy demand and emissions by 60% by 2030

• Scientists and EU say cut 50% off 1990 by 2050

• The safe path is half of b.a.u. in 2030 !

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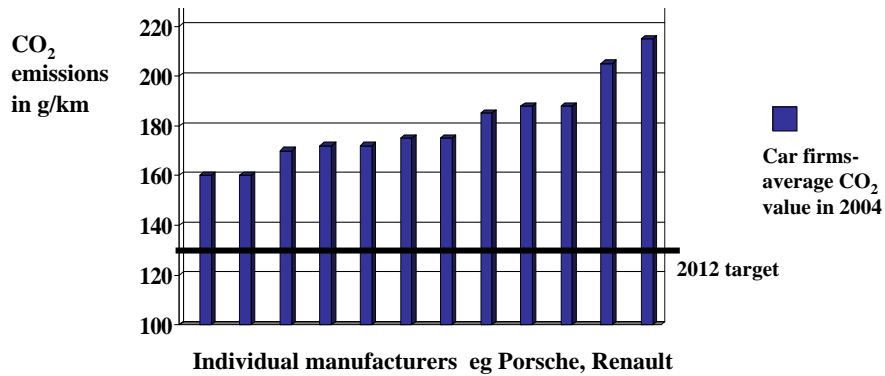
## Public and Private Sector Push

- **Regulations.**
  - EU Emissions Trading Scheme.
  - Energy Performance of Buildings
  - Vehicle Emissions Standards
  - Carbon Reduction Commitment (UK).
  - Local authority carbon league tables (E&W)
- **Carbon Disclosure Project**
- **Public Opinion**
- **Litigation e.g. UKFI/RBS October 2009**

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# EU emissions targets for cars



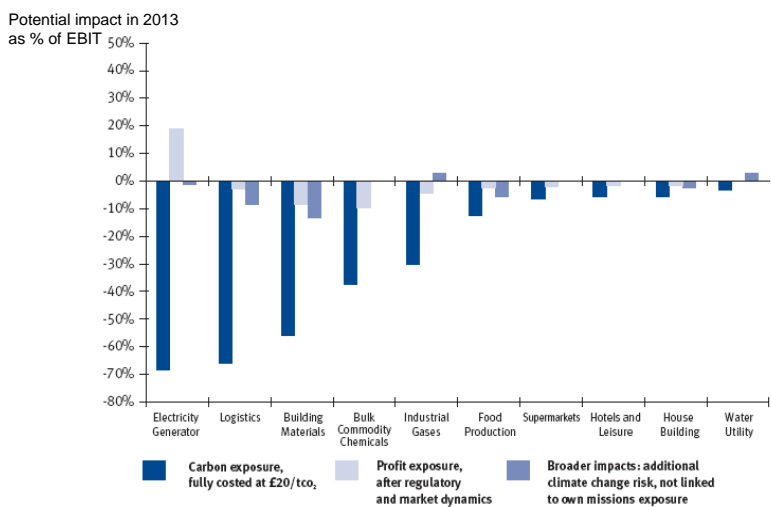
Source: WRISAM



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# Value at risk on climate change (1)



Source: Carbon Trust 2006



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## Emissions is not the only play!

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- **Construction - resilience & reconstruction**
- **Water supply and management**
- **Recycling - saves energy**
- **Biodiversity - forests especially**
- **Biosciences - health & crops**
- **Defence - increased tension conflict**
- **Insurance for refinancing post-loss**



## Carbon Disclosure Project

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- **Corporate exposure to climate change (winners & losers).**
- **Backed by 475 institutional investors with \$55 trillion a.u.m.**
- **International, annual survey of biggest listed companies.**
- **Targets 3,000 firms, focussed on region or sector e.g. utilities.**
- **Annual report, just completed its seventh cycle.**
- **Next - supply chain, public procurement, city administrations.**



## Global 500 & UK large-cap

- FT 100 is consistently top
- FT 250 is significantly behind on reporting and planning

	G 500	FT 100	FT250
Response	81%	95%	57%
Board Member	80	83	79
Regulation Factor	81	90	77
Physical Factor	70	75	62
Emissions Data	85	98	81
Emissions Plan	80	88	61

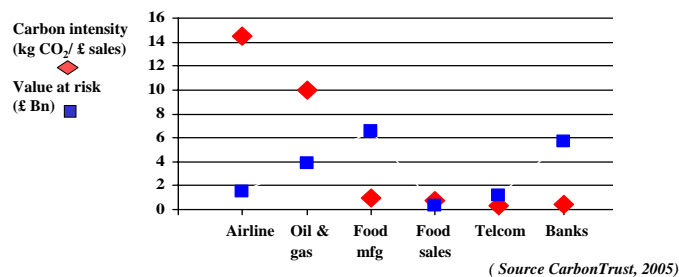
Source: CDP 2009



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## Value at risk on climate change (2)



**Paradox:**  
banks are not carbon-heavy, but are climate -sensitive



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