

YOU DECIDE !

CRAG - Carbon reduction action group



Individual and volunteer
calculation and reduction
of CO2 emissions



EFN
www.ecolo.org

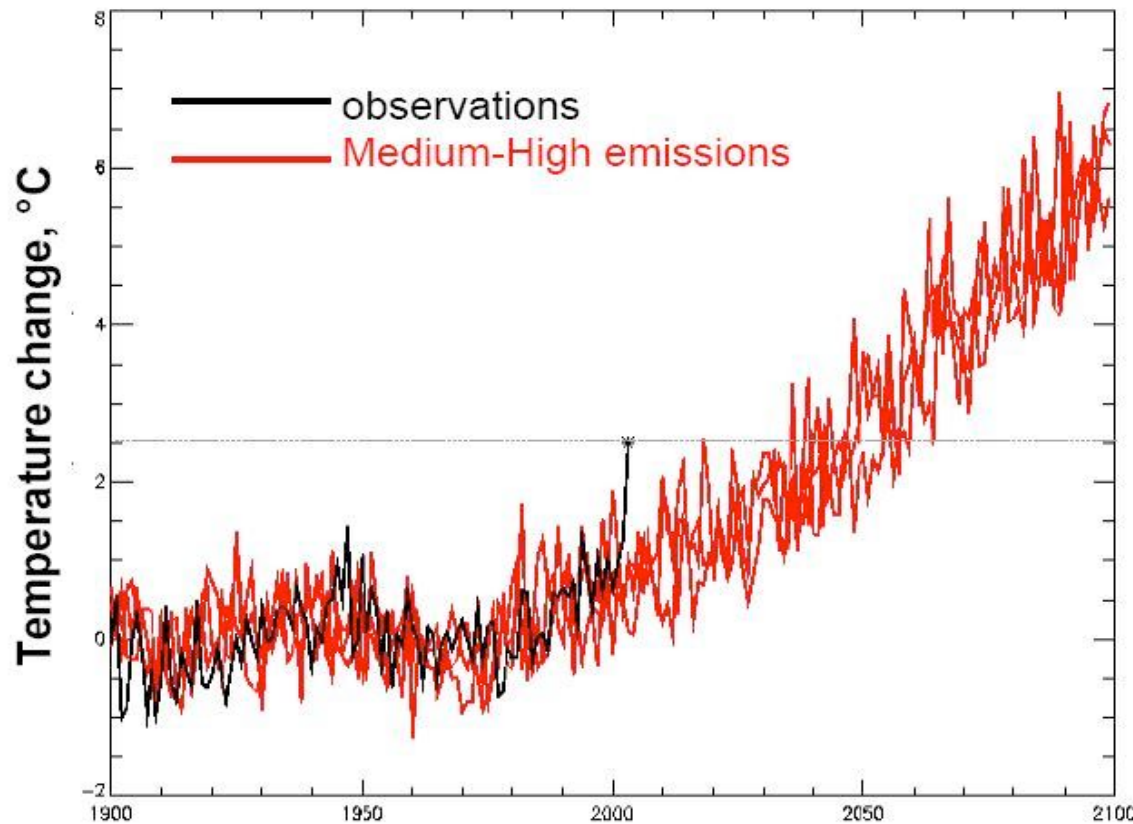
YOU DECIDE !

Contents

- **What's a CRAG**
- Your Carbon Footprint
- CRAG Rules



Was the summer of 2003 in Europe cold, normal or hot ?



European 2003 summer temperatures:

- normal by 2040s
- cool by 2060s

YOU DECIDE !

Source: Peter Stott, Hadley Centre

YOU DECIDE !



Question: What is the significance of this balloon ?



- **Answer : it contains a volume of gas equivalent to about 1.5 tonne of CO₂**
- **Note: a US citizen emits 20 tonnes (or 13 balloons) every year from the burning fossil fuels (10 in the UK, 6 in France)**

YOU DECIDE !



What Carbon Means To Us



London
STOCK EXCHANGE

7.60 € / ton of CO₂
(08/12/06)



5 t +

50 t CO₂

Driving a car

150 000 km x 10l/100km



1.5 t
CO₂



700 t
CO₂

Oil for heating

5 000 l x 50 years

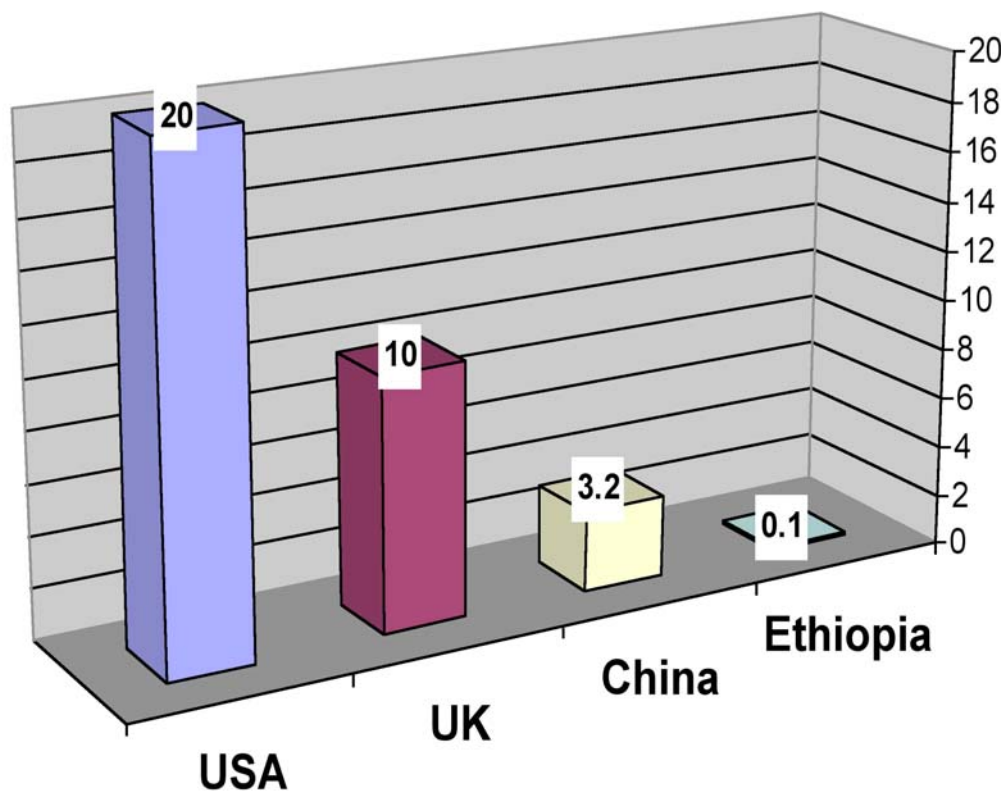
1 US citizen = 20 t CO₂/year
1 t of C = 3,7 t of CO₂

YOU DECIDE !



CO2 emissions

Per Country Per Capita Emissions



Your
personal
footprint
(average)
US: 10 tons
UK: 5 tons

Car driving
Plane flying
Heating
Cooking...
(about 50%)

Your share
of our
collective
footprint
US: 10 tons
UK: 5 tons

Factories
Roads
Communities
(about 50%)

YOU DECIDE !

Carbon Footprints And Targets



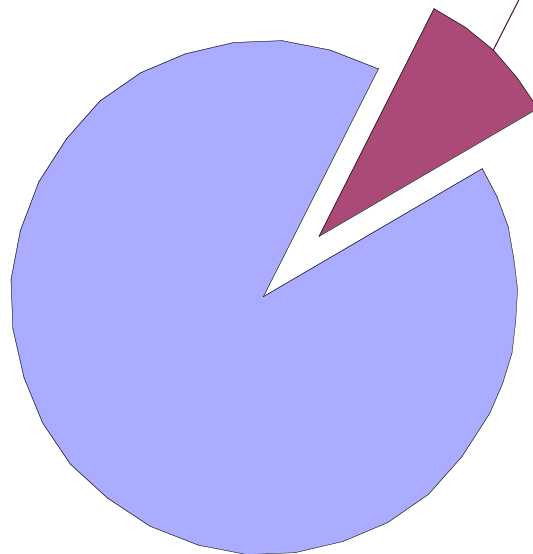
- **FOOTPRINT**
 - Your actual carbon emissions over a year
 - A measure of the amount of carbon dioxide emitted through the combustion of fossil fuels
- **CO2 SAVINGS : CO2 emissions you could save**
- **TARGETS**
 - Set an emissions goal to aim for the next year
 - Allows you to measure success

YOU DECIDE !



Your share of Carbon

Total Emissions Divided Into Equal
Rations



Each citizen is authorized to emit “his share”
(corresponding to what nature can digest,
i.e. about half of today’s emissions,
equally divided between all of us)

- Each individual or CRAG determines its own objectives for carbon reduction

EXAMPLE :

- 24 billion tons emitted today
- 12 billion tons only are reabsorbed by the ecosystems
- Divided by 6 billion inhabitants equals **2 tons per inhabitant (average) i.e. about one ton per inhabitant, for your individual emissions** (500 kgs per inhabitant in the longer term)

YOU DECIDE !

Your carbon-year

**1 - Collect
your share**

**3 - Do
your
carbon
accounting**



**2 - Monitor
Energy
Use**

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My Footprint (past year)



Example of footprint (CO2 report):

| | Begin | End | Units | CO2 emitted |
|-----------------|-------|-------|-----------------------|-------------|
| <i>Car</i> | 38891 | 54995 | 16104 | 5797 |
| <i>Gas</i> | 10090 | 11384 | 1294 | 2847 |
| <i>Electric</i> | 16052 | 18701 | 2649 | 1325 |
| <i>Total</i> | | | <i>Footprint (kg)</i> | 9969 |

That's too much, not a great story!

YOU DECIDE !

Calculating Your Footprint



- **If you are a masochist, do it manually**
 - Use multipliers for each type of energy use
 - To arrive at a CO2 equivalent for each
 - Then add them all up to get your footprint
- **Or do this with your Carbon Accountant**
 - Support from your CRAG, your friends, your accountant...
- **Or with EFN's carbon calculator**
 - Download and use the CO2 calculator developed by EFN:
[http://www.ecolo.org/documents/
documents_in_english/CO2-calculator-EFN.xls](http://www.ecolo.org/documents/documents_in_english/CO2-calculator-EFN.xls)

YOU DECIDE !



Calculating yourself, for masochists

| | Meter | Multi | CO2 |
|----------------------|-------|-------|------|
| <i>Gas</i> | | | |
| Cubic metres | 1294 | 2.2 | 2847 |
| Cubic feet | | 6.2 | 0 |
| Kilowatt hours (kWh) | | 0.2 | 0 |
| <i>Electricity</i> | | | |
| Kilowatt hours (kWh) | 2649 | 0.5 | 1325 |
| Green Tariff | | 0 | 0 |
| <i>Car</i> | | | |
| Litres petrol | | 2.3 | 0 |
| Miles | 16104 | 0.36 | 5797 |
| Total | | | 9969 |

Multipliers are readily available on the web (or in EFN's calculator)

How much are your CO2 emissions ?

YOU DECIDE !

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Act now!

Carbon Rationing Action Groups

login/register


why what how groups network news contact links

CRAG Groups

Please select a group from the map, or the list below.

| | |
|----------------|---|
| Clapham | targetting 4860 kg CO2 with a 4p penalty |
| Glasgow | looking for willing weegies! |
| Hereford | targetting 4500 kg CO2 with a 5p penalty |
| Islington | started on Dec 1st 2006 |
| Leamington | targetting 4500kg CO2 with a 4p penalty |
| Oxford | targetting 5000 kg CO2 with a 4p penalty |
| Sevenoaks | now recruiting! |
| Wokingham | now recruiting! |
| Worcestershire | Worcestershire welcomes new members who wish to find out about reducing their personal carbon footprint |

If you would like a space for a new CRAG, just register and send us a message.



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- Join a CRAG (or create one)
- Define your rules
- CRAG aims:
 - Promote carbon-reduction and carbon-awareness
 - Exchange information
 - Reduce emissions (and your energy expenses)
 - Analyze success and failures
 - Combat global warming

YOU DECIDE !

The network of CRAAGs



- An expanding network
- Especially in the UK
- In other European countries
- And around the world...
- With EFN

YOU DECIDE !



Democratically Decide Your CRAG's Rules

| | |
|---------------------|-------------------------------------|
| Share of CO2 2007 | 2 tonnes (2000 kg) |
| Carbon Year | From 01 Jan 2007 to 31 Dec 2007 |
| Household Sources | Heating, electricity, transport |
| Travel Sources | Car, Public transport, Air fligh... |
| Penalty | 0.03 € per kilo (30€/t) |
| CO2 Debt | Invest, exchange, donate |
| Type of supervision | Accountant, mutual, self-control |

These are suggestions, each CRAG determines it's own rules!

YOU DECIDE !

Account Settlement Options

- **If you have a Carbon Credit at the end of the year:**
 - You deserve a reward!
 - Be pleased with yourself, display your results proudly!
 - Carry forward your credit to next year
 - Exchange, donate or sell your credit to a carbon debtor
- **If you have a Carbon Debt at the end of the year:**
 - Subtract them from your carbon credit of previous years
 - Pay or exchange directly with those who have a carbon credit
 - Support an organization who efficiently combats carbon emissions and global warming (for example EFN - www.ecolo.org)
- **Then determine your aim for next year**

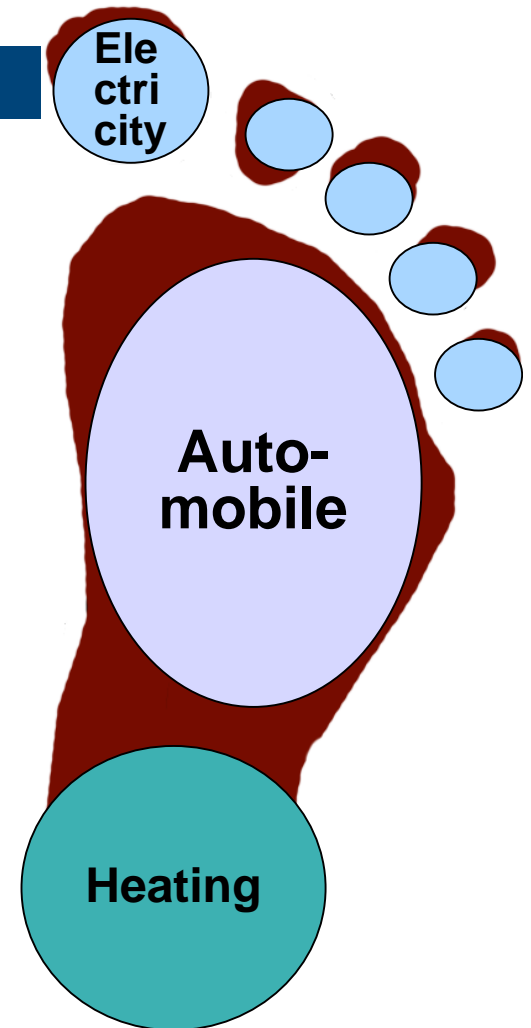


Invite your friends to join the CRAG!

YOU DECIDE !

My annual CO2 Statement

| ANNUAL CARBON ACCOUNT | | Cost | My share |
|---|--|----------|----------|
| Mr./Mrs. _____ | | 3 cts € | 2000 kg |
| ENERGY SOURCE | | Quantity | CO2 kg |
| Gas | | m3 | kg |
| Electricity | | kWh | kg |
| Heating | | | kg |
| Car Km | | km | kg |
| Bus and collective | | km | kg |
| Train | | km | kg |
| Air flights | | km | kg |
| TOTAL CO2 emissions | | | kg |
| Carbon credit (+) or Carbon debt (-) in Euros | | | € |

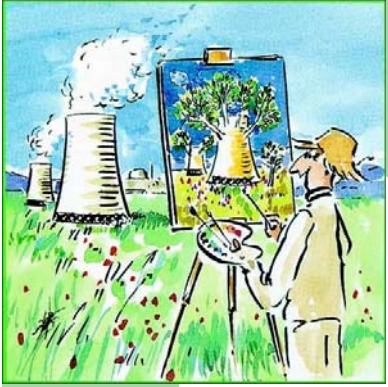


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My CRAG's Activities



- Presentation meetings, lectures
- Contact by email, mailing list and forum activity
- Information on the CRAG's web site
- Exchange information with other members:
 - Tricks to reduce carbon consumption
 - How to improve your lifestyle to be less carbon-intensive
 - Resolve issues and answer questions
- Do simulations and settle your yearly carbon account
- Plan rules and parameters for the next year



YOU DECIDE !

Are You Ready to Go?

YES!

- The correct answer is “YES”
- Set yourself up for the carbon year
 - Start your CO2 calculations
 - Keep ahead of all carbon-saving practices
- Read your Meters on New Year’s Day!
 - Get up late and stagger into the garage to read your meters (electricity, gas, car mileage...)
- Create a CRAG and reduce your emissions !

For more information: www.ecolo.org