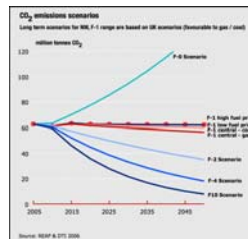


# Eco<sup>nw</sup>

## towards a one planet region



Welcome to the Eco-Region NW.

This is all about a better future for us and our children. In other words, it concerns sustainable development and a **One Planet Economy**, in the North West of England.

## The project

The **Eco-Region NW** project maps out the flows of energy, materials and the **ecological footprint**, of all activity in the NW region.

It looks both at what we produce, and at what we consume. It goes from the region to the local level and the household level.

It shows the measure of 'real' sustainability – for the region, for industrial sectors, for policy options, and lifestyle choices.

It sets the direction for change in the NW region, which combines economic growth, social welfare and environmental sustainability.

## Who is it for

The Eco-Region NW through its website aims to put technical information side by side with interactive communications, across many topics:

- Sustainable urban development
- Climate change & energy policy
- Waste & minerals management
- Business-environment issues

- Sustainable economic development
- School / college projects in geography, economics, environmental science and current affairs

Although the Eco-Region NW is bounded to the region, it is strongly linked to the national 'Ecological Budget UK'

[www.ecologicalbudget.org.uk](http://www.ecologicalbudget.org.uk)

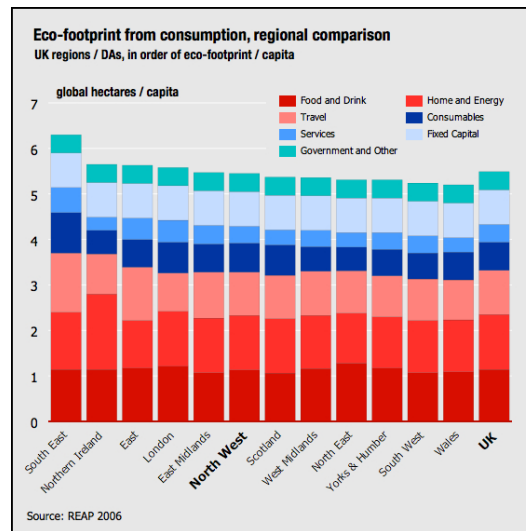
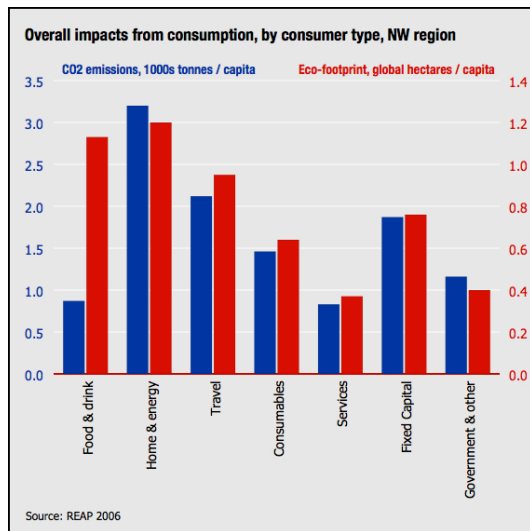
## An interactive toolkit

The Eco-region NW is not only a report and spreadsheets – it aims at a set of interactive working tools. The gateway to these is the site [www.eco-region.org](http://www.eco-region.org)

The most important is the interactive database / model '**REAP**', which covers all UK regions & all local authorities in the NW. This is available (shortly) on [www.reap.sei.se](http://www.reap.sei.se)

On [www.eco-region.org](http://www.eco-region.org) itself you can explore the future of the NW region with 2 kinds of interactive tools:

- **Eco-life NW** – this asks topical questions (i.e. what do people really want), and then shows a vision of the future based on the answers.
- **Eco-Quest NW** – this asks for policy decisions (housing, transport etc) and then shows the results of the choices in local maps and charts.



## State of the region

The Eco-Region NW research has focused on 3 main indicators of environmental performance in production and consumption:

- CO2 emissions, as the largest cause of climate change
- Material flow and mass balance
- Eco-footprint, as the overall measure of impact.

These are each calculated in the REAP system for the UK, and then allocated to regions by their profile of production and consumption.

## Warming the world

- Total 'consumption' CO<sub>2</sub> emissions (i.e. generated from the supply chains involved in all types of consumption) are 11.5 tonnes/cap, slightly lower than the UK average.
- This is higher than the 'territorial' emissions of the NW of 10.8 tonnes/cap (i.e. emissions within the NW boundary).
- Notably, domestic energy consumption in the NW is responsible for the emission of 1.7 tonnes CO<sub>2</sub> per capita, the third highest of all UK regions. This is due to the relative inefficiency of the housing stock.

## Eco-footprint

- The NW region's eco-footprint is just over the UK average at 5.45 global hectares per person.
- This is 3 times bigger than our fair 'earth share' of 1.8 global hectares, i.e. if the world's productive land area was equally shared with the world's population.
- The sectors with the largest eco-footprint are food / drink: and home / energy.
- The region's waste arisings from households, commerce and industry (13 million tonnes)

contains enough embodied energy to power a large (2000MW) power station.

- The local areas with the highest eco-footprint per head are Macclesfield and Fylde: and with the lowest, Halton and Barrow.
- Liverpool, Manchester and Blackpool each have a eco-footprint of 200 times their actual area.

## Balancing the books

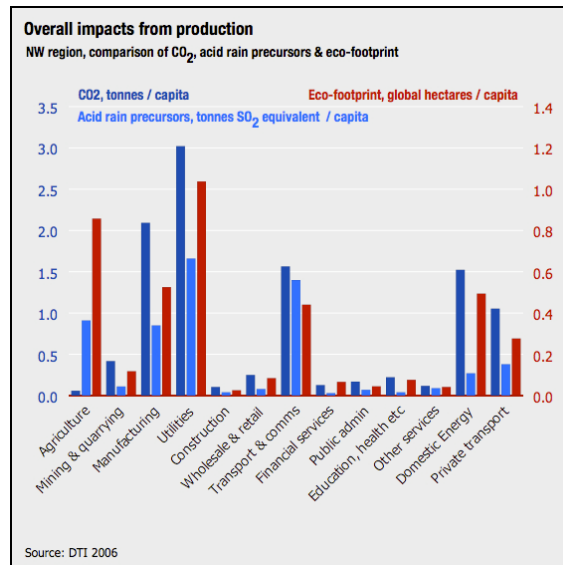
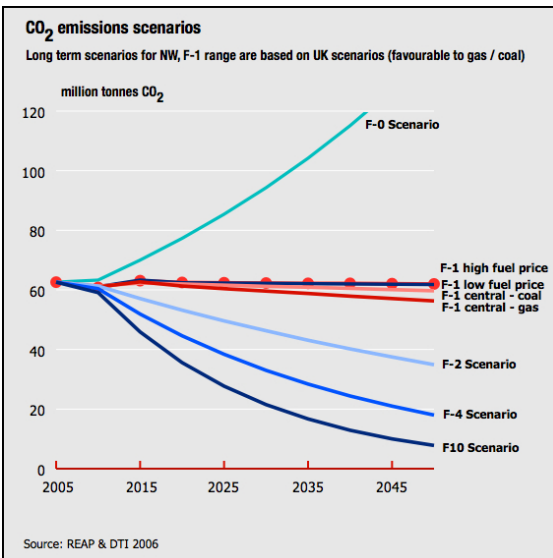
Material flow analysis puts another light on our impacts:

- Primary industries such as agriculture, fishing, forestry and mining bring 5.3 tonnes per person per year into the NW economy.
- Imports from overseas bring another 2.2 tonnes per person, and half of that tonnage is then exported.
- All these materials are then circulated around in the economy from one sector to another, until they reach the point of sale or 'final demand'.
- Households purchase directly nearly 1.9 tonnes per person of food and other products, and capital investment is another 0.3 tonnes
- Waste accounts for over half the material flow at 4.2 tonnes per person

## Where are we heading?

At the moment, there is much talk of sustainable development, but the current trend is still on the "F-1" 'business as usual' scenario. The graph shows the difference between that and the One Planet Economy F-4 scenario.

- The fastest growing impact is that of low cost flights from Manchester and Liverpool: at current growth rates, air travel would consume the regions's entire carbon budget by 2050.



- Overseas holidays by NW residents cause about 10 times the impact of inward visitors to the region, (and rising).

## Implications for policy

The Regional Economic Strategy's vision of a 'low carbon economy' should look ahead to the UK target of a 60% cut in UK emissions by 2050. While the RES target to 'reduce CO<sub>2</sub> per £GVA' is a small step in this direction, a serious strategy requires a continuous reduction in Co2 per £GVA, i.e. increase in carbon efficiency, of around 4.5% per year.

As the RES and RSS both recognize that investment in roads and airports will have major impacts, they need to do more to find alternative ways of meeting demand.

## The role of business

The Eco-region NW provides a detailed benchmark for the performance of 123 business sectors, as summarized in the chart above. But this is not enough in itself. There is a wider realization that the necessary step change in resource efficiency can be both cause and effect of growth and competitiveness. All businesses are now somewhere on the 'responsibility' spectrum, with major oil companies and retailers now showing the way.

One problem is that as the amount of presentation goes up, the credibility often goes down. This is then the contribution of the Eco-region NW, and its parent REAP model – to provide a benchmarking scheme for environmental sustainability, based on the best available solid data and analysis. The prototype on [www.eco-region.org](http://www.eco-region.org) shows the basics, to be developed in phase 2 of the programme.

## One Planet Economy

Where is the destination in all this? A 'One Planet Economy', as talked about in the UK Strategy, is a system of production and consumption which respects environmental limits, local and global, which is also financially and socially sustainable.

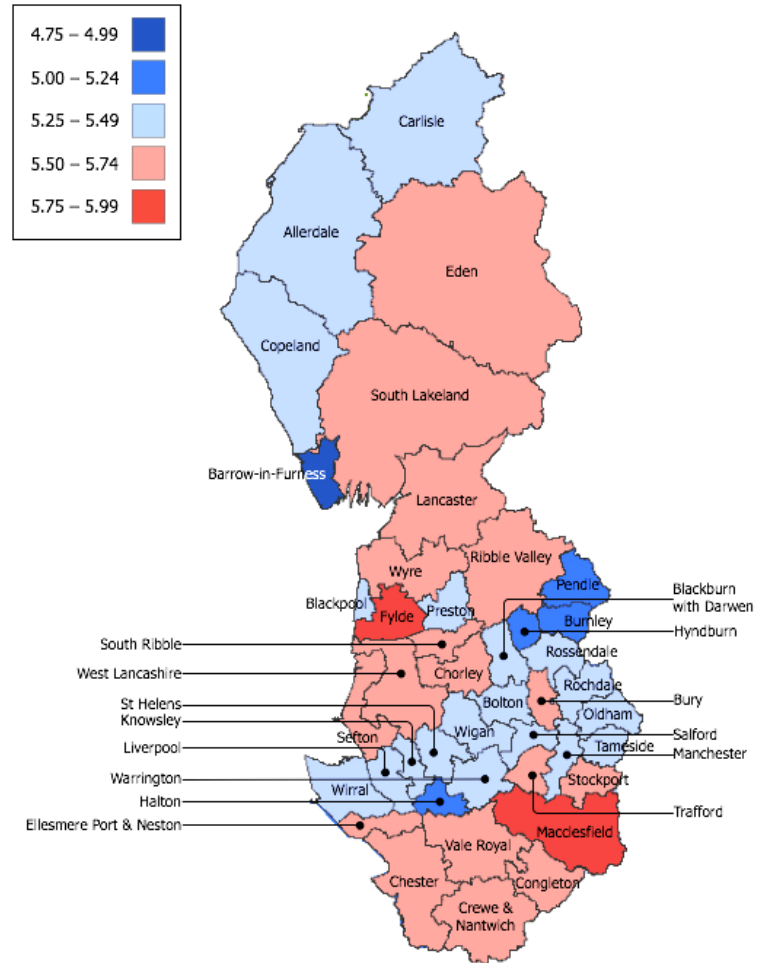
Its main target is the fair 'earth share' footprint of 1.8 gha per person. This means a long term goal of 75% cut in resource use – i.e. **Factor Four** increase in resource efficiency. These are the main principles:

- 'Integrated asset management'**, covering economic, social and environmental capitals and risks – in other words, that the NW economy should manage itself as smartly as any other large organization.
- The accounts and budgeting systems in public and private sectors should take a **'triple bottom line'** approach, including for all forms of capital – economic, social & environmental.
- This follows an **'integrated supply chain'** principle, i.e. by tracking material and energy resources from cradle to grave, and from supply sides to demand sides.
- This adds up to a full **'market transformation'** programme in each sector, for low impact technologies and sustainable consumption patterns.
- Such a programme should be **financially viable**, aiming at net gains in both national and individual costs and benefits. It should also be **socially responsible**, equalising the differences between social groups, between regions, and between nations.
- To implement this requires a practical **'business case'** to be developed for each economic sector: each policy level: each product type, and so on.

This challenge is now the theme of the One Planet Economy Network (OPEN). This is now in formation, and details will be posted on [www.eco-region.org](http://www.eco-region.org).

## Total ecological footprint

North West region by NUTS4 District, global hectares / capita, incl. aviation



## Next steps

It is not too difficult to reduce the impacts of our lifestyles and consumption habits by up to 10-20% - using low energy light bulbs, changing driving styles etc. There is a lot of 'low hanging' fruit around.

Beyond that, few people can really make major changes in their lifestyles and consumption habits. To make serious moves towards a One Planet Economy, the onus is on government and business – to invest in more sustainable technology and infrastructure.

To help this process, the Eco-Region NW and the One Planet Economy Network are aiming to work on three main fronts:

- **Building the evidence base:** improved information for accounting, budgeting and analysis of all types of consumption and production:
- **Building the applications:** applying this evidence through benchmarking, appraisal, decision support etc, to the challenge of the One Planet Economy.
- **Building the capacity:** promoting networks, training, partnerships, forums etc, to help mobilize the potential of public, private and civic sectors.

The Eco-region NW is the most significant step in the region to date, in understanding how the choices we make every day affect the planet we live on. It shows a direction to move from the current 'three planet economy' of the region and the UK, to a One Planet Economy for the future.

## Partners

The project has been coordinated by CURE (Centre for Urban & Regional Ecology), in partnership with:

- Sustainability NW, [www.snw.org.uk](http://www.snw.org.uk)
- Stockholm Environment Institute at York [www.sei.york.ac.uk](http://www.sei.york.ac.uk)

Core funding was generously granted by Biffaward - [www.biffaward.org.uk](http://www.biffaward.org.uk)

Also with the help of:

- Royal Society of Wildlife Trusts – [www.rswt.org.uk](http://www.rswt.org.uk)
- Building Research Establishment (Scotland) [www.bre.co.uk](http://www.bre.co.uk)
- Environment Agency (NW region) [www.environment-agency.gov.uk](http://www.environment-agency.gov.uk)
- Merseyside Waste Disposal Authority [www.merseysidewda.gov.uk](http://www.merseysidewda.gov.uk)

### Contact:

CURE (Centre for Urban & Regional Ecology),  
School of Environment & Development,  
Manchester University, Oxford Rd, M13 9PL  
t.+44 (0)161 275 6879: f. 275 6893  
[joe.ravetz@manchester.ac.uk](mailto:joe.ravetz@manchester.ac.uk)  
[www.sed.manchester.ac.uk/research/cure/](http://www.sed.manchester.ac.uk/research/cure/)  
[www.eco-region.org](http://www.eco-region.org)

A Biffaward project on Sustainable Resource Use