

Climate change

**Have we got the desire to achieve real reductions
in the carbon footprint of Welsh agriculture?**

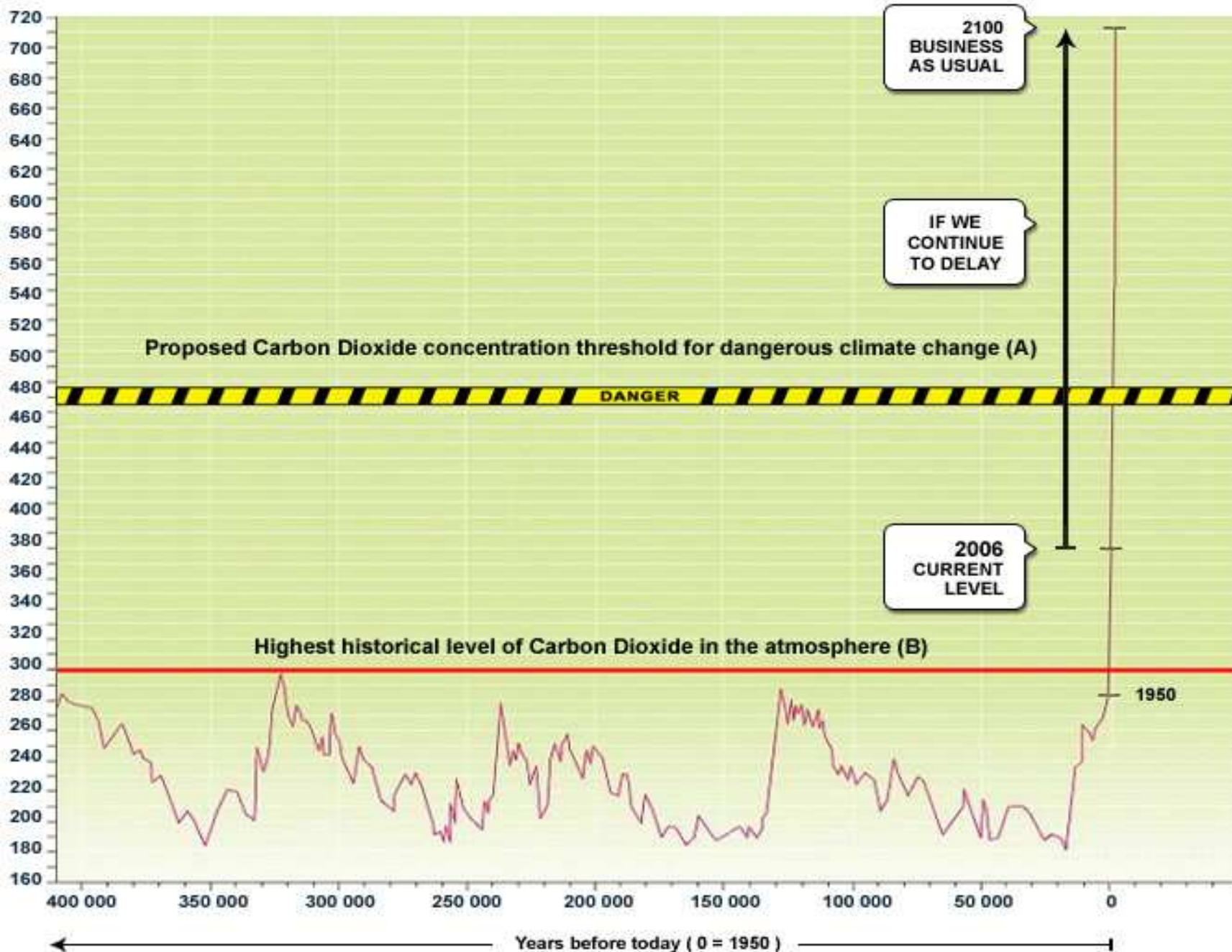
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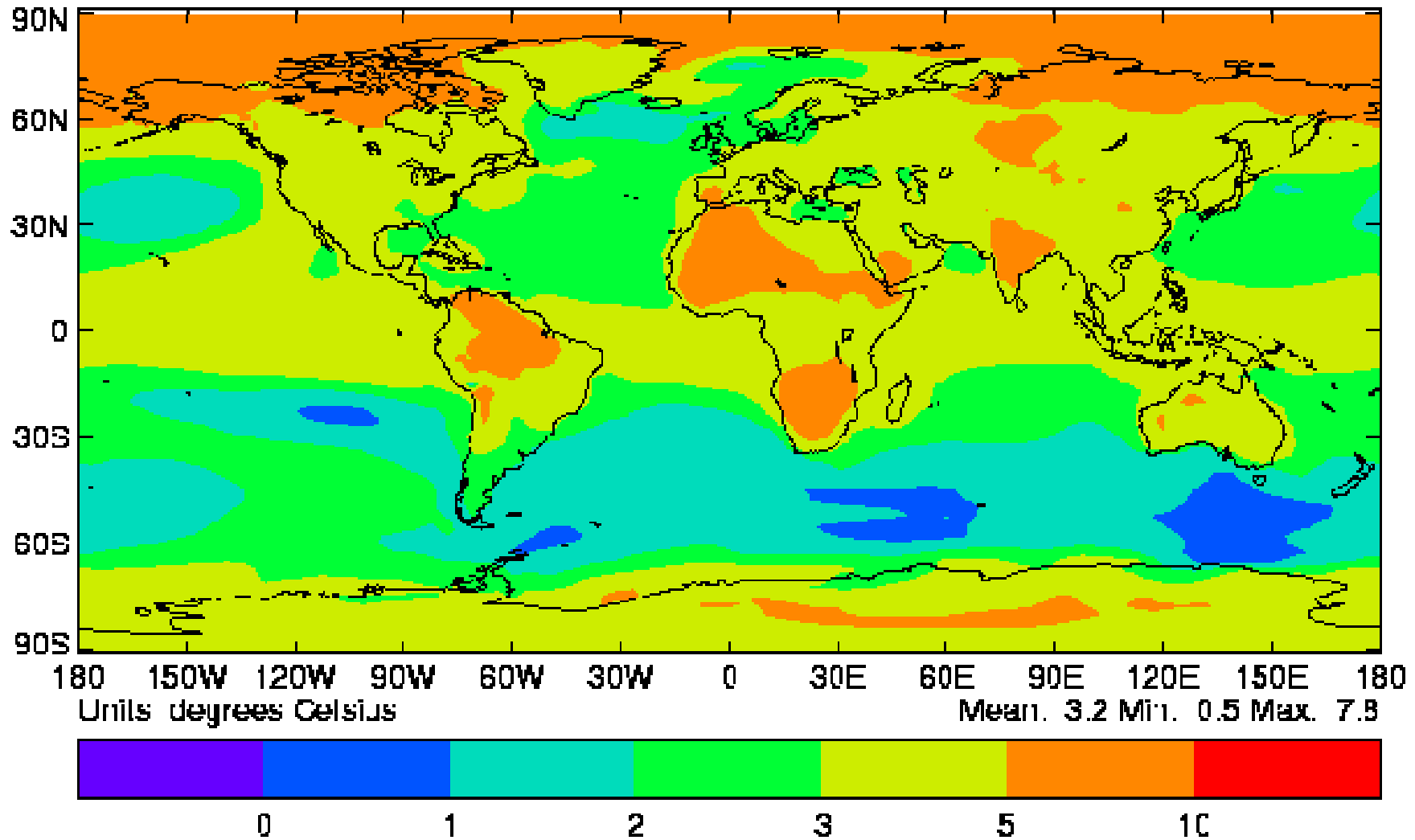
The science



Predicted climate for Wales by the 2020s (UKCIP 2009)

Element	Variable	Central estimate	Wider range of uncertainty
Temp.	Summer mean temperature	+1.4°C	+0.5 to +2.5°C
	Summer mean daily max temperature	+1.9°C	+0.4 to +3.6°C
	Winter mean temperature	+1.3°C	0.5 to +2°C
Rainfall	Summer mean precipitation	-7%	-23% to +14%
	Winter mean precipitation	+7%	-4% to +17%
	Annual mean precipitation	0%	-4% to +5%

**Change in annual average surface air temperature
from 1960–1990 to 2070–2100 from HadCM2 IS92a**

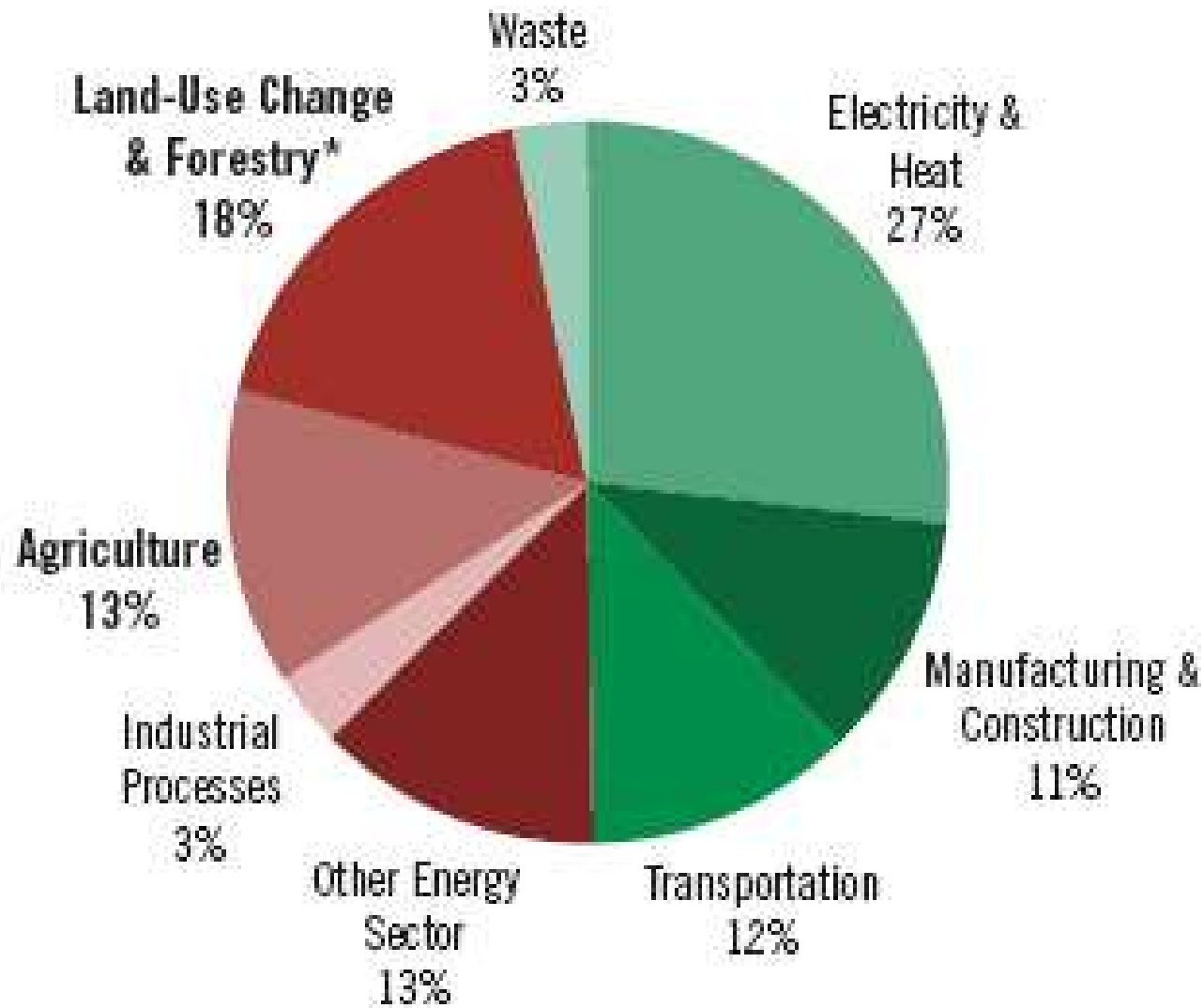


Climate change will not have large impacts for many years to come, and even then it will largely affect people who live a long way away

But we need to act now to reduce the impact!

The policy response

Greenhouse gas emissions by sector at a global scale



**Typical carbon
footprints**
(various sources)

Item	Kg CO2 eq / kg
Apples	0.5
Strawberries	0.8
Green beans	1.4
Broccoli	1.9
Potato	0.64
Tomatoes	2-5
Pork	3-6
Beef	12-23
Milk (per litre)	1
Cheese	7 -13
Chocolate	3.45

Legally binding targets

- 3% per year from 2011 in Wales
- 6% reduction in agriculture by 2016 in England
- 80% overall by 2050
- Could be more stringent targets set in Copenhagen

Agriculture will be expected to do its bit

Facilitate change

- Canolfan Hinsawdd Cymru – established as a Development Programme by WAG in July 2009 in order to work with farmers and other partners to reduce emissions from agriculture and horticulture.
- NFU developing a voluntary response to targets in England
- Roadmaps from different sectors – DairyCo, Eblex/HCC, HDC

What can we do individually?

- Increased productivity decreases footprints of food
- Use nitrogen efficiently and sparingly!
- Look for energy efficiencies around the farm and in the supply chain.
- Use the land to supply energy for use by ourselves and others
- Sign up for Green Energy schemes
- Use wastes effectively
- Lock up as much carbon as we can in soils and trees.

What can we do as a sector?

- Keep records of what we have done to reduce emissions.
- Engage positively with policy makers.
- Communicate effectively to those outside the sector about what we are doing.
- Avoid point scoring between 'tribes' – this is bigger than all of us.

INNOVATE!!!

Conclusions

- Climate change is happening.
- We all need to reduce emissions.
- Land managers are the only people who can lock-up carbon.
- In the short term emission reduction policy will be more challenging than a changed climate.
- Red meat and dairy sector are particularly challengedbut this is not a reason avoid the challenge.

'People who bury their heads in the sand now, will drown in the future as the sea level rises.'