



Sustainable Consumption & Production

Carol Wilson

SCPnet Co-ordinator

What is SCP?

DTI definition:

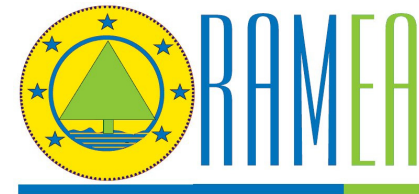
- Doing more with less



What is SCP?

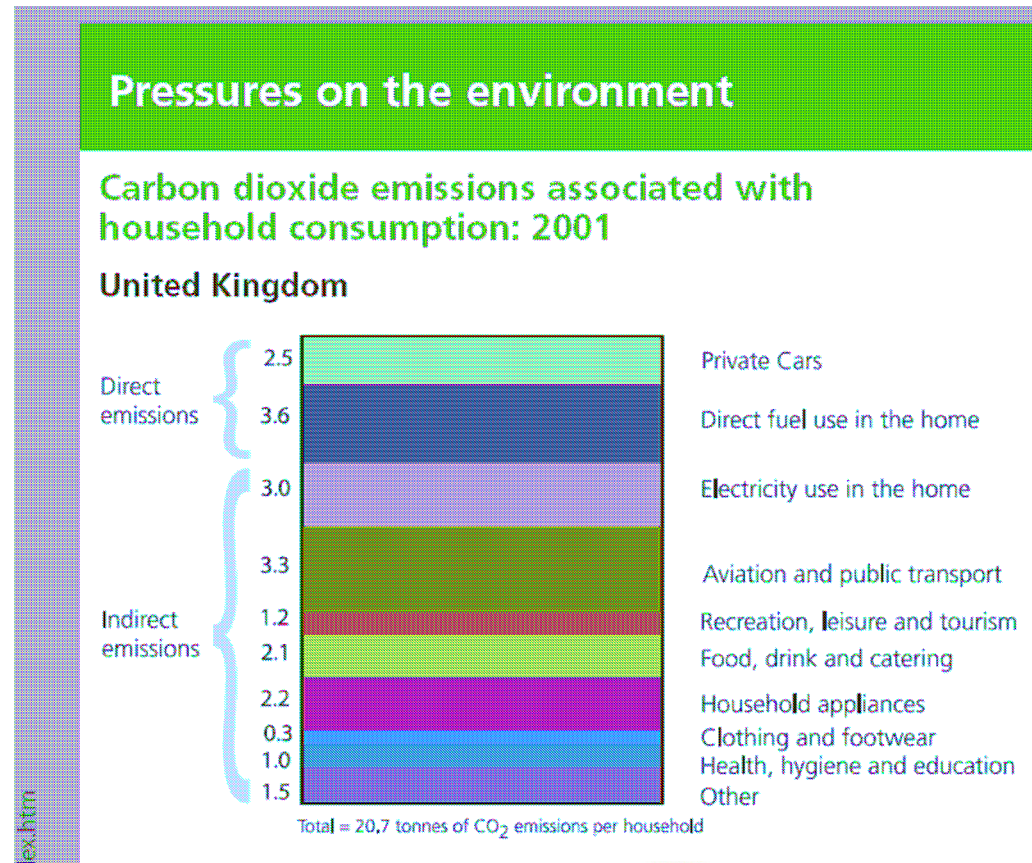
Defra definition:

- Achieving economic growth whilst respecting environmental limits



What is SCP?

- **Direct Impacts**
- **Indirect / Embedded Impacts**



SCP at a Regional Level

Focus on issues of:

- Climate Change
- Resource Use



What is the Evidence Base?

RAMEA - Regionalised NAMEA - National Accounting Matrix with Environmental Accounts cross-referencing:

- **Economic data**
- **Environmental data**



What is the Evidence Base?

**RAMEA - Consistent, Evidence-based
Decision Support Tool to inform:**

- **Regional Policy**
- **Regional Intervention**



RAMEA - Framework

Industries	Constant Prices (Millions of euros 1995)		GHG emissions (Mg)		
	Output	Value Added	CO2	N2O	CH4
Agriculture, hunting and forestry, fishing	6,983.7	2,978.6	974,043.5	8,886.5	78,475.8
Mining and quarrying	1,688.7	131.6	35,959.8	6.7	197.2
Manufacturing activities	125,690.0	22,518.1	13,209,554.6	2,099.0	1,882.1
Electricity, gas and water supply	4,606.3	1,105.5	5,574,001.9	234.9	31,514.4
Construction	10,753.6	4,164.7	69,034.6	2.3	5.1
Wholesale and retail trade, hotels and restaurants	28,829.4	14,498.4	844,127.7	62.5	162.2
Transport, storage and communication	14,858.0	5,749.2	2,873,923.5	159.8	7,595.0
Other services	61,111.6	33,363.5	1,882,924.2	140.8	38,985.5
Total - Industries	254,521.4	81,054.1	25,463,570.0	11,592.5	158,817.2



RAMEA - Contents

42 Economic Sectors (by 2-digit SIC / NACE Codes)

- **Employment**
- **Gross Value-Added (GVA)**
- **Output**



RAMEA - Contents

Environmental Data:

- **Air Emissions (Greenhouse Gases & PM₁₀)**
- **Energy Consumption (by fuel type)**
- **Waste Generation (by sector / household & waste management route)**
- **Water Consumption (by sector & households)**

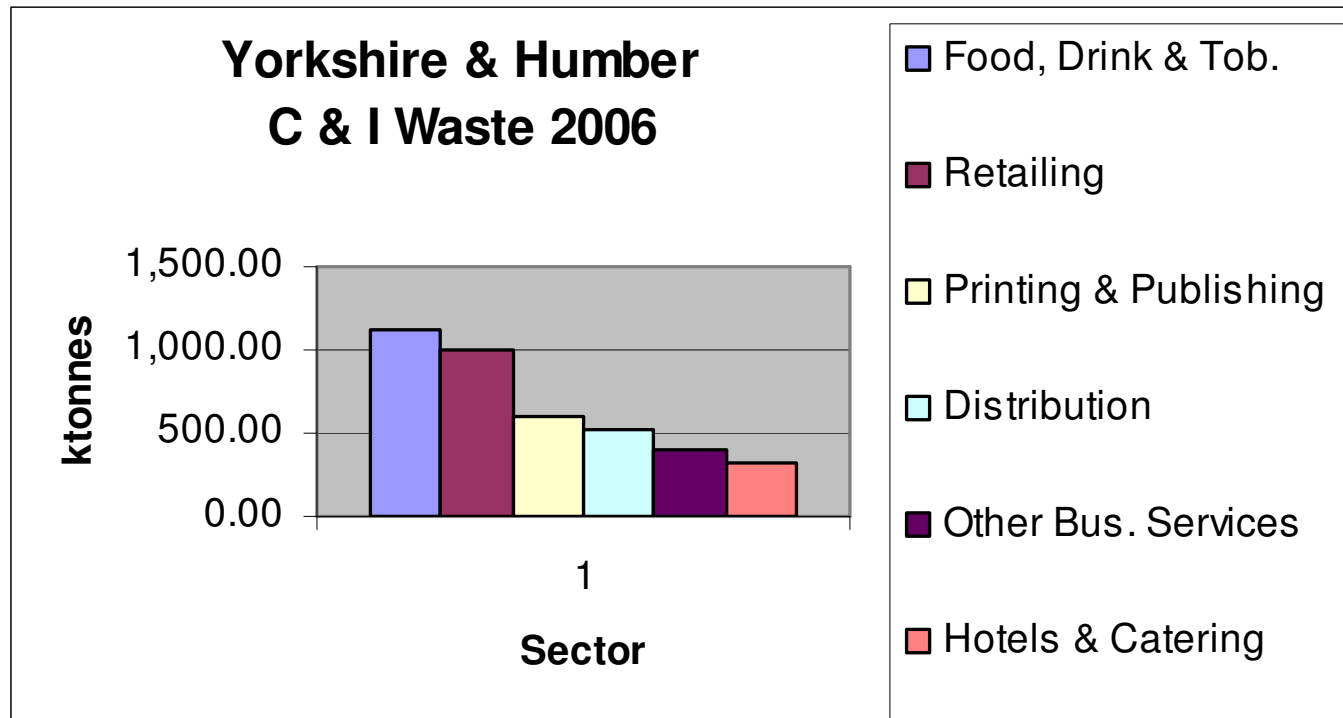


RAMEA – Data Sources

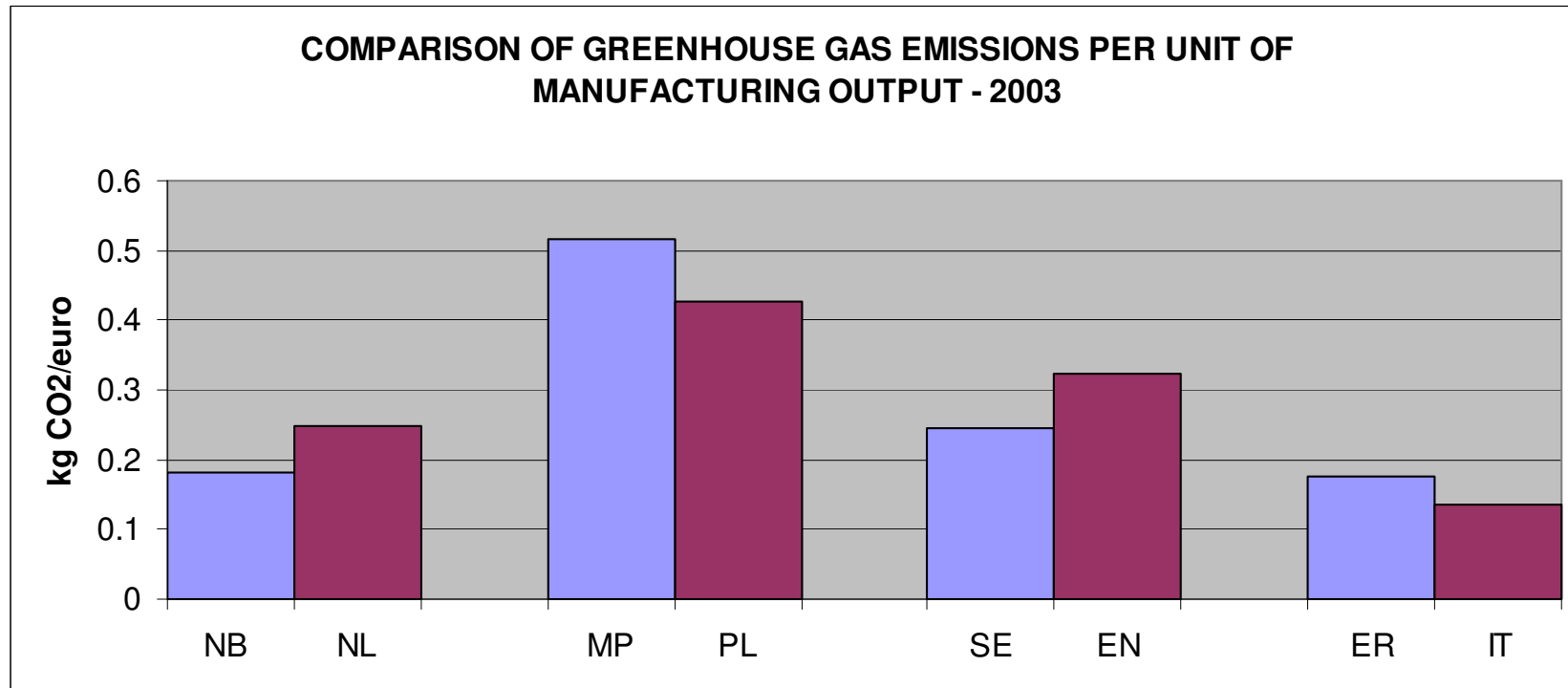
- **National Air Emissions Inventory**
- **DUKES**
- **DfT data**
- **EA SWMAs**
- **Envirowise water data**



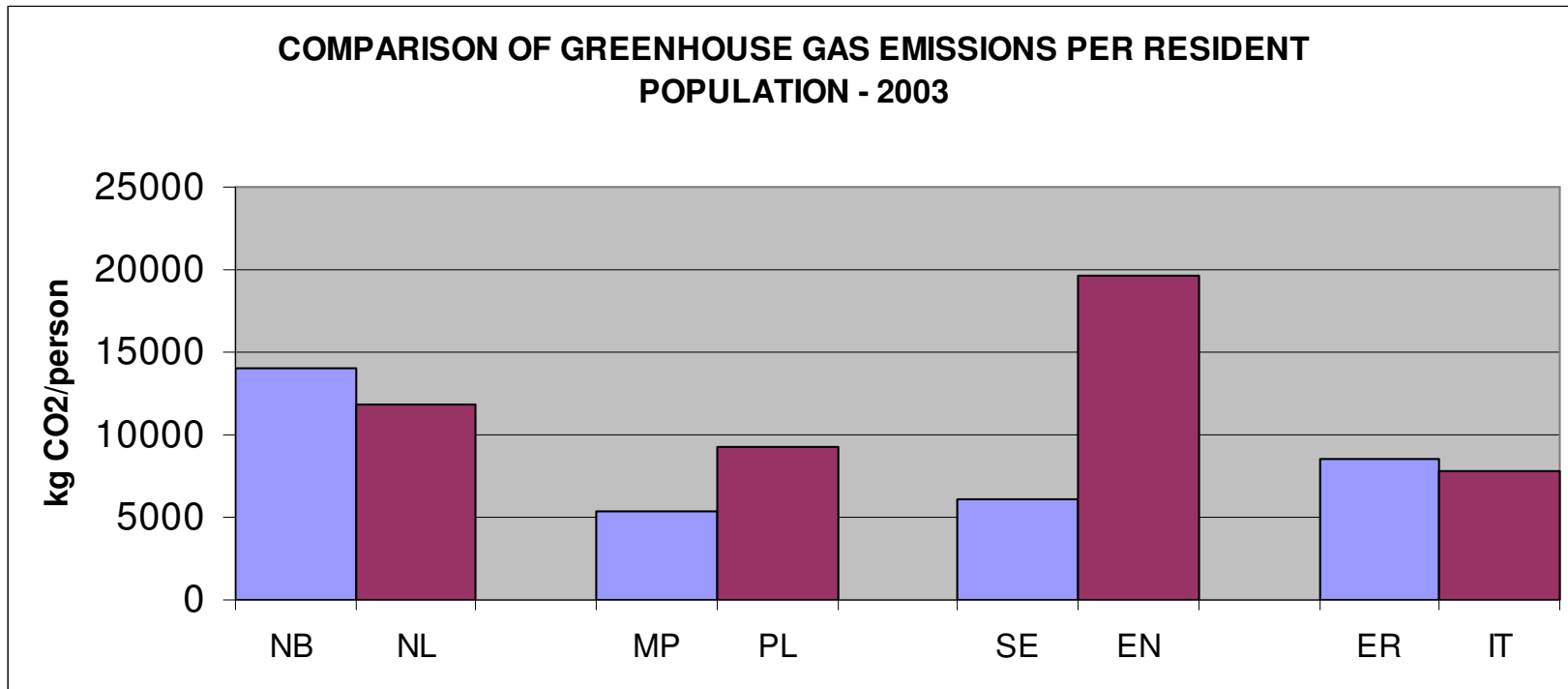
RAMEA - Benchmarking



RAMEA - Benchmarking



RAMEA - Benchmarking



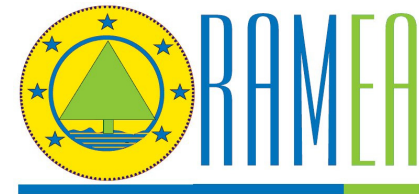
Regional SCP

- Where do we want to be?
- How are we going to get there?
- How do we avoid dangerous climate change?



Value of Scenario Modelling

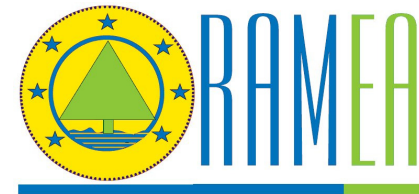
- REEIO (Regional Economy-Environment input-Output) model
- REAP (Resources & Energy Analysis Programme)



Value of Scenario Modelling

REEIO – territorial (direct) impacts due to production activity within the region by:

- **Economy**
- **Transport**
- **Households**



Value of Scenario Modelling

**REAP – global (direct & indirect)
impacts of consumption within the
region by:**

- **Resident Population**



Value of Scenario Modelling

REAP:
global
(direct &
indirect)
emissions
(2050)

REEIO:
direct
emissions
(2015)

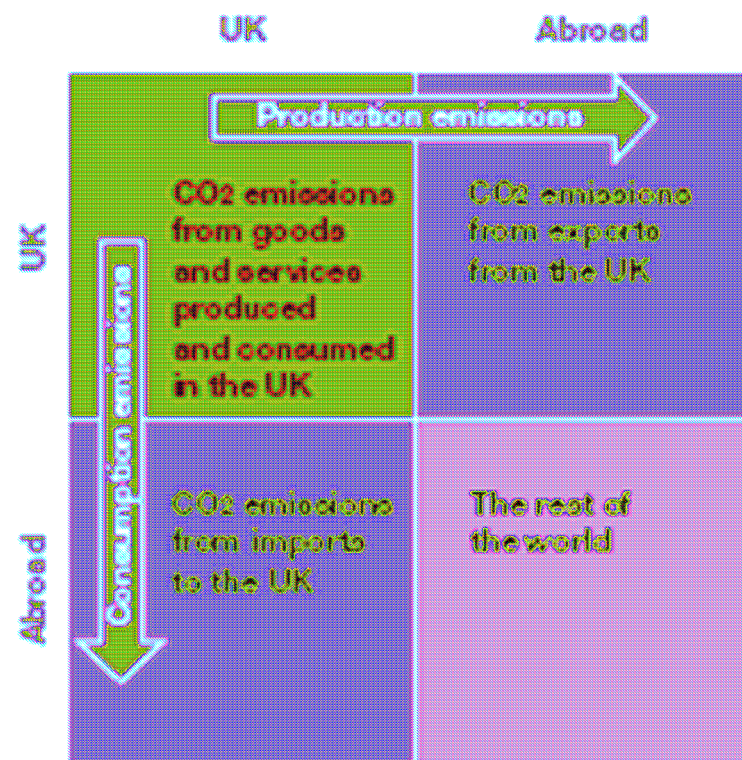
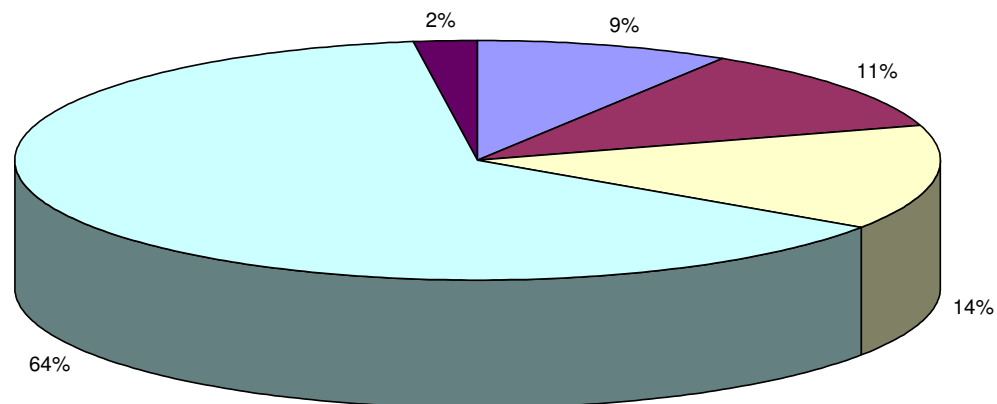


Fig 1 CO₂ emissions from consumption and production

REEIO – Business-as-Usual

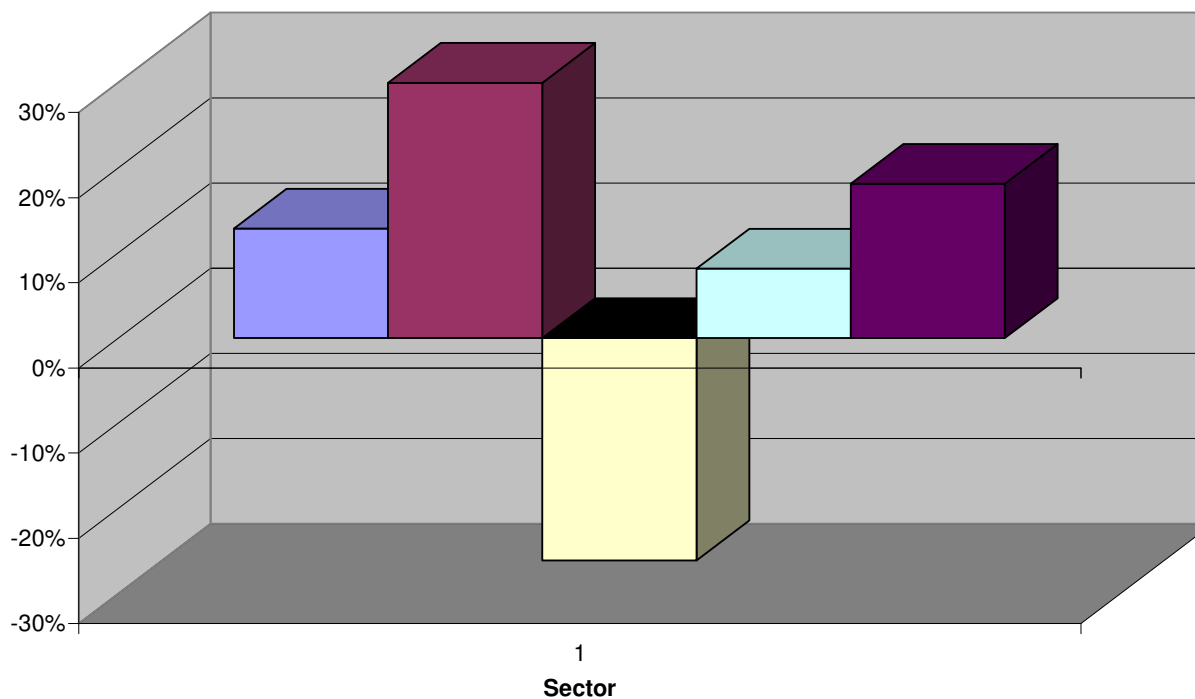
Y&H CO2 Emissions 2003



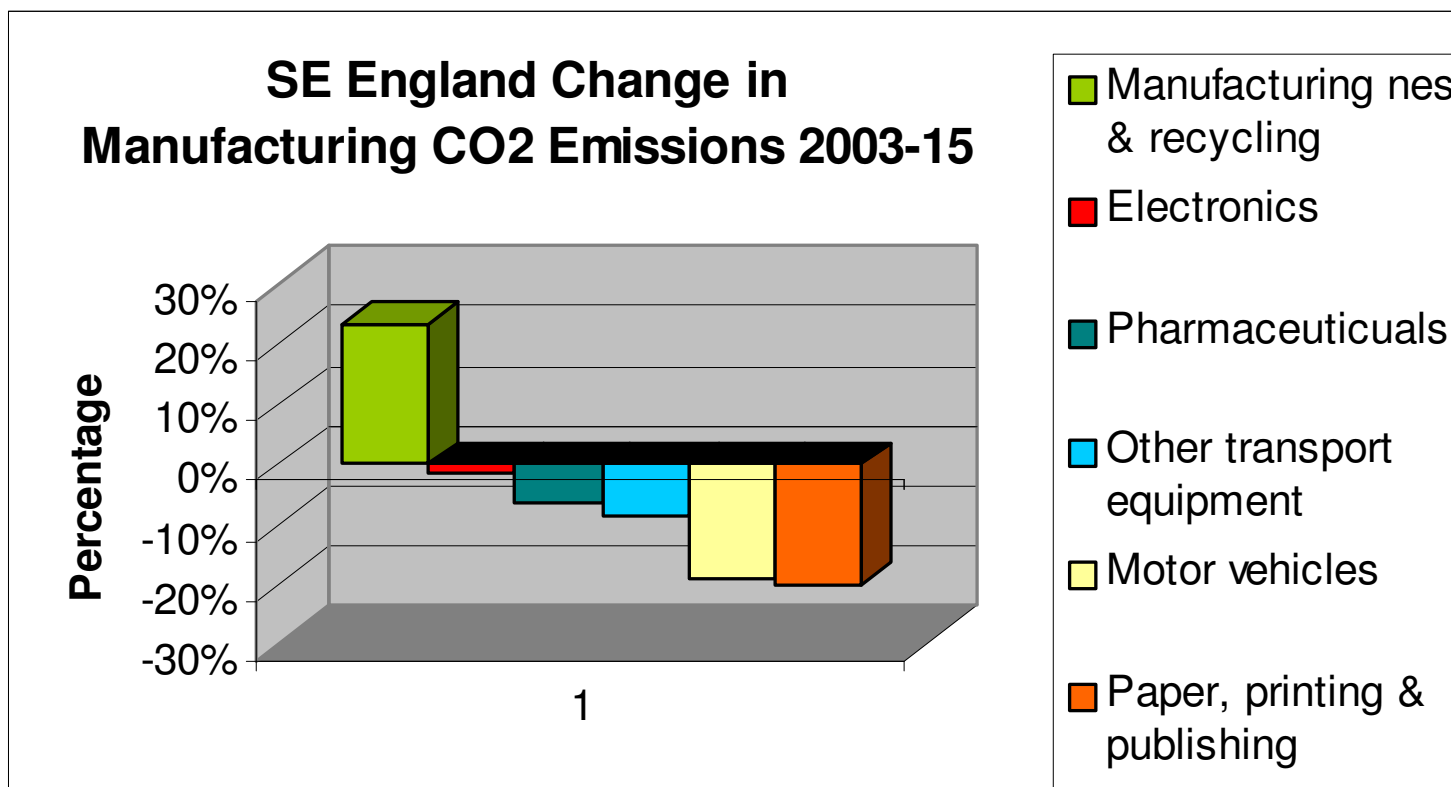
Households Transport Manufacturing Utilities Commerce & Public admin

REEIO – Business-as-Usual

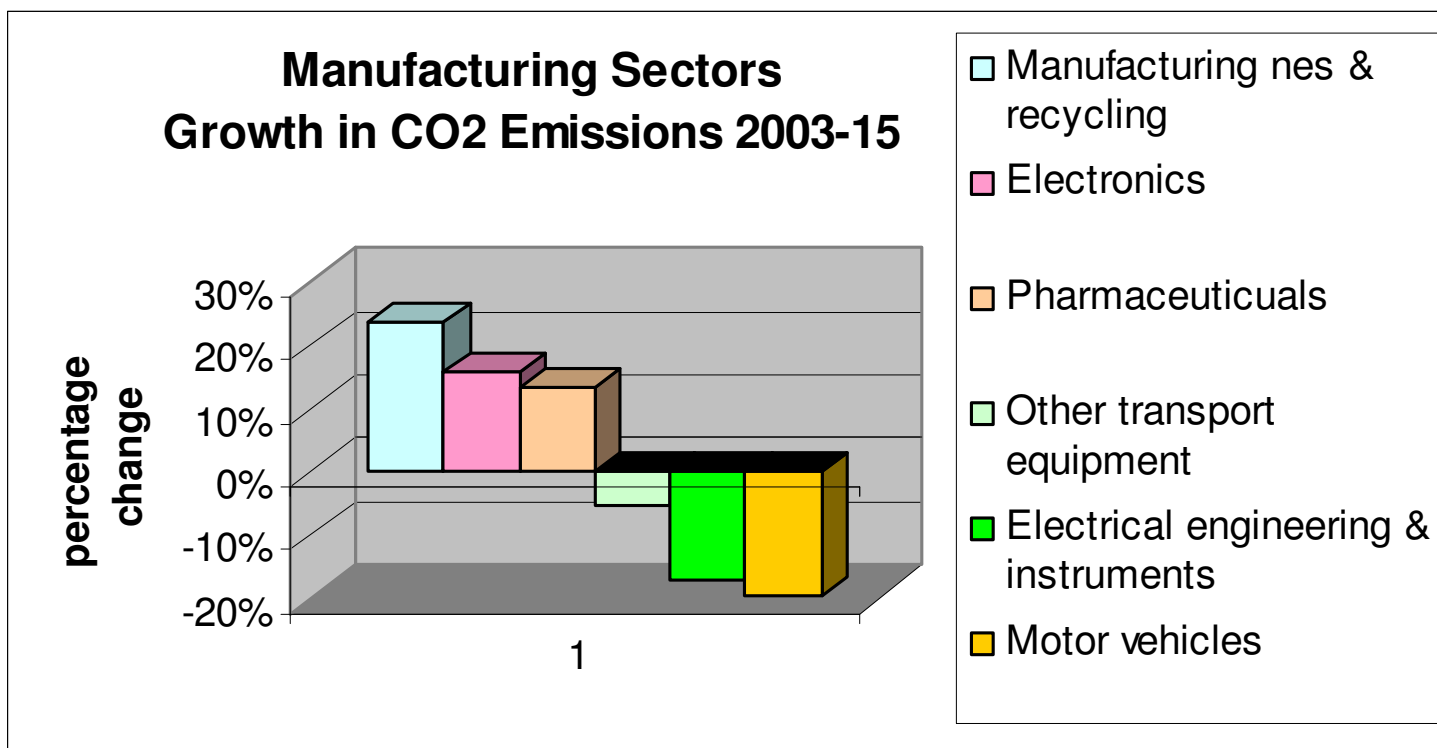
Y&H Change in CO2 Emissions 2003-2015



REEIO – Business-as-Usual



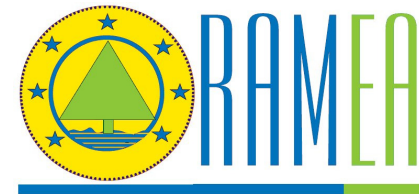
REEIO – Business-as-Usual



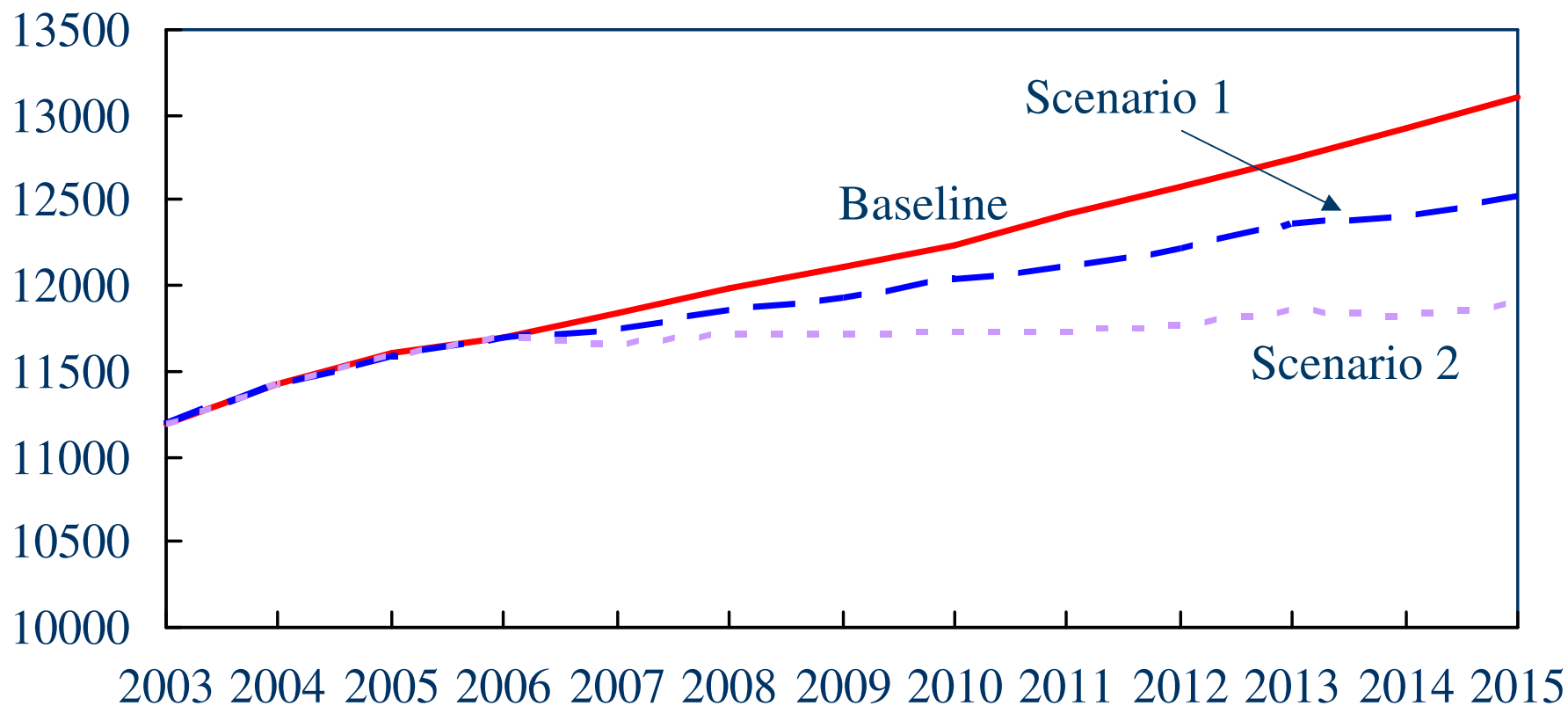
Value of Scenario Modelling

REEIO – business-as-usual & “what if” scenarios:

- **Business Efficiency**
- **Transport Efficiency (fuel mix, tonne / passenger km)**
- **Household heating efficiency**



REEIO - Scenario Modelling



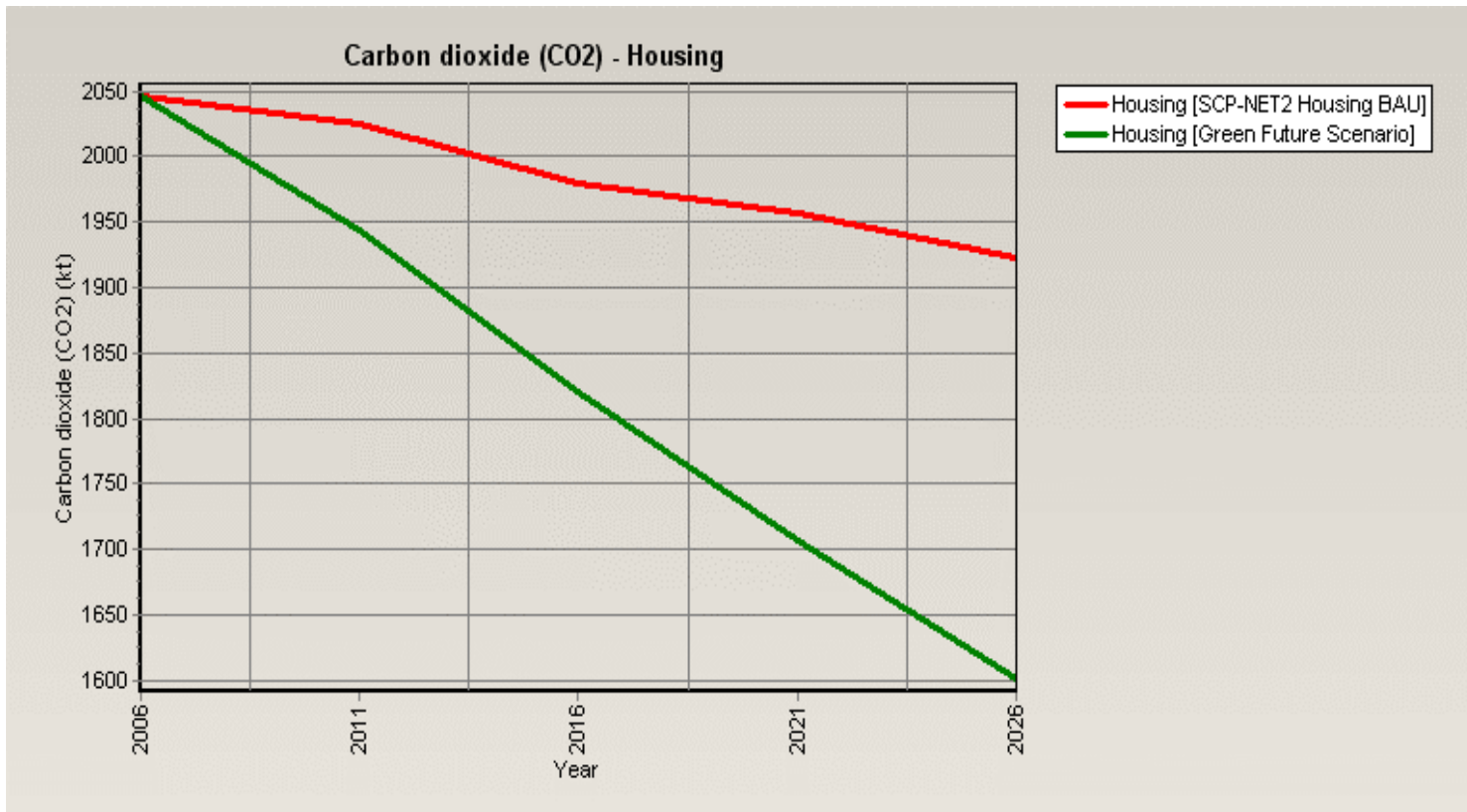
REAP - Scenario Modelling

REAP – “what if” scenarios:

- **Personal Transport Efficiency (modal shift)**
- **Household expenditure (e.g. heating re alternative standards of household insulation)**



REAP - Scenario Modelling



Value of Scenario Modelling

NOT – absolute values

IS – order of magnitude of change



Value of Scenario Modelling

“All models are wrong but some models are useful”

William Deming



www.scpnet.org.uk

[\(www.ramea.eu\)](http://www.ramea.eu)

