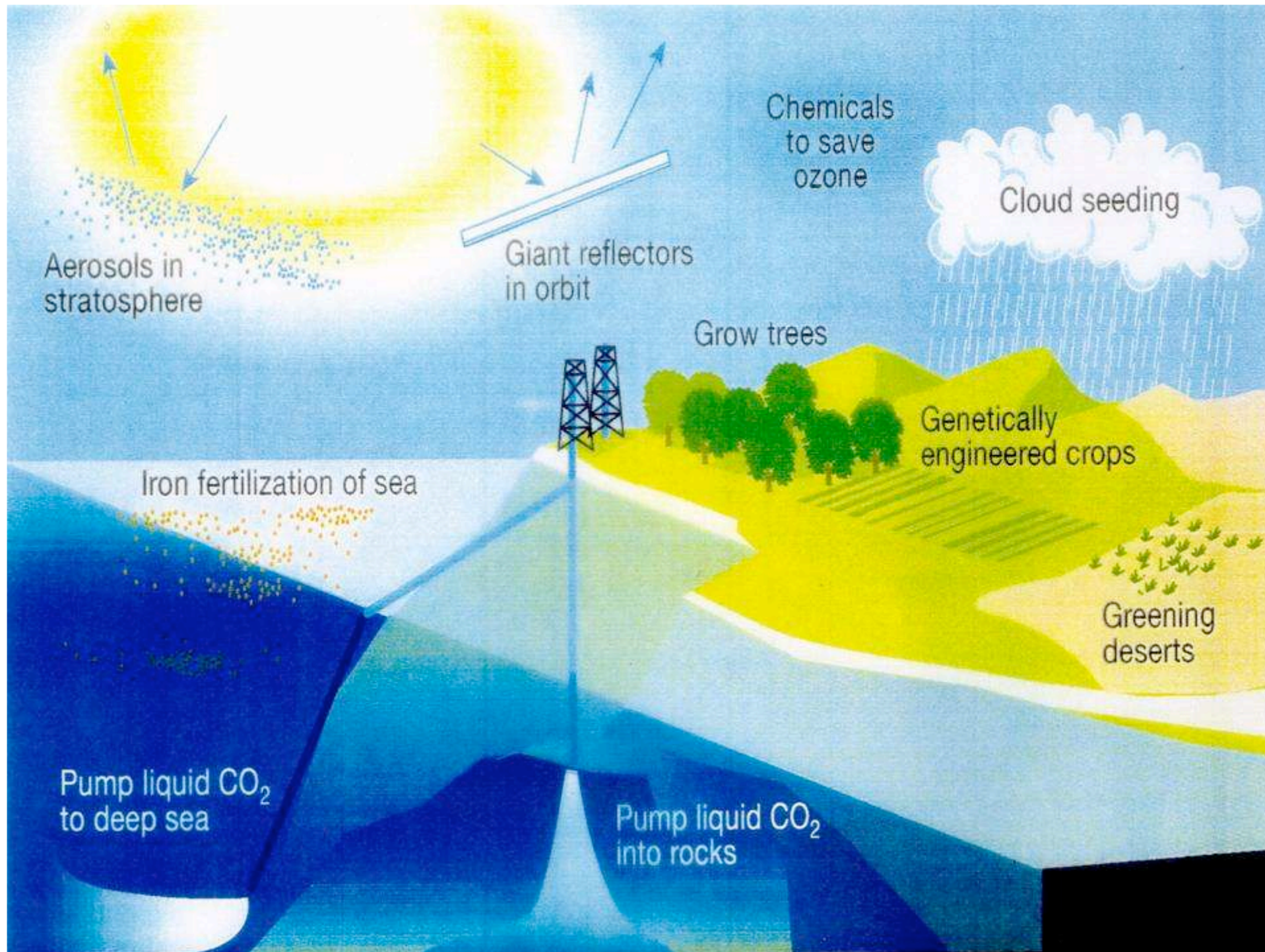


# Zero Carbon Living : Creating Behaviour Change in East Anglia

Dr Simon Gerrard  
Chief Technical Officer  
Low Carbon Innovation Centre

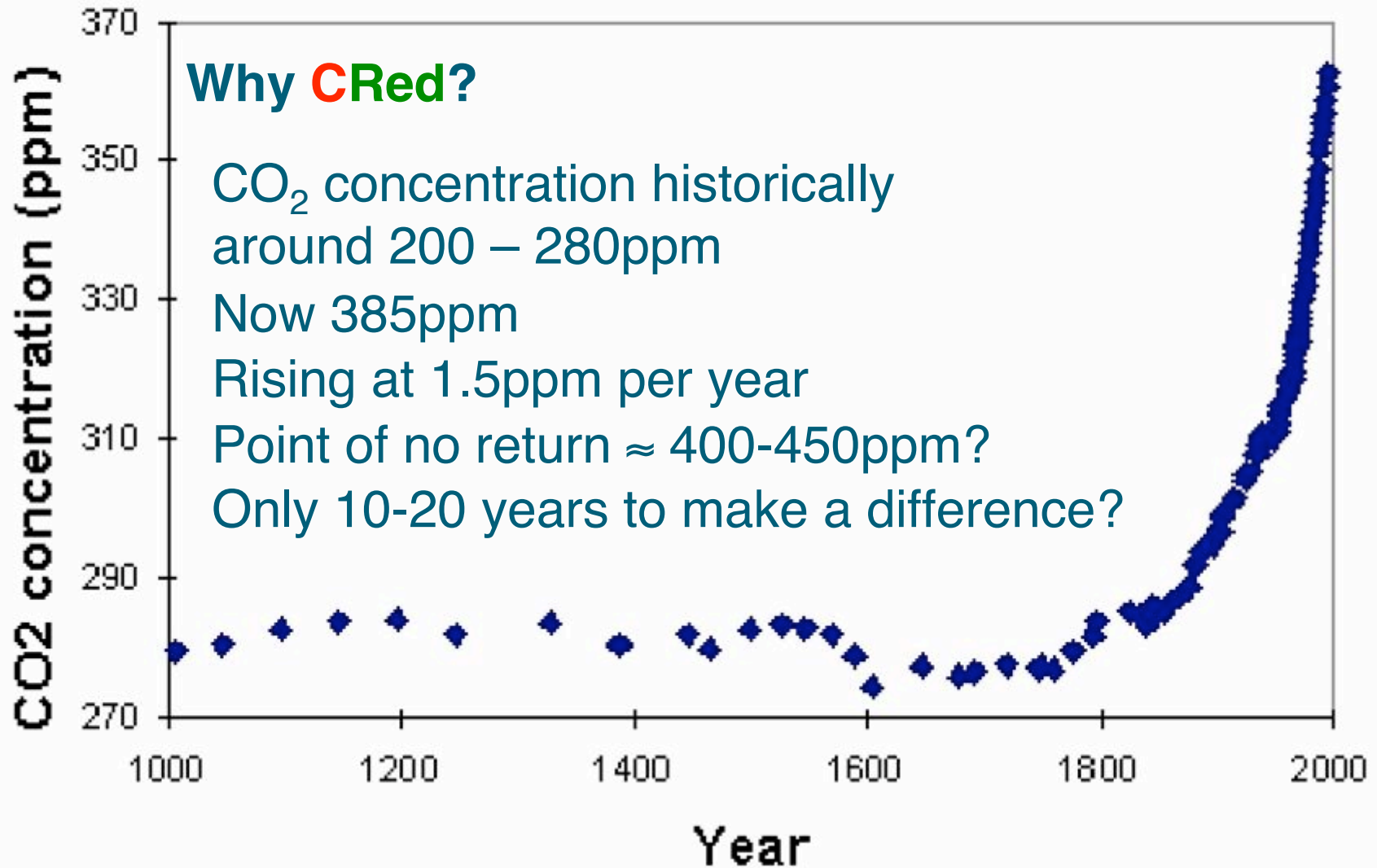


# The 60% challenge



© LCIC 2009

# Atmospheric carbon dioxide concentrations



## Why CRed?

CO<sub>2</sub> concentration historically around 200 – 280ppm

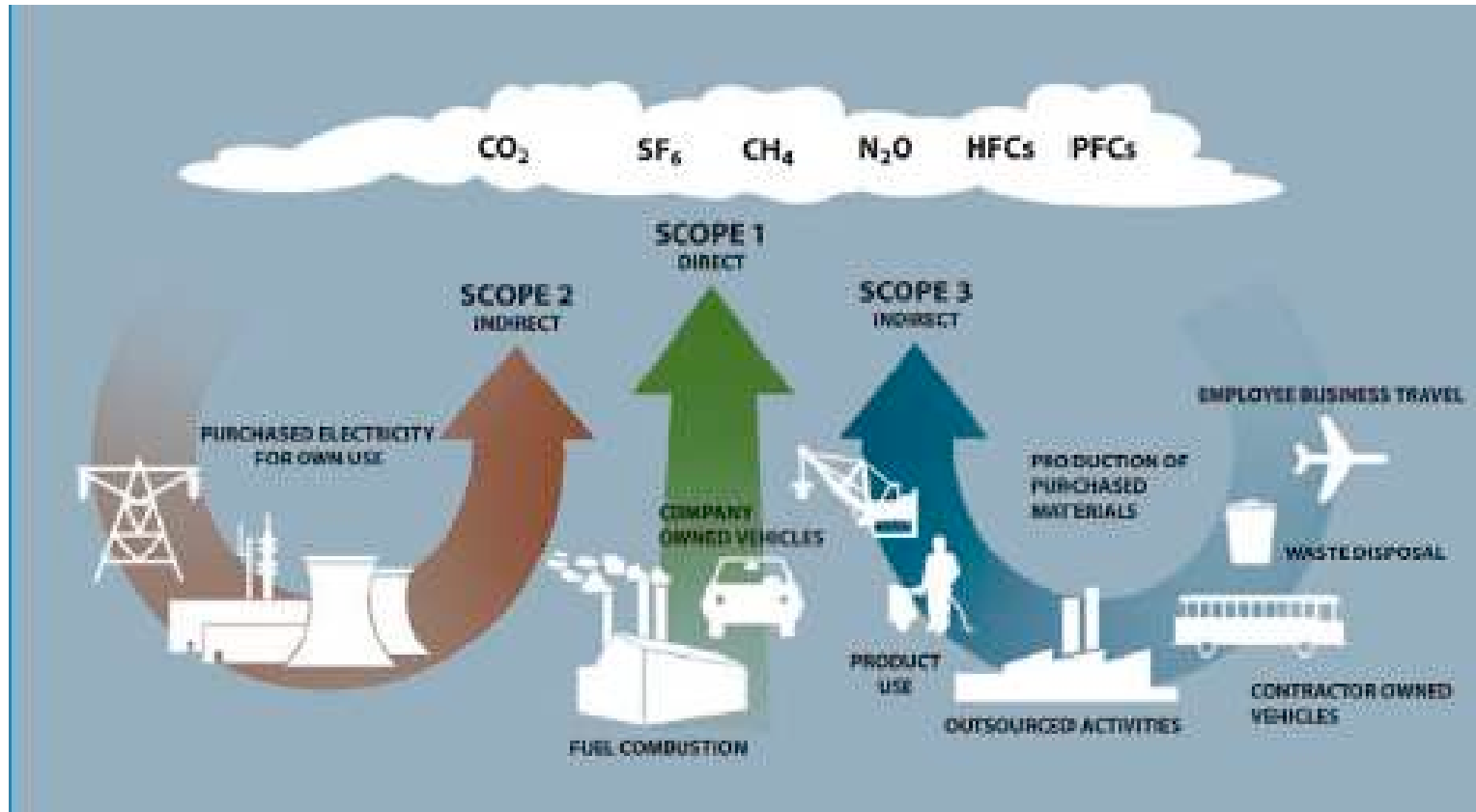
Now 385ppm

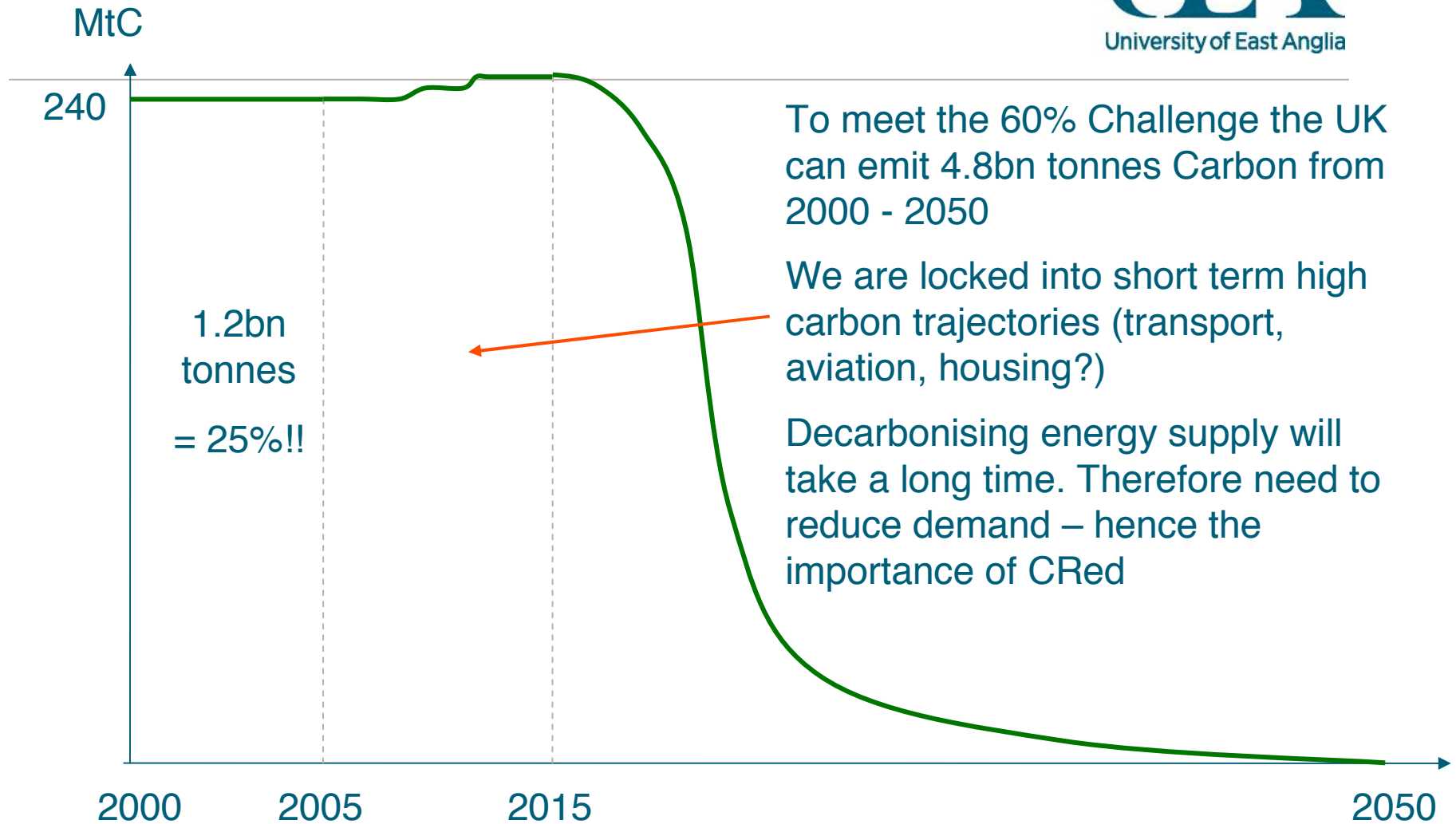
Rising at 1.5ppm per year

Point of no return  $\approx$  400-450ppm?

Only 10-20 years to make a difference?

# GHG Reporting: Scopes 1-3

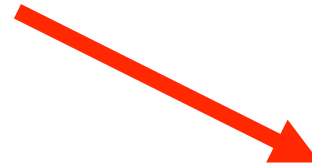




# Pathway to a Low Carbon Future



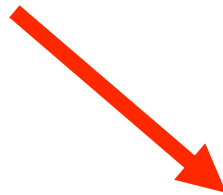
1. Don't waste energy



2. Use more efficient equipment



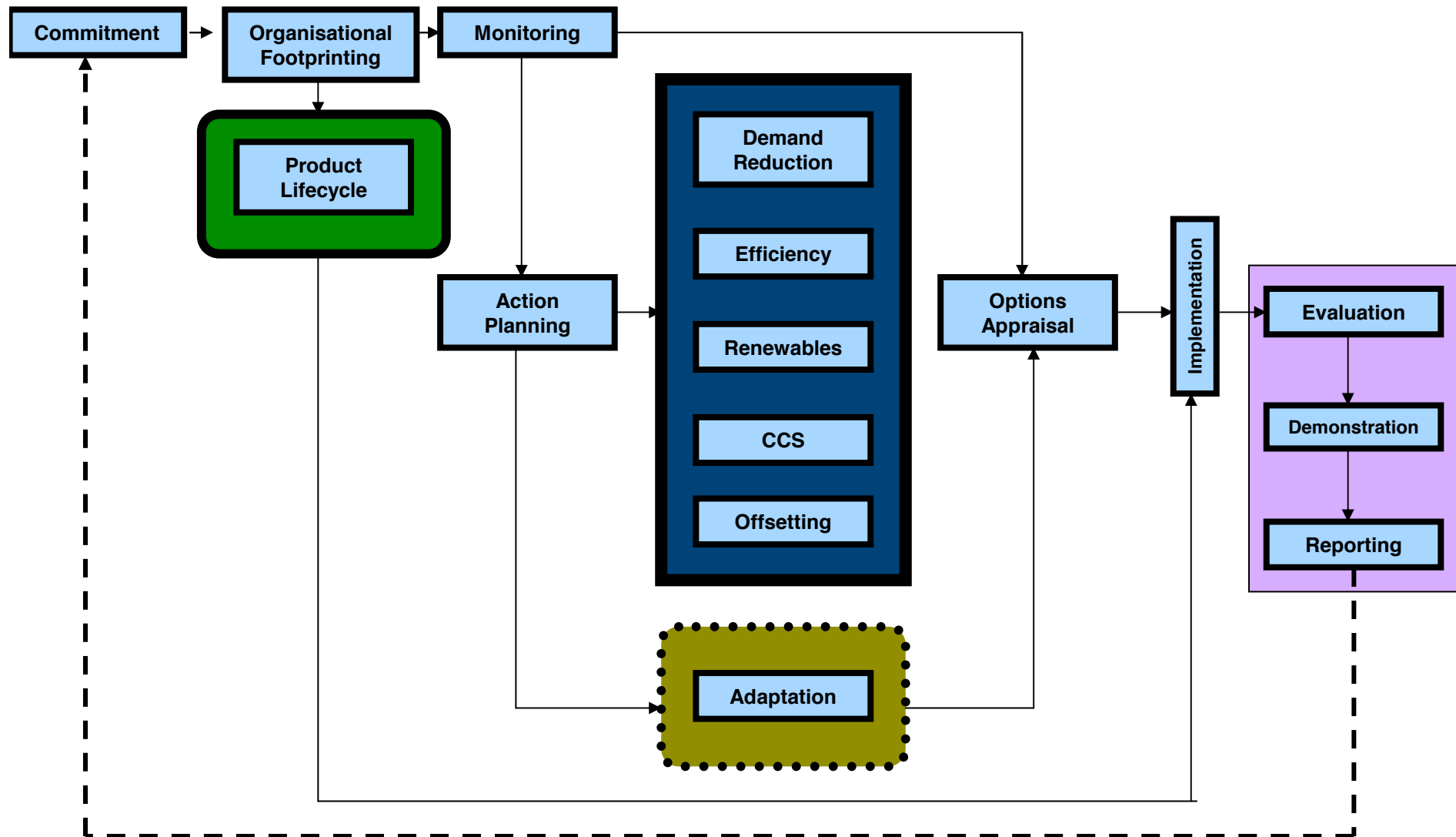
3. Switch to renewable energy



4. Capture & store or offset the remainder

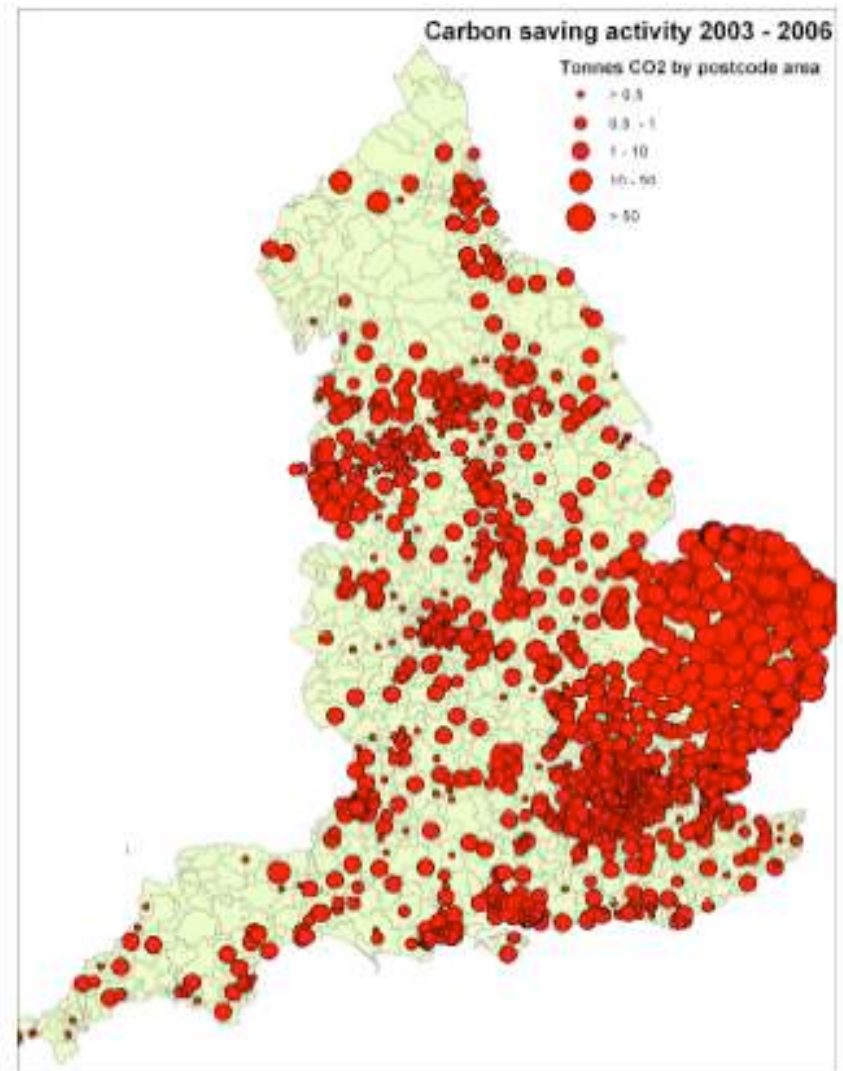


# The Carbon Management Process



## UK Geography

- ✦ **Community focused**
- ✦ **150,000 pledges**
- ✦ **50,000 people**
- ✦ **Growing at 1-2% per month**





Homepage

Your CRed Team

CRed in Business

CRed in Schools

CRed at Home

Press Support

Star of the East

Academic  
Resources

Thought's on CRed

Sponsors

Transport

Low Carbon  
Technologies

Contact Us

Join CRed / Sign Up

Login / Pledges

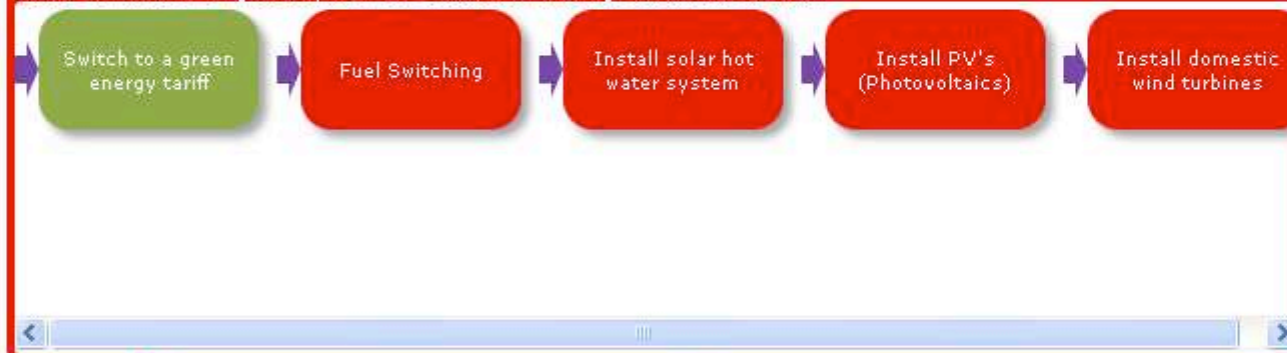
## CRed Pledge Pathways for Norwich

Welcome to the CRed Pledge Pathways screen, please select your desired pathway type from the menu and then select a Pledge.

[Back to My Homepage](#)
[Communication](#)
[Lighting](#)
[Behavioural](#)
[Heating and Comfort](#)
[Fuel Source and Choice](#)
[Appliances](#)
[Insulation](#)
[Transport](#)

### Fuel Source and Choice

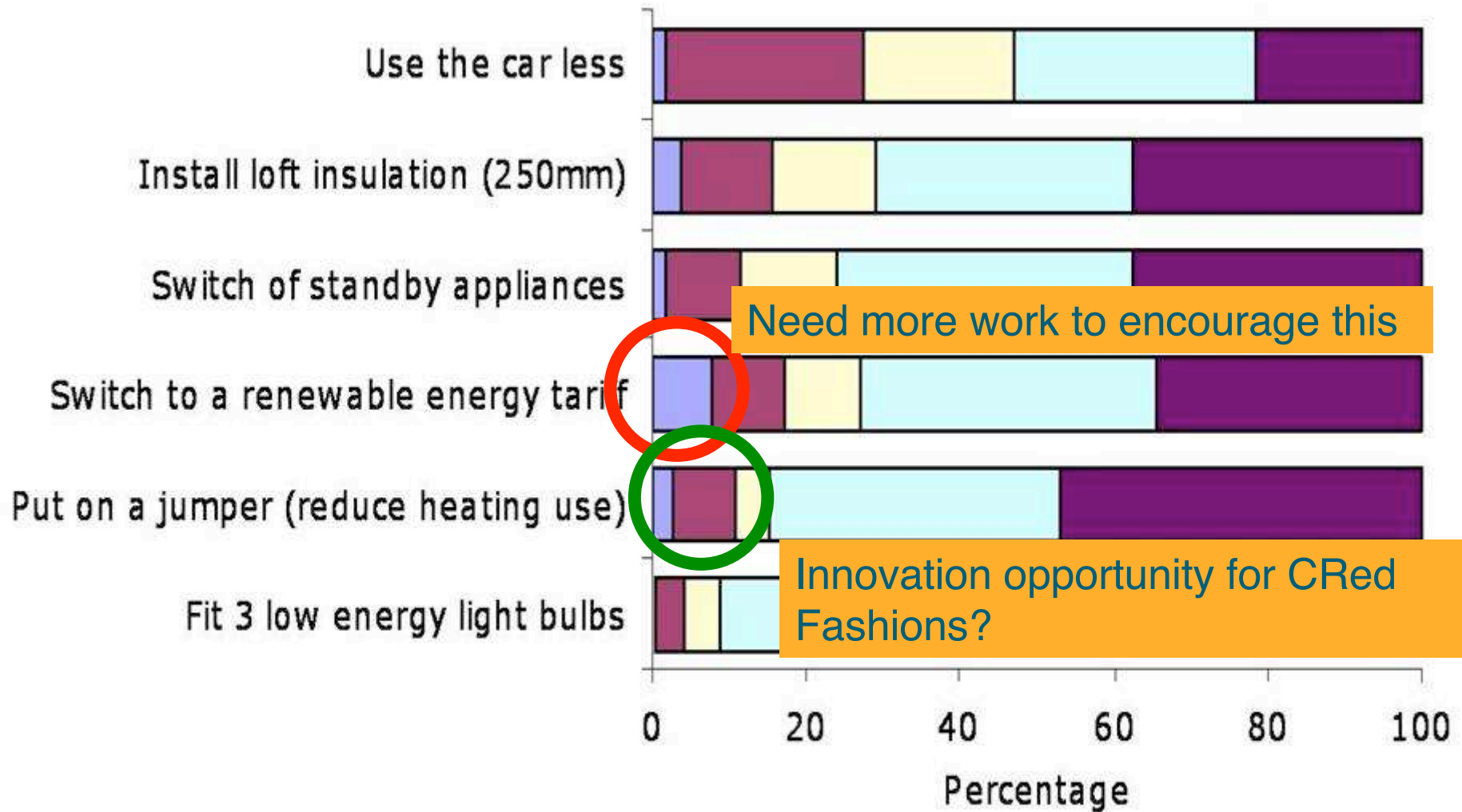
Make sensible changes to your fuel sources and usage to reduce carbon



■ Available Pledges

■ Pledges already taken or superseded

[Show Help](#)



■ Very difficult 
 ■ Difficult 
 ■ Neither 
 ■ Easy 
 ■ Very Easy

## Progress with behaviour change

---

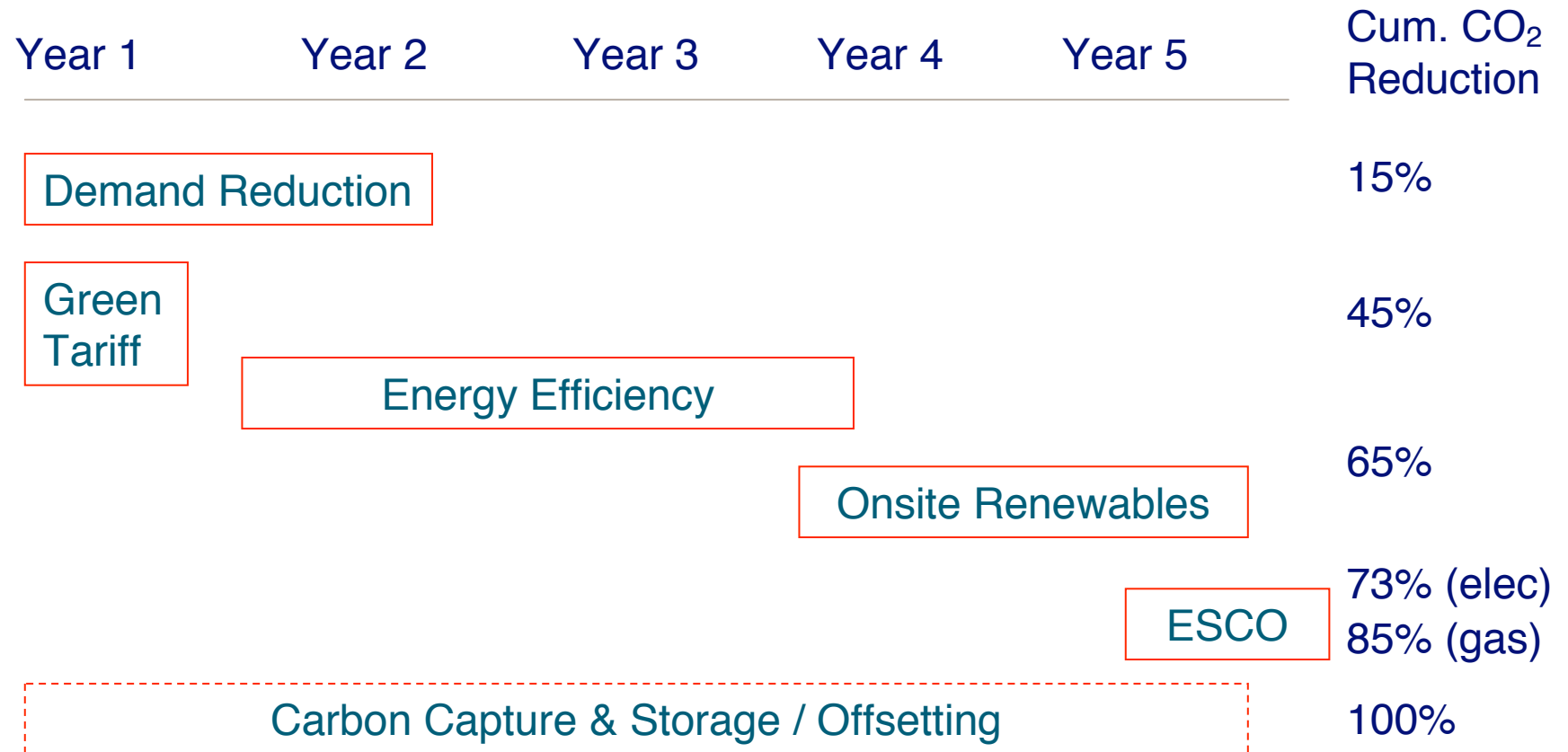
- ✦ Evaluation enables the creation of success factors for different types of pledges e.g.
  - ✦ Buy AA-rated appliances = 76%
  - ✦ Install radiator panels = 28.6%
- ✦ 2007 – 5.4 pledges per person saving around 1.5 tonnes CO<sub>2</sub> up from 0.8 tonnes CO<sub>2</sub> in 2005.
- ✦ This is about 10-15% of a typical individual UK carbon footprint (excluding Scope 3 consumables and waste)

## Motivations for behavioural change

---

- ✦ Economic - saving money
- ✦ Political – national/local government responses
  - ✦ Provision of recycling bins; cycle paths; free bus travel etc.
- ✦ Cultural – media representations of climate change and ‘appropriate’ behaviours to create social norms
- ✦ Moral/ethical drivers

# Typical Roadmap



# Creating Individual Action

DEFRA operated; not 'open source' but available to others

HTML version

Directgov  
Public services all in one place

ACT ON **CO<sub>2</sub>** Calculator *It's time to act*

Before you start

**Ready to act?**  
Use our CO<sub>2</sub> calculator to find out your carbon footprint.

**start**

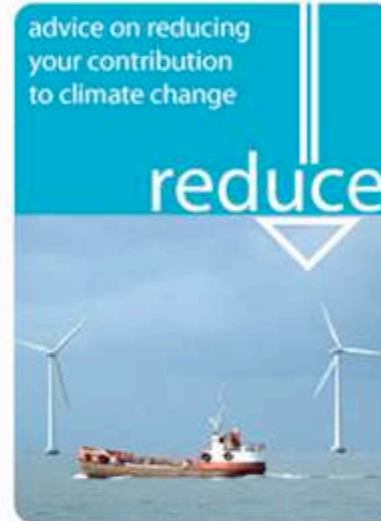
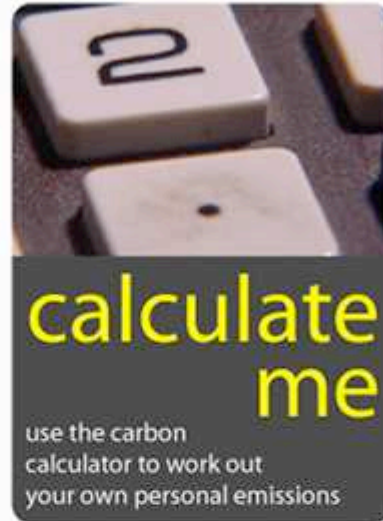
Welcome to the CO<sub>2</sub> calculator. Find out what your carbon footprint is and how you can make some simple changes to help tackle climate change.

[More about your CO<sub>2</sub> calculations - FAQs.](#)

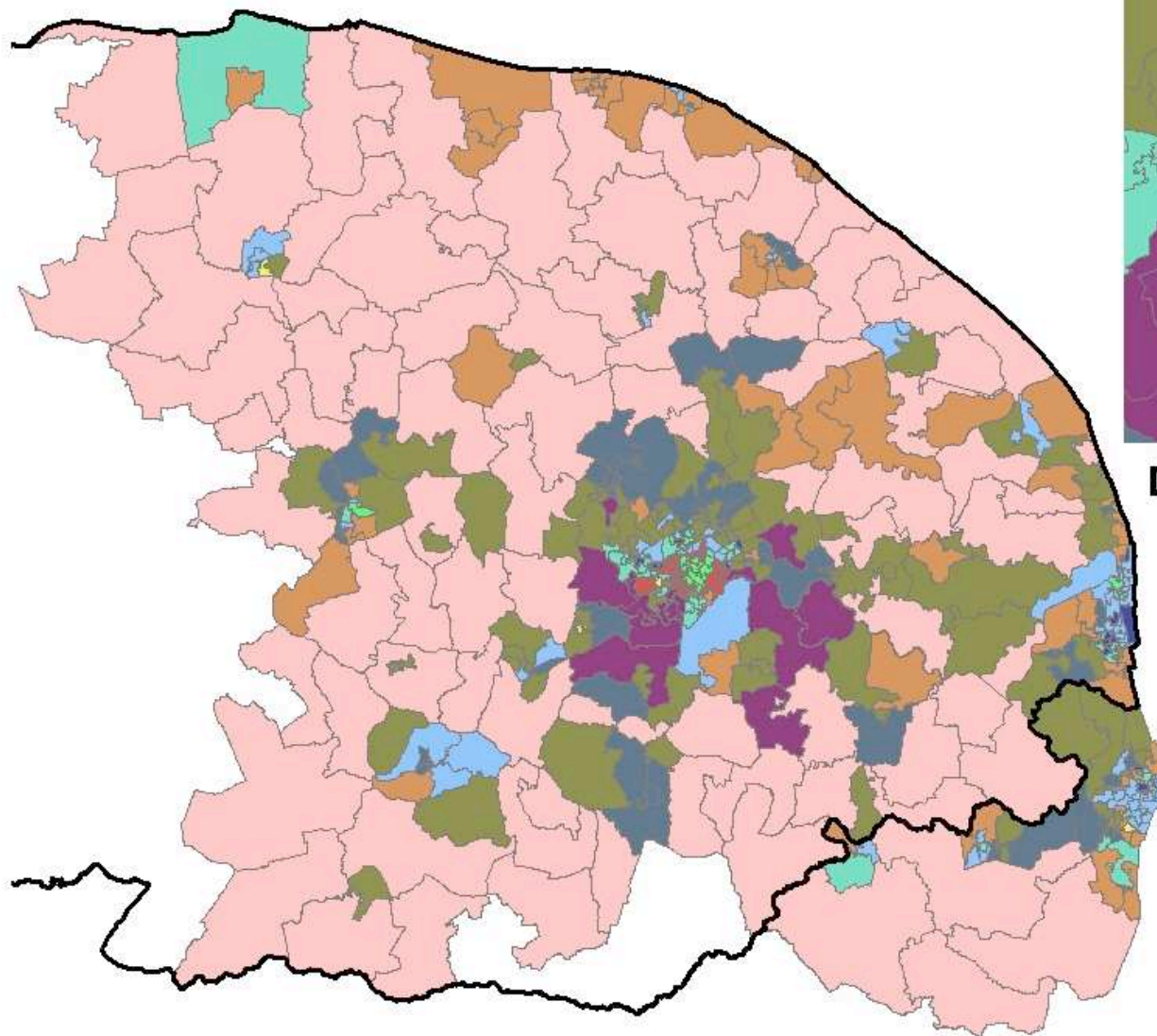
View, complete or change your footprint **log-in** Save your answers **sign-up**

[Your CO<sub>2</sub> Calculations - FAQs](#) | [Climate Challenge website](#) | [Directgov](#) | [Accessibility](#) | [Feedback](#) | [Your Privacy](#) | © Crown copyright

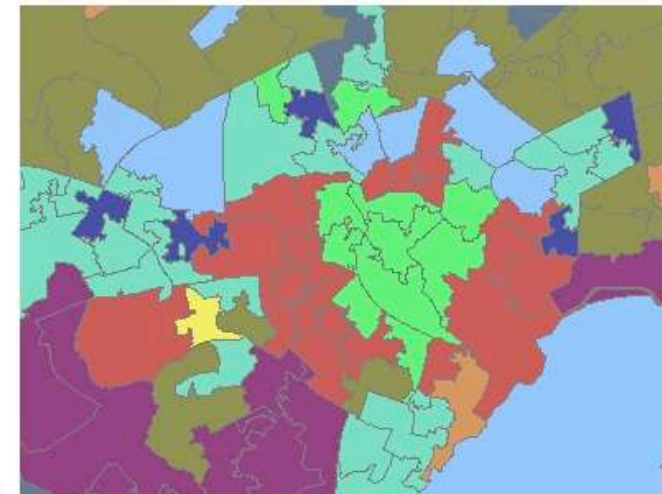
Comprehensive and offers some limited recommendations for action  
Good presentation of results (6 top tips)



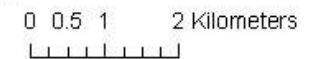
Generates relatively high emissions results as it includes questions on scope 3 emissions arising from goods and services and adds an individual share of UK infrastructure emissions



**Mosaic Data by Super Output Area**



**Detail of Norwich**



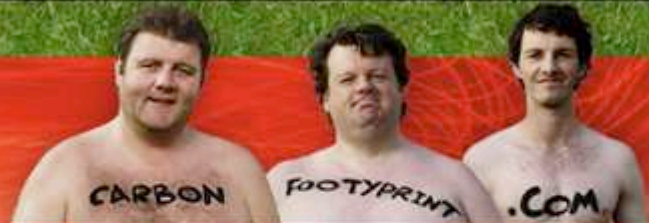
**Mosaic Categories**

- Symbols of Success
- Happy Families
- Suburban Comfort
- Ties of Community
- Urban Intelligence
- Welfare Borderline
- Municipal Dependency
- Blue Collar Enterprise
- Twilight Subsistence
- Grey Perspectives
- Rural Isolation

# Carbon reduction by mosaic category

	Mean carbon reduction per person pledging (kgpa)
Symbols of Success	1551.09
Urban Intelligence	1339.98
Suburban Comfort	1506.09
Welfare Borderline	1515.79
Twilight Subsistence	1033.47
Rural Isolation	1493.39
Happy Families	1437.68
Blue Collar Enterprise	1476.97
Grey Perspectives	1632.85
Ties of Community	1681.18
Municipal Dependency	1419.84

# Creating Community Action



Welcome back Simon Sign out >

- Home
- Carbon League
- Lift shares and events
- Pledges
- Photo gallery
- About E.ON
- Prizes and promotions



Want to win tickets to an FA Cup match?

### FA Cup News

#### Fifth Round draw

FA CUP: The Fifth Round draw was made at Soho Square on Monday, with Manchester United being drawn with Arsenal.

#### No draws!

FA CUP: No replays were required from the weekend's Fourth Round games, the first time in over 50 years that has happened.

#### Gale hails Havant heroes

FA CUP: Havant & Waterlooville boss Shaun Gale has paid tribute to his team of part-timers who gave Liverpool a fright.

[Read more news at thefa.com](#) →

### Event photos



[Click here to see all photos](#) →

### Pledge-o-meter



6% of carbon generated by The FA Cup has been offset.

[Manage my pledges](#) →

#### Pledge Tips:

Turn off unused lights

[Pledge Now](#) →

steve has pledged to don't leave equipment on standby

[Manage my pledges](#) →

### Your club is Reading

Your club is in 44th place  
Your club has 21 fans  
that have made 130 pledges  
and saved 14740kg CO<sub>2</sub>.

[My events](#) →

[My details](#) →

[My alerts](#) →



### Filters

- My club
- My club's members
- All events
- All clubs



[Discover E.ON UK](#)

Going green with E.ON's products and services is easy

[Go Green with E.ON](#)



### What is the Big Green Challenge?

We're facing one of the biggest challenges of our generation - climate change. At NESTA, we believe that encouraging people to work together will help find new ways - better ways - to tackle BIG problems, like reducing CO<sub>2</sub> emissions. That's why we've developed a unique and exciting competition - with a £1 million prize fund - the Big Green Challenge from NESTA.



### People powered... who can take part?

All of us can help to reduce CO<sub>2</sub> emissions in our



### What's involved?

This prize is about encouraging change and innovation. We're challenging you to reduce your CO<sub>2</sub> emissions in your community - which can be local, regional or more widely dispersed - by 60%. Are you up to the challenge? Our ten finalists, once selected, will have a year to show us that they can turn their BIG ideas into action. The winner will be announced in late 2009.

You have until 29 February 2008 to enter the first stage of applications.

[▶▶ Sign Up to the Challenge ◀◀](#)

### Big Green Blog 'people-powered'



### Sarah Beeny's post

#### Launching the Challenge!

Welcome! The Big Green Challenge is a really worthwhile reason to get together with your neighbours, a local club or find like-minded people to join with.

Climate change affects everybody, so having a prize that rewards communities and groups for working together to tackle it makes perfect sense.

# CUT YOUR CARBON

Can you cut it as a **CARBON HERO?**



[more](#) →

[Home](#) [About us](#) [Get involved](#) [Win funding](#) [Why act?](#) [Info store](#) [News](#) [Get in touch](#)

Site search

[find](#) →

19 August 2008

[Login](#)

## JOIN US... HELP SAVE THE PLANET!

Be a carbon hero - join your community in tackling climate change. [Watch our new competition video](#) to see communities pitching their ideas to judges to win funding in the first round!

[register](#) →



## Search for a community...

Postcode, name...

[go](#) →

## Calculate your footprint!

[Register to  
get your  
carbon  
footprint](#)



## News

### Communities win funding for low carbon dreams

Six communities have won funding from EEDA's Cut your Carbon competition.

[Full story](#)



01 Jul 2008

### Communities battle for low carbon funding

[Full story](#)



19 May 2008

### Cut your Carbon unveils new high-profile judges

[Full story](#)



See what other people have done - and learn from them. [Read more](#)

**CUT YOUR  
CARBON**

in partnership with

anglianwater **e-on**

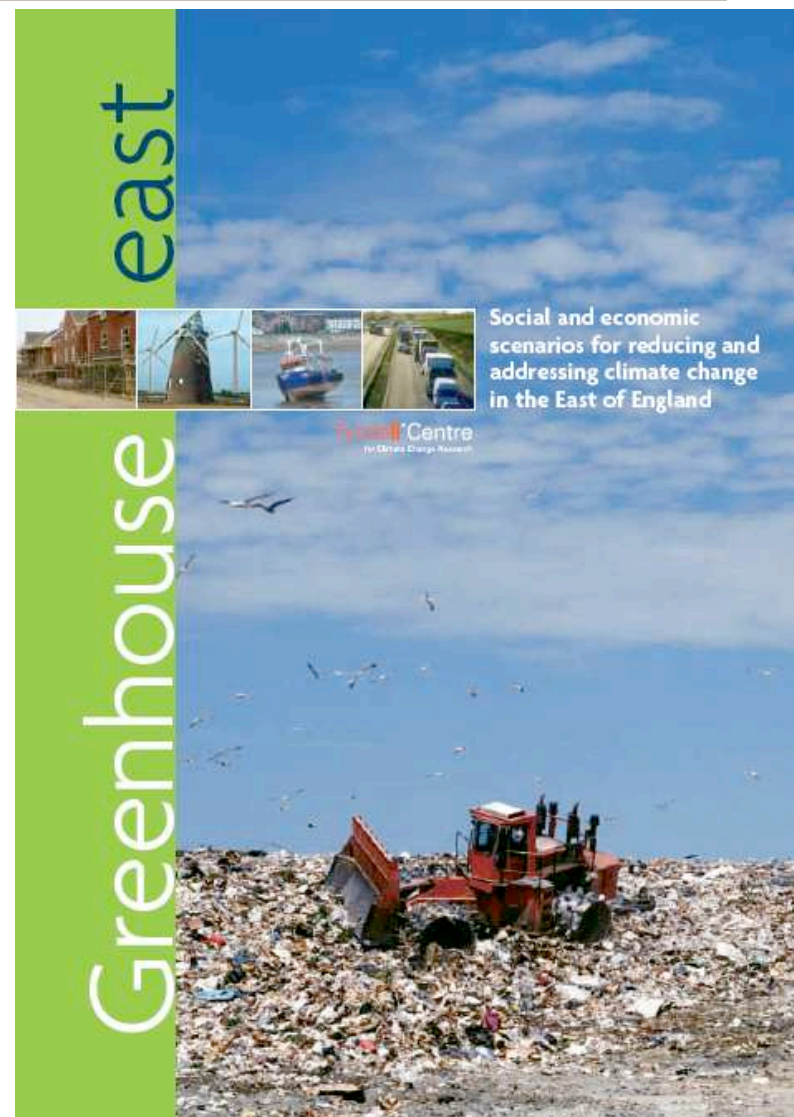
© 2008 EEDA | [Privacy Policy](#) | [Disclaimer](#) | [Contact](#) | Engineered by Solstice

**EEDA**  
East of England Development Agency

# Looking Forward to 2030

# Greenhouse East (2005)

- ✦ More of the Same
- ✦ Market Fix
- ✦ Guided Change
- ✦ Local and Green





# climate futures

responses to climate change in 2030

October 2008

## Vision 1 – behind the scenes

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- ✦ Focus on energy efficiency and decarbonisation of power supply but little radical change in attitudes and behaviours
- ✦ Carbon trading for businesses and organisations
- ✦ Low-level media discussion
- ✦ Neoliberal ideology intact

Amory Lovins believes that “there is no need to change lifestyles to tackle climate change. There are other good reasons for lifestyle changes – better quality of life – but this shouldn't be mixed up with what needs to be done to tackle climate change.”

Forum for the Future (2008) Climate Futures. p11

## Vision 2 – New Green Deal

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- ✦ UNEP Green Economy Initiative
  - ✦ Apollo Alliance (US); Aldersgate Group (UK)
- ✦ More radical change in attitudes and behaviours stimulated by state confidence in implementing new regulation
- ✦ Serious / catastrophic impact of climate change on lifestyle leads to new alliances between industry, government, unions and communities
- ✦ Supportive media; greater levels of communication in news and culture

## Vision 3 – Local and Green (Protectionist)

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- ✦ Local production; self sufficiency
- ✦ Reduce demand for energy and products – repair, reuse, recycle
- ✦ Quality of life indicator replaced GDP
- ✦ Stable population
- ✦ Community-based solutions
- ✦ Less mobility but not necessarily decreased levels of social interconnectivity (use of low-carbon ICT)

## Concluding Thoughts

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- ✦ Attitude and behaviour change at the individual level likely to be insufficient to deliver zero carbon future for all
- ✦ Even apparently solely technical solutions have important human components
- ✦ Changes in existing institutions required; new ways of thinking, doing, living are needed
- ✦ Starting point - take a long hard look in the mirror

## Contact

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W: [www.uea.ac.uk/lcic](http://www.uea.ac.uk/lcic)

