

ECO-REGION NORTHWEST

An ecological budget for the North West region: Moving from 'information' to 'intelligence' in material and waste management.

A Biffaward national research programme of waste / resource flow analysis

Material Flow Analysis (MFA)

'What gets measured, gets managed', so using best available data, the Project team is assembling a 'mass-balance' budget for material and energy flows through the region. The data is a set of consolidated accounts which track the total inputs, processes and outputs in the region. Such insight can help policy-makers plan for the future by identifying inefficient resource consumption and utilization.

From the quarry to the landfill, raw materials are tracked using the MFA methodology. A closer look at the region's construction sector shows that annually, the industry consumes 70 million tonnes of material; 43 percent of the total from all regional activities, and equivalent to 10 tonnes for every resident of the North West. MFA shows that waste materials and emissions, labelled as 'value-less' in traditional economies, take on considerable value in a 'sustainable' region. A scenario modelling tool builds on MFA to allow the user to journey into the future.

Ecological Footprint

The ecological footprint aggregates into one measure, the direct and indirect environmental pressures, caused by human activity. It is the area of land (measured in global hectares) required by an individual, a company, or a region to supply the natural resources needed, and absorb the waste materials and carbon dioxide generated.

The project will use the ecological footprint metric, coupled with information on the direct material consumption of the region, to establish a baseline measurement of the resource budget and ecological sustainability of the North West region.

Users of the project's web-based information system will be able to analyze the ecological footprint of the region, its industrial sectors, and common consumer products and services. In this way policy-makers will have an additional tool to help refine policies so that they can better respond to activities and behaviours with high environmental impacts.

Business Benchmarking

The Eco-Region NW project aims to establish a new 'regional' lens with which to view resource productivity and waste management in the North West of England. Given the key role played by private industry in the consumption and disposal of materials in the region, the Project will act as a ready portal through which industry can see itself within the context of regional material and waste flows.

Industrial production and waste data are used to generate crucial business metrics including carbon intensity, productivity, energy intensity, ratio of non-product to product output, and the ecological footprint of the firm and its main products. Such insight is critical for industries to remain competitive in the future. Global carbon trading, rising waste disposal, tightening EU / national environmental regulations, new markets and consumer confidence are the drivers behind changes in business practices. The project's industry benchmarking tool can help industry see where they are today, and then track a path to a more profitable and sustainable business future.

Eco-Region Northwest

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 at both the regional and sectoral levels.

The Project's main aim is to show the physical budget for running *NORTH WEST PLC* – about 66 million tonnes of inputs and outputs from producers and consumers. From there we can make the links between the region, industrial sectors, firms, households and common products. The project is developing a range of tools to analyse the regional budget, including mass balance analyses, waste system analyses, ecological footprints, future scenarios, industry benchmarking and communication initiatives.

The Eco-Region NW project:

Focuses on the North West region as a pilot region.

Highlights policy applications, especially in analysing the impacts of economic, spatial & environmental strategies and scenarios at the regional level.

Business applications, especially in benchmarking for sustainable production & consumption.

Focuses on the construction sector as a pilot demonstration.

Who is it for?

This project aims to produce not only static information, but an interactive tool and communications platform, aimed at businesses, policy makers and consumers. The benefits include:

Regional policy-makers

Regional policy-makers can get direct feedback on the environmental impacts of their decisions.

Businesses

Businesses can benchmark waste minimization performance against the sectoral and regional profile.

Industrial sectors

Industrial sectors can make the link between the waste minimization performance of their firms, and the environmental pressures and opportunities they face.

Waste management

Waste management and materials supply industries, can assess more accurately where their problems, risks and opportunities are coming from.

Construction industries

Construction industries can see trends and opportunities in regional environmental strategy, and develop intelligent ways of tracking their performance.

Households

Households can assess their consumption choices and move towards waste minimization and eco-efficient lifestyles.

Partners

Centre for Urban & Regional Ecology - University of Manchester (CURE)

CURE's expertise in city-region policy research, scenario modelling, and sustainability planning help to structure the project and frame scenario outputs in light of current policy agendas.

Stockholm Environment Institute (SEI)

SEI in York is a national leader in Material Flow Analysis (MFA) and Ecological Footprint Analysis (EFA).

Building Research Establishment (BRE)

BRE is the UK's leading centre of expertise on buildings and construction,

Sponsors

BiffAward
Environment Agency
Merseyside Waste Disposal Authority
McGrath Environmental Consultants
Research Methods Consultancy

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