

Responding to Climate Change



**Why should
congregations be
concerned about
climate change ?**

Responding to Climate Change

- Because climate change is one of the greatest challenges of the century
- What are the causes and consequences
- How can you respond
- What particular issues does this pose for congregations?



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Responding to Climate Change

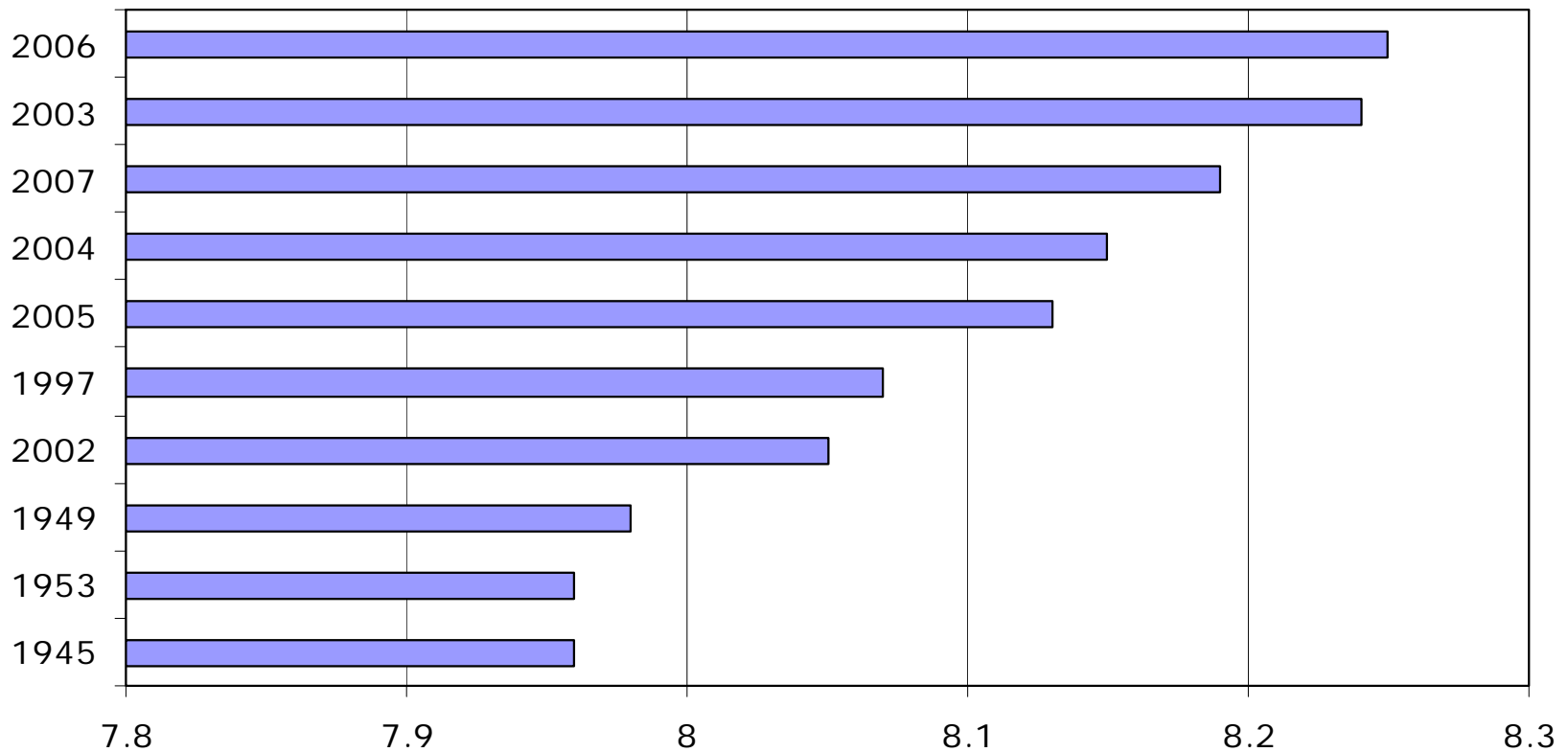
- Climate change is one of the greatest challenges we face this century
- It has the potential to ruin lives, especially of the poorest
- It has been caused by our profligate use of coal, gas and oil



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Scotland's Warming Climate

The Ten Warmest Years since 1914

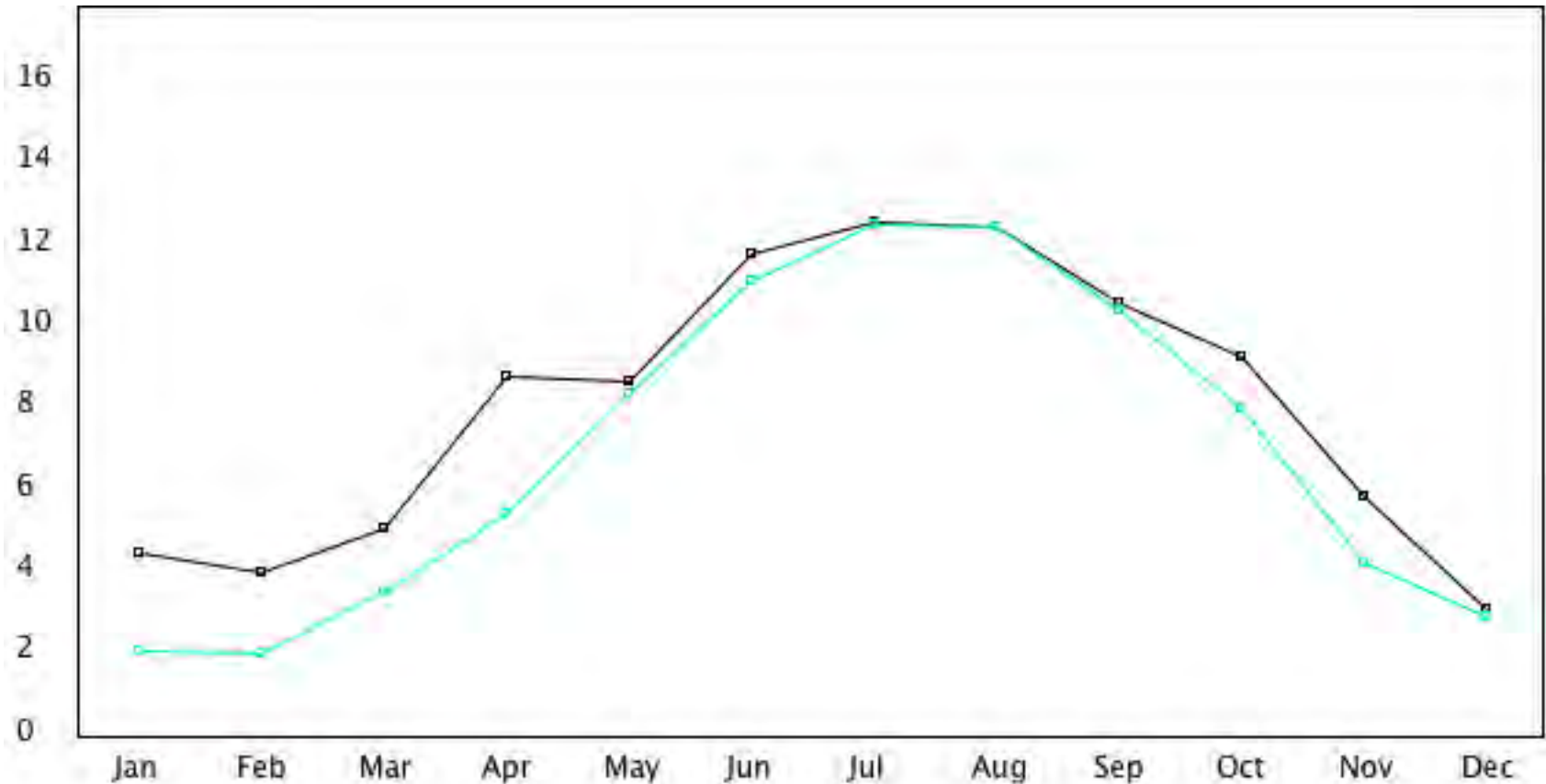


Annual Average Temperature Scotland (degrees Celsius)

Source: WWF Scotland

Temperatures in Scotland in 2007 compared to the average temperatures of the years 1961-1990 (degrees Celsius)

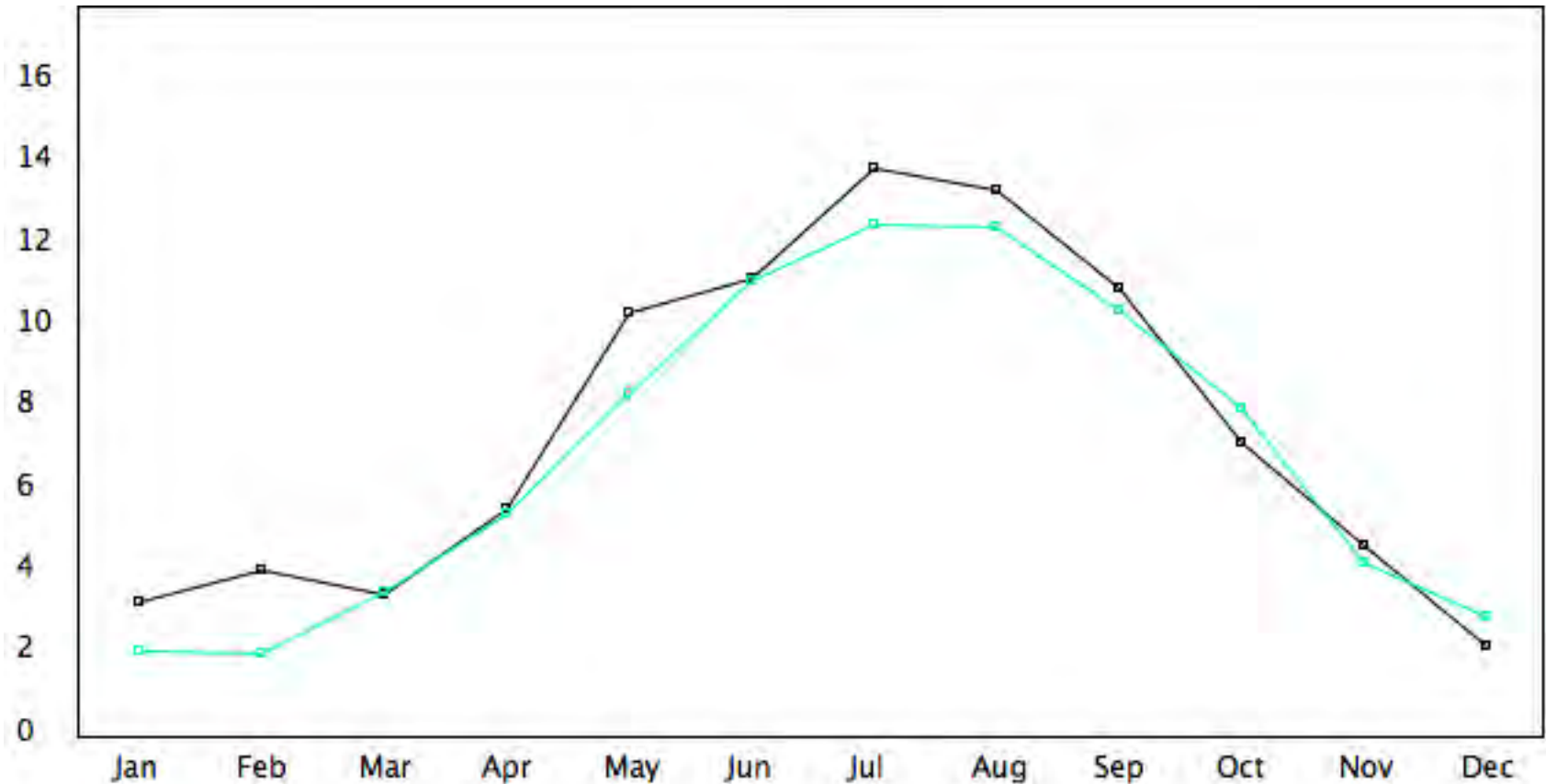
Source: WWF Scotland



Black line = 2007; green line = average of the years 1961-1990

Temperatures in Scotland in 2008 compared to the average temperatures of the years 1961-1990 (degrees Celsius)

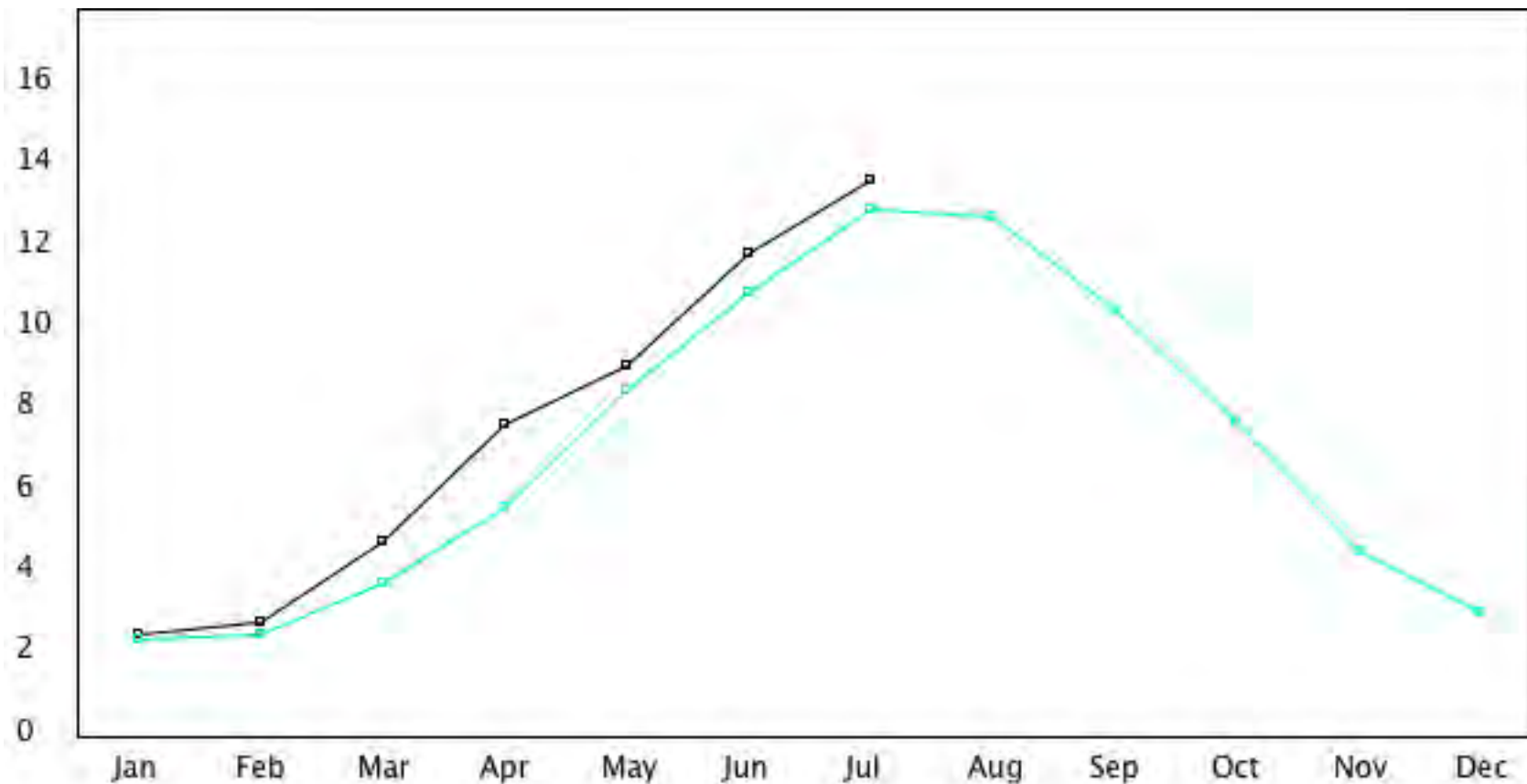
Source: WWF Scotland



Black line = 2008; green line = average of the years 1961-1990

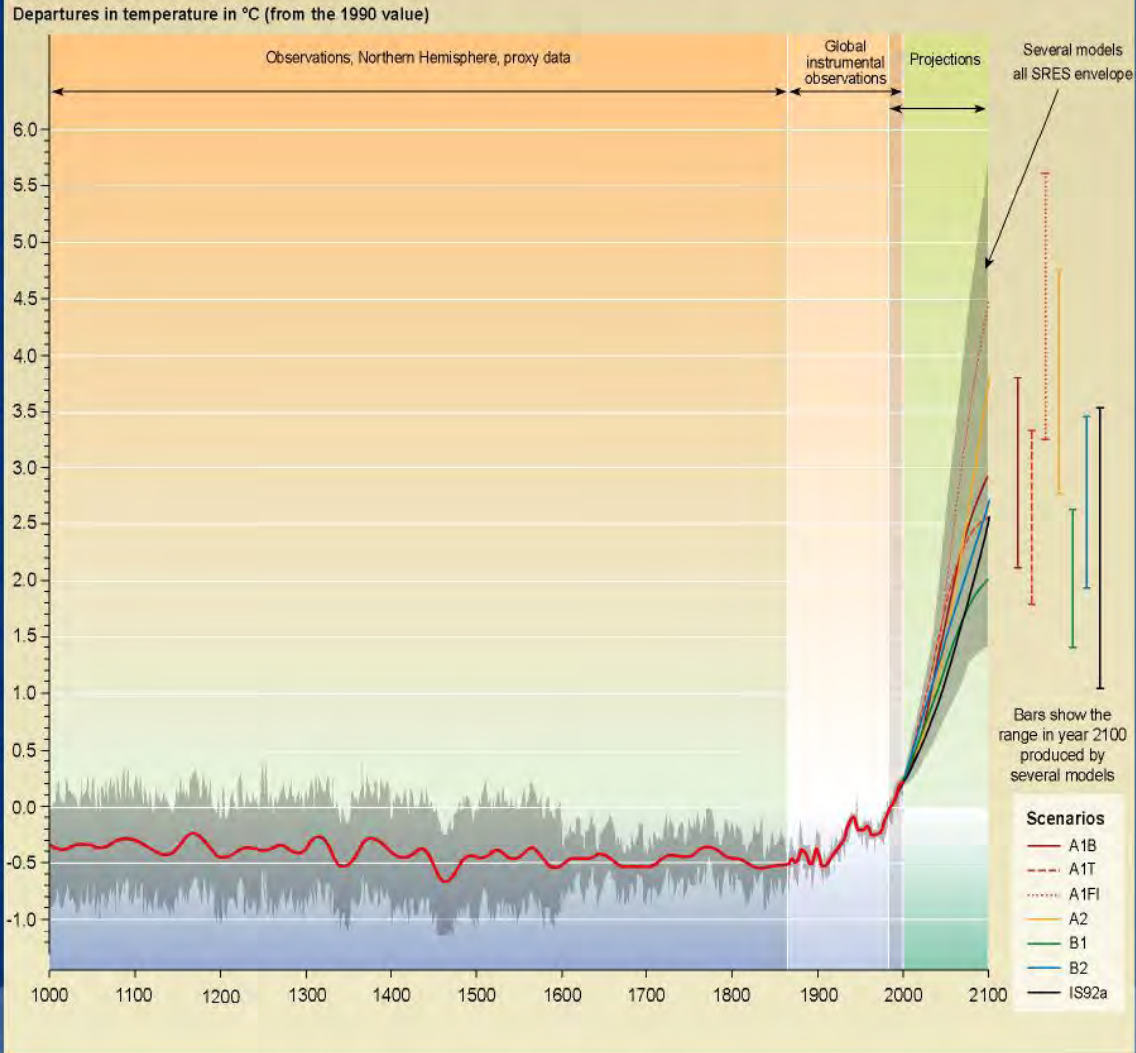
Temperatures in Scotland in 2009 compared to the average temperatures of the years 1971- 2000 (degrees Celsius)

Source: WWF Scotland



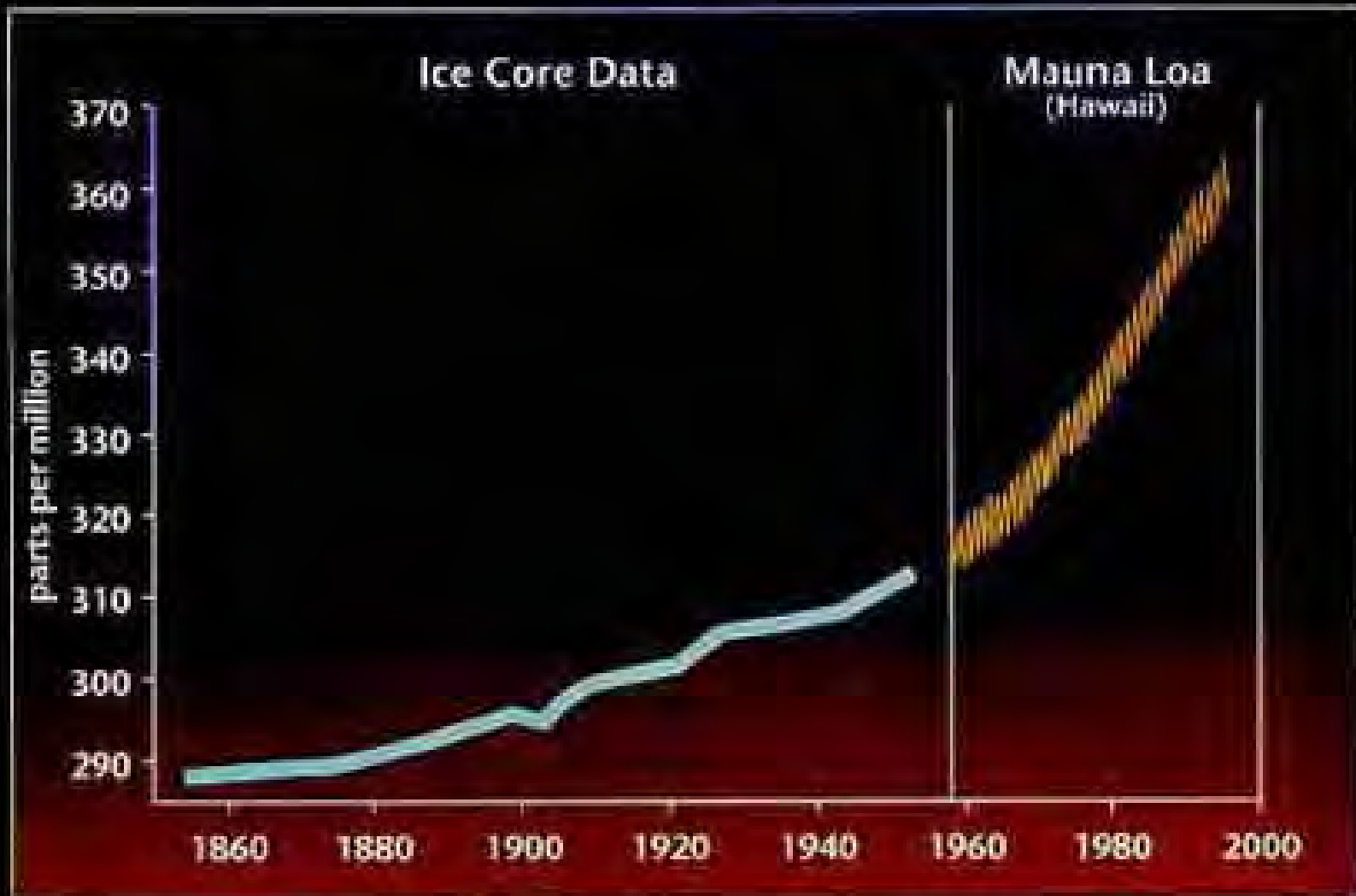
Black line = 2009; green line = average of the years 1971-2000

Variations of the Earth's surface temperature: year 1000 to year 2100

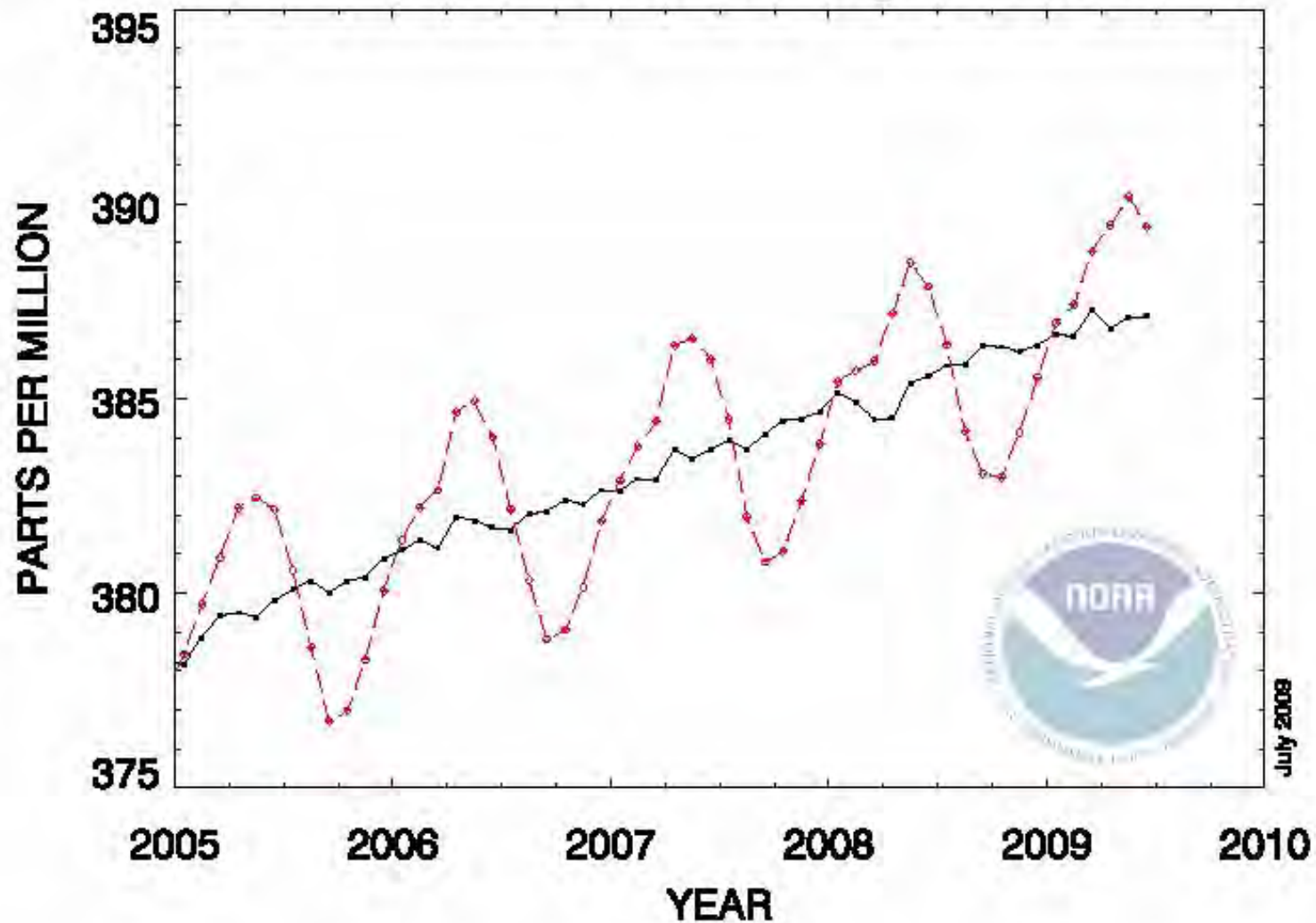


SYR - FIGURE 9-1b

Carbon Dioxide Concentrations



RECENT MONTHLY MEAN CO₂ AT MAUNA LOA



The growth rate of CO₂ has averaged about 1.94 ppm per year in the period 1996-2007.

***Longannet Power Station, Fife:
the single biggest source of CO₂ in Scotland
(9 million tons a year)***

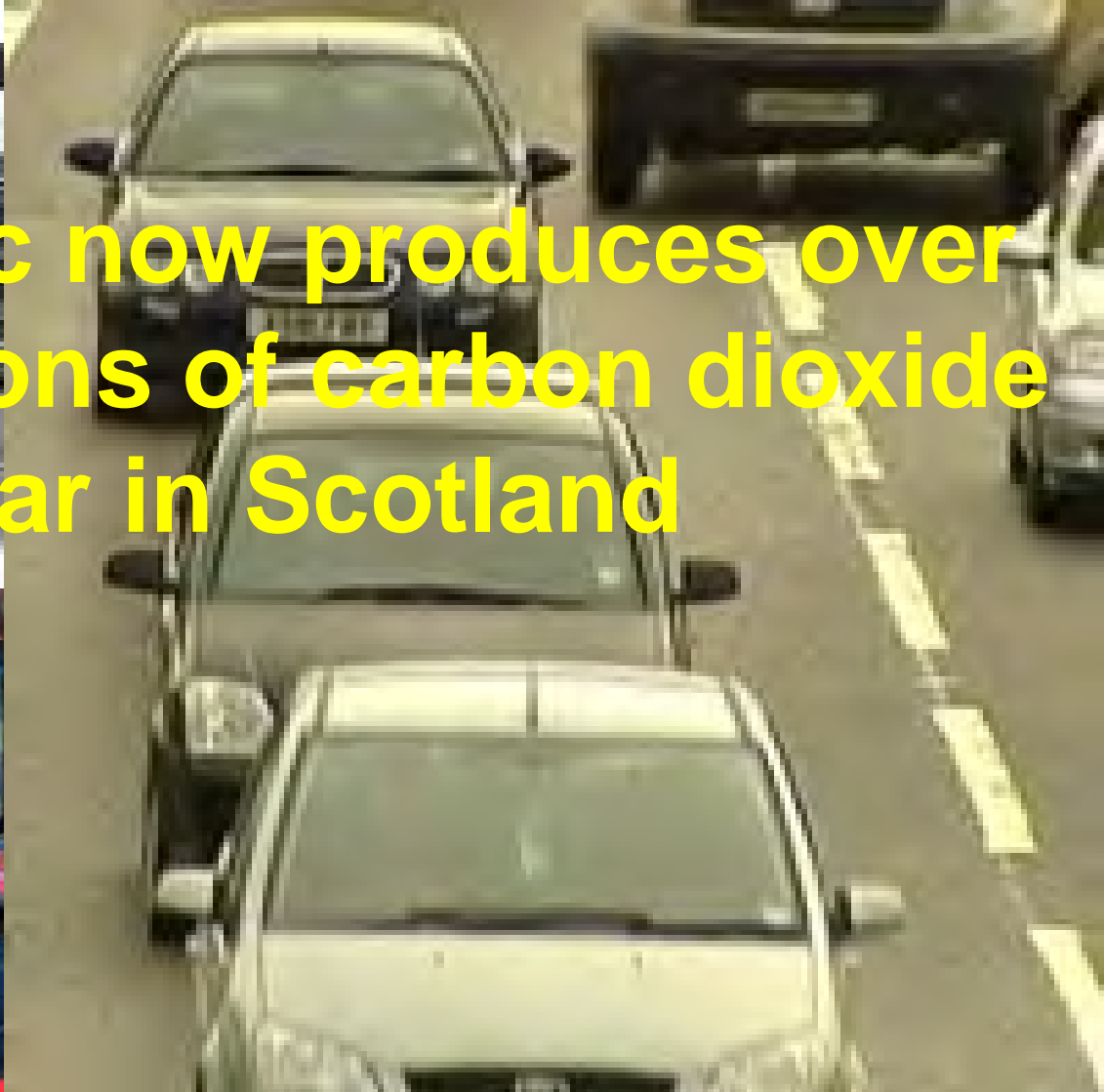


INEOS Grangemouth Refinery

Production capacity: over 10 million tons fuel a year



**Road traffic now produces over
10 million tons of carbon dioxide
a year in Scotland**



The Consequences

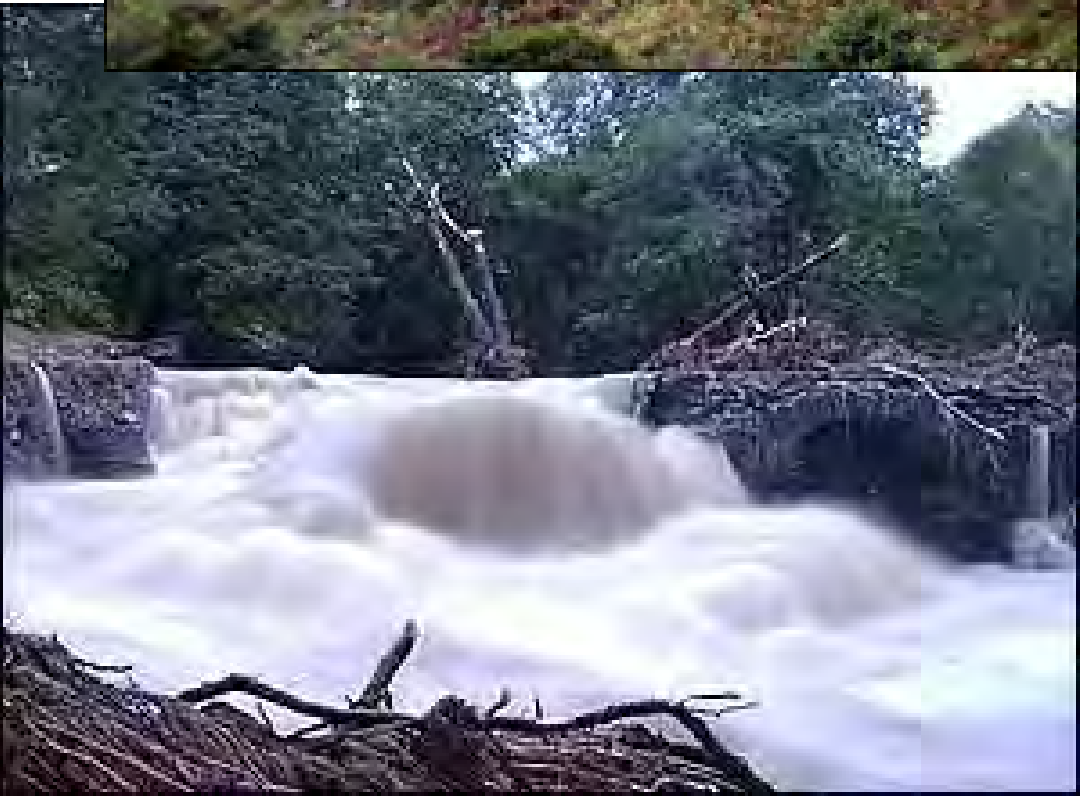
- the disappearance of Arctic sea ice and contraction of snow cover elsewhere
- increase in frequency of heat waves and heavy rainfall
- likely increase in tropical cyclone intensity
- likely decrease in rainfall in subtropical areas such as the Mediterranean or southern Africa.

Source: IPCC Summary Report to UN Conference on Climate Change December 2007



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The Consequences: More Flooding in Scotland?



“likely increase in tropical cyclone intensity”

The Consequences:
Bangladesh

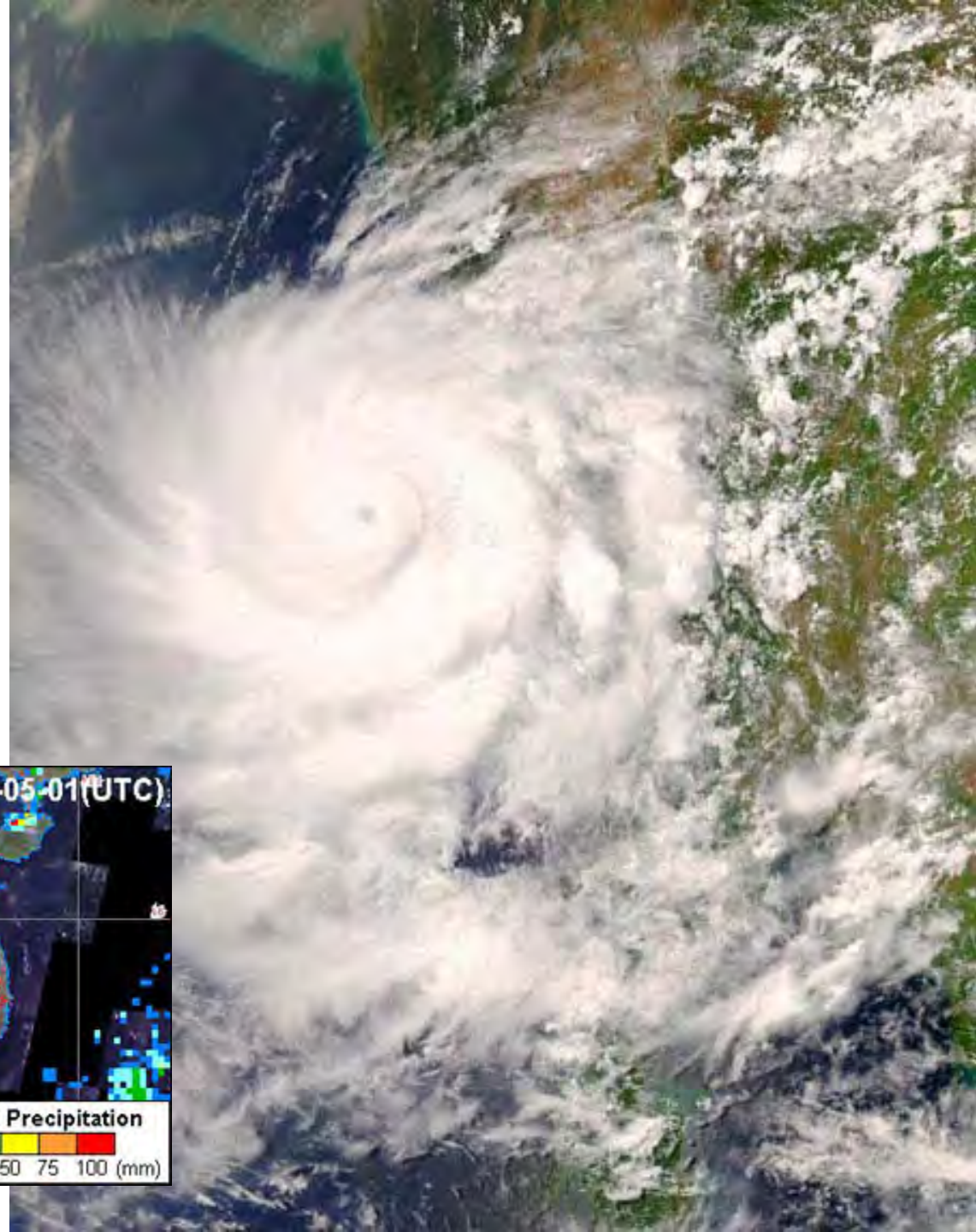
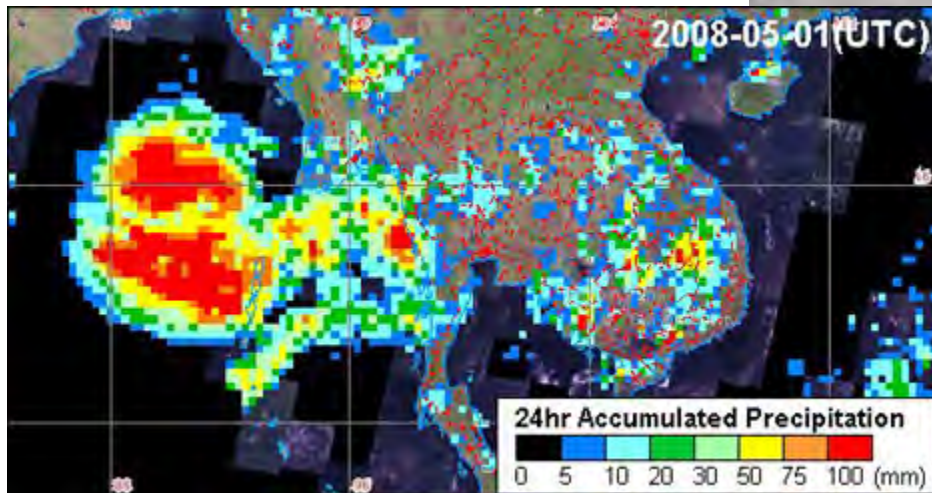


*Images of Bangladesh after
Cyclone Sidr by Rev David Hall,
Church of Bangladesh*

“likely increase in tropical cyclone intensity”

The Consequences: Burma

*Cyclone Nargis,
May 2008*





The consequences of sea level rise: Tuvalu



“When our land is submerging slowly but visibly, any ideological debate on ecological issues are only a luxury of the privileged communities”

Rev Tafue Molu Lusama, Pacific Eklasia Kelisiano, Tuvalu

The Role of the Kirk

“The Church of Scotland is concerned that climate change poses a serious and immediate threat to people everywhere, particularly to the poor of the earth; and that climate change represents a failure in our stewardship of God’s creation.”

Church and Society Council Report to General Assembly 2009



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How can congregations respond ?

- Be aware of climate change
- Take action in your congregation
- Get involved



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Be aware

Do you know:

- how much energy do your church buildings use?
- how much energy do you use at home?
- how to work out your carbon footprint?



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How much energy do your church buildings use?

From your church fuel bills for 2008:

- How many units of electricity (kilowatt hours) did you use?
- If you have gas, how many cubic metres of gas did you use?
- If you use heating oil, how many litres of oil ?



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How to work out the footprint of your church buildings

Carbon Calculator			
	Enter energy used...	...multiplied by...	to give ...kgs of CO2
Gas: (Cubic metres)		2.2	0
Oil: (Litres)		3	0
Electricity (kWh)		0.5	0
Total CO2 emissions from buildings (kilograms)			0
Total CO2 emissions from buildings (tonnes)			0.00



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Worked Example: Gilcomston South, Aberdeen

Carbon Calculator			
	Enter energy used...	...multiplied by...	to give ...kgs of CO2
Gas: (Cubic metres)	19,651	2.2	43232.2
Oil: (Litres)		3	0
Electricity (kWh)	33,768	0.5	16884
Total CO2 emissions from buildings (kilograms)			60116.2
Total CO2 emissions from buildings (tonnes)			60.12



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Take action

- We need to reduce CO2 emissions by 80% by 2050
- Iona Community commitment to reduce by 5% each year will get us there
- Could you manage a 5% cut in energy use each year?



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Get involved:

Become an eco-congregation

- Express your commitment to care for creation
- Take practical action
- Raise awareness in your congregation and community



Eco-Congregation Scotland Programme

- 200+ congregations across Scotland and growing fast
- The largest community led environment movement in Scotland
- Becoming a significant national lobbying force



Summary

- Climate change is one of the defining challenges of the century
- Christians must respond
- How can you and your congregation respond?
- We suggest you make a commitment to measure and reduce your carbon footprint



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