ECO-REGION NW

Update #4

June 2005

The Eco-Region NW project sets a new standard for analysis of waste and material flows at the regional scale. It provides a 'joined up' information system which measures environmental performance for the region, for industrial sectors and products, and for lifestyle options.

The Eco-Region NW has now been linked to the larger national project **'Eco-Budget UK'**. This is developing new methods for material flow and eco-footprinting, including both direct and indirect effects. It is also building a comprehensive material flow database/model **'REAP'** for the UK regions.

The Eco-Region NW has also shifted its focus from the level of basic data, towards adding value to the Eco-Budget UK database / scenario model. This includes:

- Focus on the NW as a pilot region, with applications to economic, spatial & environmental strategies.
- Business applications, especially in benchmarking for sustainable production & consumption.
- More detailed development of waste management assessment systems.
- Focus on construction as a demonstration industrial sector.

New insights

These are some topical results and innovations from the research process.

Business benchmarking:

The Eco-Region NW benchmarking system is developing a template for common environmental pressures for each of the 76 main production sectors, and the key product types from each sector. The Business Paper 2 then outlines how these can be classed as direct, indirect, or induced flows. There is also an interesting breakdown of consumption types, corresponding to accountancy depreciation classes:

- Metabolic consumption e.g. food, with a residence of less than 24 hours (hopefully)
- Consumables with residence of less than 1 year e.g. household stuff
- Durables with lifetime of 3-5-10 years – e.g. electronic equipment
- Infrastructure with indefinite residence i.e. buildings, roads etc

The benchmarking system aims at providing a toolkit for industrial and trade associations and other agencies in promoting environmental best practice in business. A demonstration version will be available on the website.

Waste management data

Waste composition data is notoriously patchy, and this is one of the many obstacles to more sustainable resource management. The Eco-Region NW is now a test site for a new comprehensive MSW dataset, currently being prepared by SEI for all local authorities in the UK. This then offers the chance to link the PRODCOM material production tables from Customs & Excise, with physical input-output tables for each industrial sector and each consumption category.

A draft preliminary dataset is now available on the EcoNW website. (To generate results for each local authority, insert the reference number into the 'magic cell' at the top of the Calculation Sheet).

Current research is aiming to produce a waste data framework for MSW and C&I which will link material composition with source sector information. We will be aiming to test out this system as it develops over the next few months with Merseyside & Greater Manchester WDAs.

Working papers

The interim results of the Eco-Region NW are being published on the interim project website (see note below):

- Position paper 1: applications of MFA & EFA
- Position paper 2; measuring regional sustainability
- Position paper 3: policy targets & indicators
- Position paper 4: policy scenarios & options
- Position paper 5: industrial ecology, resource productivity & regional innovation
- Regional paper 1: NW material flow in production & consumption
- Business paper 1: Industry benchmarking systems
- Business paper 2: MFA-EFA application to business sustainability
- Construction report 1: BRE interim report
- Construction report 2: BRE final report (available shortly)

There are also a series of Excel workbooks: some of these are being incorporated into the REAP system:

- Workbook 1: NW activity model – Sept 2004
- Workbook 2: Summary EF of consumption – Jan 2005
- Workbook 3: Summary IOA & construction – June 2005
- Workbook 4: MSW local data – June 2005

Related projects

The Eco-Region NW is part of a unique portfolio of parallel projects at UK and EU level, from CURE, SEI and various partners. Many of these projects overlap and contribute towards the Eco-Region NW databases, modelling techniques and policy applications.

SE Plan footprint analysis

While the South East is under great pressure for housing and infrastructure, the draft SE Plan set out its policy for 'footprint neutral' development:

> *"…a stabilisation of consumption of resources, and a reduction in absolute levels of consumption in the long term,*

with an aim to stabilize the SE ecological footprint by 2010".

The EcoNW methods together with the REAP / REWARD spreadsheets were used to provide the evidence base and policy implications of this inspirational target. The main conclusions for the SE region could be translated to the NW Regional Spatial Strategy and Action for Sustainability programme:

- The research shows that the Eco-footprint of the South East is growing at about **0.068** gha/cap per year. The portion of this growth caused by building and operating the built/urban environment was **0.025** gha/cap per year, roughly 40%. The overall annual growth rate of 0.068 gha/cap per year equates to an average growth of 1.11% per annum (doubling time of 60 years).

In order to ***stabilize*** or ***offset*** this growth rate of 0.025 gha/cap per year, various policy measures were calculated in aggregate form:

- "40% house" long term programme for upgrading of the existing housing stock: savings of **0.005** gha/cap per year (excluding demolition of any existing houses).
- All new housebuilding to be low energy at the Eco-Homes 'excellent' standard: with savings of **0.001** gha/cap per year.
- Low impact construction to be phased in for all housebuilding: giving savings of **0.005** gha/cap per year.
- Low impact construction to be phased in for all other property construction: savings of **0.004** gha/cap per year.
- Low energy building design and operation to be phased in for all other property: savings of **0.004** gha/cap per year.
- Road traffic growth containment: this aims to stabilize growth in road traffic with a rapid increase in public transport provision: savings of **0.006** gha / cap per year
- Waste recovery and recycling: a full programme of minimization and re-use could produce savings by substitution of **0.002** gha / cap per year.

This last figure is now being checked through the full MSW database as above.

Project issues

The project research partnership includes:

- SEI (Stockholm Environment Institute at York University): MFA – EFA database & modelling applications
- BRE (Building Research Establishment) construction and waste management sectors:
- Creative Concern: website & media developers

Unfortunately, researchers Alastair Moore and Dominica Babicki are returning to their native British Columbia in September. We are seeking replacements and any contacts would be welcome.

Website

Interim reports and working papers are available on the CURE website. Due to the merger of UMIST and Manchester this is on a temporary address at http://www.art.man.ac.uk/PLANNING/cure/Eco.htm

A full project website is in development, to be launched shortly.

Steering group

The first two steering groups met prior to the approval of the project. Following the setting up of the Eco-Budget UK collaboration, meetings are now at approx 6 month intervals, with intervening meetings of the project team.

The meetings are now planned in conjunction with a series of workshop / forums on the three main themes of the Eco-Region NW: construction, waste management and business benchmarking.

The proposed workshops / Steering Group meetings now include:

- 4) Tuesday September 6th 2005: Construction Sector workshop
- 5) December 2005: Business Benchmarking workshop
- 6) February 2006: Waste Management workshop & project launch. The waste theme has been put back to the end of the programme, due to the delays in the National Survey of industrial & commercial waste.

The full Steering Group includes each of the project partners and sponsors, plus other regional bodies, other statutory agencies, and other information providers.

Construction Sector workshop

This workshop now planned for September 6th is aimed at urban development clients, analysts and policy-makers.

The results of the Eco-Region NW construction analysis will be presented and discussed. Invited speakers will review progress on the sustainability of design and construction. Topical questions include:

- Sustainability benchmarking in the construction sector – what are the indicators and how to use them?
- Is a zero-energy urban development possible or feasible?
- What is the total impact of the Regional Spatial Strategy?
- How can construction help or hinder the regional sustainability targets?

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