

One Planet Economy Network – Europe Project





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What problem are we trying to solve?

Our planet is buckling under the weight of the demands we are making on it. The world's population is set to increase to nine billion by 2050 and global consumption levels are already five times what they were just 50 years ago. This overconsumption is leading directly to climate change and species extinctions. We are losing some of the world's richest forests; we are degrading soil and sources of fresh water faster than ever before.



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"I am excited by the possibilities that the EUREAPA tool will offer national and EC decision makers in helping make a greener tomorrow, a reality today. These tools form the backbone of any sound analysis in planning for this sustainability challenge; I will be using the tool to support my decision-making and hope you will too!"

Sirpa Pietikanen, MEP Finland and President of GLOBE.

Europe has a central role to play

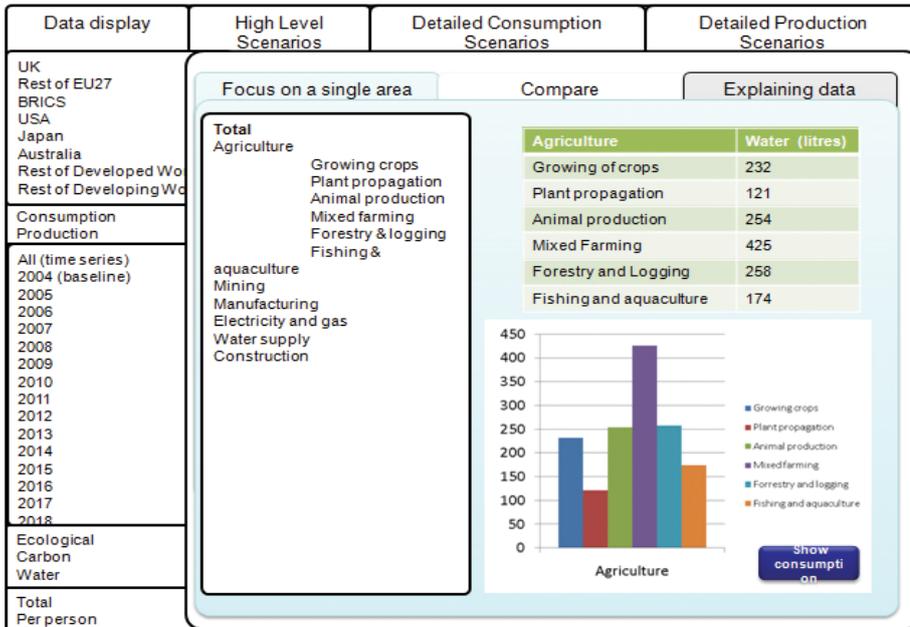
Currently, the European economy is using nearly three times more ecological assets than those available. This situation cannot be sustained indefinitely. Tools and action are needed that can start to reverse the condition. In 2009, an EU funded One Planet Economy Network: Europe (OPEN:EU) project was launched to develop the evidence and innovative practical tools that will allow policy-makers and civil society to identify appropriate policy interventions to transform Europe into a One Planet Economy, by 2050.

Footprint Family Indicators – developing the science

Building on the premise that no single indicator is able to comprehensively monitor (progress towards) sustainability, the project defined a "Footprint Family" suite of indicators to track human pressure on the planet from multiple angles. An environmentally –extended multi-regional input-output (EE-MRIO) model was developed to group the "Footprint Family" indicator under a single, streamlined, modelling framework and combine them with tables from national economic accounts and trade statistics. This enables the exploration of environmental pressures (both inside and outside the EU borders) associated with changes in population, consumption patterns, production, technology or trade over time.

EUREAPA Tool – applying the science

The project is in the process of developing an online scenario-modelling and policy assessment tool (EUREAPA) to act as a user interface which will improve access to the extensive data held within the EE-MRIO model and make the "Footprint Family" more relevant to policy makers and civil society. EUREAPA translates complex science into practical information which decision makers can use to tackle complex issues simultaneously and better deal with trade offs.



One Planet Economy Network - Delivering Change

Tools and evidence alone, cannot deliver change. So the project is bringing together people from public, private and civil society organizations to share expertise, co-create EUREAPA and define possible science-based pathways to establish Europe as a One Planet Economy by 2050. Through this dialogue process, the concept of a One Planet Economy is being further defined and policy-makers are being encouraged to use EUREAPA as an important policy and communication aid in the complex field of sustainable consumption and production.

Left: Diagram illustrating how the EUREAPA tool will look onscreen. Please note that this development is ongoing and may be subject to change.

EUREAPA – Applying science to policy development

The EUREAPA tool has been designed to help EU policy-makers and Civil Society access and manipulate a vast amount of information relating to the environmental impact of consumption and production, in order to prioritise and evaluate intervention into particular areas.

The software contains tables from national economic accounts and trade statistics with data from environmental and footprint accounts. Using EUREAPA, you can look at the impacts of consumption activities in the context of lifestyles or national differences. It will allow you to identify differences in footprints across countries, from consumer and producer perspectives, and also to break down environmental impacts along global supply chains to identify footprint hot-spots associated with the food people eat, the clothes they buy, the products they consume or the way they travel.

Using EUREAPA you can:

- View data for **9 different indicators**:

Carbon Footprint (total) in tonnes	Water Footprint (total) in litres	Ecological footprint (total) in global hectares
Carbon Footprint (CO ₂)	Water Footprint (blue water)	Ecological footprint (carbon land)
Carbon Footprint (CH ₄)	Water Footprint (green water)	Ecological footprint (other land)
Carbon Footprint (FGases)	Water Footprint (grey water)	
Carbon Footprint (N ₂ O)		

- Select from 45 regions** you want to view data for, or work on via a scenario. These include all the EU member states, 16 important trading partners and regions of the world, other countries are included in Annexes of climate change agreements and the rest of the world.
- View data on a **total or per capita basis**.
- Export data** as charts and tables.
- View data from a **production or a consumption perspective**.
- Explore link between consumption products and production sectors**, view the contribution of production sectors to each of the broad consumption areas at a national level e.g. Housing, Food, Transport, Consumables and Services.
- Benchmark or compare countries** - e.g. benchmark a country's impacts against the best and worst in the EU; show the average impact in the EU and an indication of a One Planet Economy target; make comparisons between countries at a total footprint level and at the most detailed level (e.g. the impact of consumption of food).
- Produce a high level scenario to model the effects of future policy** e.g. change the population, the general affluence

(volume of spend), proportion of spend on high level consumption categories and production efficiency, by either describing a percentage yearly growth rate, uploading a file of values per year or making a 2050 target level.

- **Create your own consumption scenarios** e.g. by making changes to population, the total volume of spend and how this is shared between high level consumption categories. Or describe a more detailed spend breakdown within each category e.g. to investigate scenarios such as a shift towards a low meat diet or a modal shift in transport.
- **Investigate the effect of production scenarios**, by selecting from a list of pre-loaded scenarios that affect the efficiency of production in your own country or countries that you trade with.

- **Select a pre-loaded policy scenario** that models the effect that a range of EU policies will have on the impact of consumption and production.
- Save your scenario, import a scenario, share a scenario with another user and export the results.

EUREAPA – A Collaborative Design Process

In order to design the EUREAPA tool, we carried out a consultation with representatives from the European Commission DG Environment, the Swedish Environmental Protection Agency, the European Topic Centre for Sustainable Consumption and Production and Civil Society Organisations working in the field of Sustainable Consumption & Production and Environmental Impact Assessment.

We gathered useful insights into the level of detail policy-makers need to see from the EUREAPA tool; the types of scenarios policy-makers will want to model and the types of functions/reports deemed most important.

The next stage of this collaborative approach involves iterative user-testing by policy-makers and Civil Society. This will allow us to further refine the EUREAPA tool and ensure it is fit-for-purpose. The first stage of the user-testing phase will run from 24th February- 11th March 2011.

“We are very interested in using the EUREAPA tool to inform our policy work and our representatives have actively participated in the design of the EUREAPA tool, to ensure it meets our policy needs.”

Swedish Environmental Protection Agency

How YOU can get involved

We are delighted to invite you to participate in user testing the EUREAPA prototype. It is important to us that EUREAPA be as user-friendly and intuitive as possible so that it can support policy-makers and Civil Society in their work.

If you would like to participate in this testing to see what EUREAPA can do for you, please contact us:

info@oneplanetecomynetwork.org



What does user testing involve?

The first stage of the iterative user-testing phase will run from 24th February- 11th March 2011.

During the first phase of testing, we will send you an email containing:

1. An MS Excel file containing a prototype of the EUREAPA tool.
2. A description of how you will be able to use the ‘Scenario’ Function of EUREAPA in the future
3. A link to a short feedback questionnaire

Using this MS Excel file, you will be able to test the ‘viewing data’ function of EUREAPA e.g. viewing environmental impacts of individual countries by consumption category, by production sector, on a total or per capita basis, in terms of comparisons between countries, etc...

The questionnaire will ask you to describe how far the ‘Viewing Data’ and ‘Scenario’ Functions meet your requirements. We will use this information to refine the EUREAPA tool. There will be a further two phases which will run during March –April 2011 and will include testing the high level scenario function and the detailed scenario function.

One Planet Economy Network - Developing pathways towards a One Planet Economy

While the future is uncertain, our One Planet Goal is very clear. The OPEN: EU project has therefore taken a scenario approach in order to 'future proof' the many pathways to a One Planet Economy against a range of possible futures.

Utilising such an approach can help to provide better policy or decision support and stimulate engagement in the process of change.

The scenario approach helps us manage uncertainty associated with any visioning or horizon scanning - especially when we are looking as far ahead as 2050.

Utilising UN approved, tried and tested techniques we are developing four plausible futures that describe different ways in and different conditions under which a One Planet Economy may become a reality.

We are encouraging people from public, private and civil society organisations through a dialogue process to explore how consumption patterns and production efficiency need to change in the future and agree which policy interventions would be needed to achieve a One Planet Economy by 2050.

In September 2010, the project initiated a process to define these four different pathways. This process began with a workshop involving around 40 individuals representing public, private and civil society organizations to define a framework from which the project would develop scenarios to help us understand how life might change until 2050.

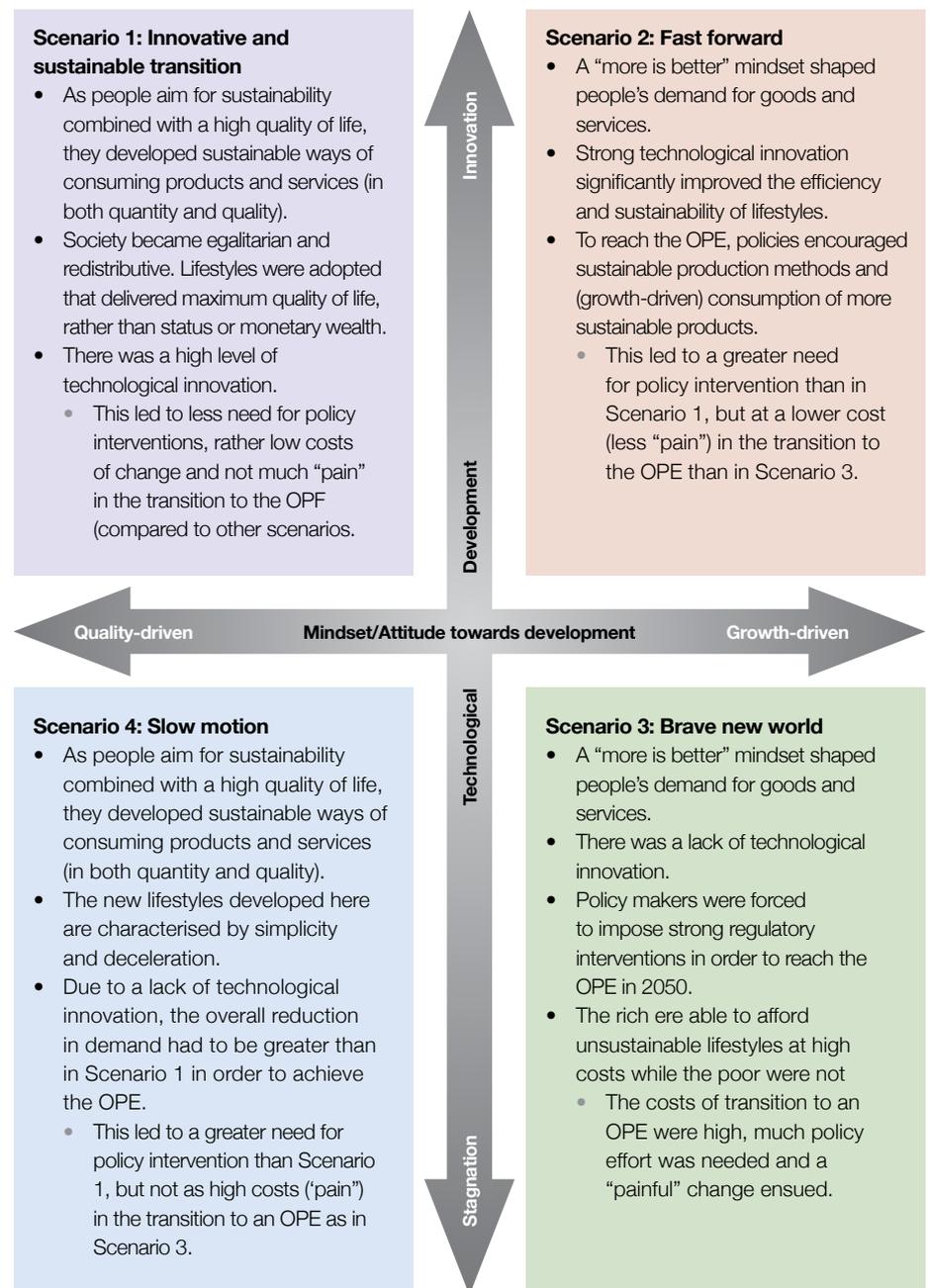
The following diagram provides a summary of the scenario framework with its two defining drivers – technological development (innovation vs. stagnation) and people's and decision makers' mindset or personal attitude towards development (quality-driven vs. growth-driven) – and the main features of the resulting transitions towards the overarching policy objective of reaching a One Planet Economy (OPE).

The project team are developing descriptions for the four possible scenarios for Europe in 2050, as set out by this framework. This work includes recommending policy interventions (type and severity) that could transform Europe according to each of the four scenarios, between now and 2050.

We are using the EUREAPA tool to model the various policy recommendations to identify where we might intervene with policy in the future and what kind of policy might be most effective in each of the four scenarios.

Once complete, the narratives will have a strong political focus and can therefore be used

The Scenario Framework



by policy-makers and civil society to engage European policy-makers and start the process of transforming our economy to operate within environmental limits.

Our narratives will be made available via our website in April 2011.

Example - how to apply EUREAPA to policy development

Using EUREAPA for a policy of greenhouse gas mitigation through change in consumer behaviour.



EUREAPA has been designed to help EU policy-makers and Civil Society address emerging issues by providing information and analysis that supports the development of new policy approaches. In order to demonstrate how EUREAPA can be applied to the policy development process let's look at its application against a current policy issue:

“What can be done to ensure the EU takes full responsibility for the carbon emissions and environmental impacts resulting from EU consumption, both in terms of locally produced and imported goods and services?”

Tackling a complex issue like this requires policy-makers and Civil Society to explore new approaches to encourage behaviour change. Taking proposals for green house gas emission mitigation as an example, we can describe how EUREAPA might be used in the detailed assessment of aspects of a new approach to policy and in measuring the impact of these proposals.

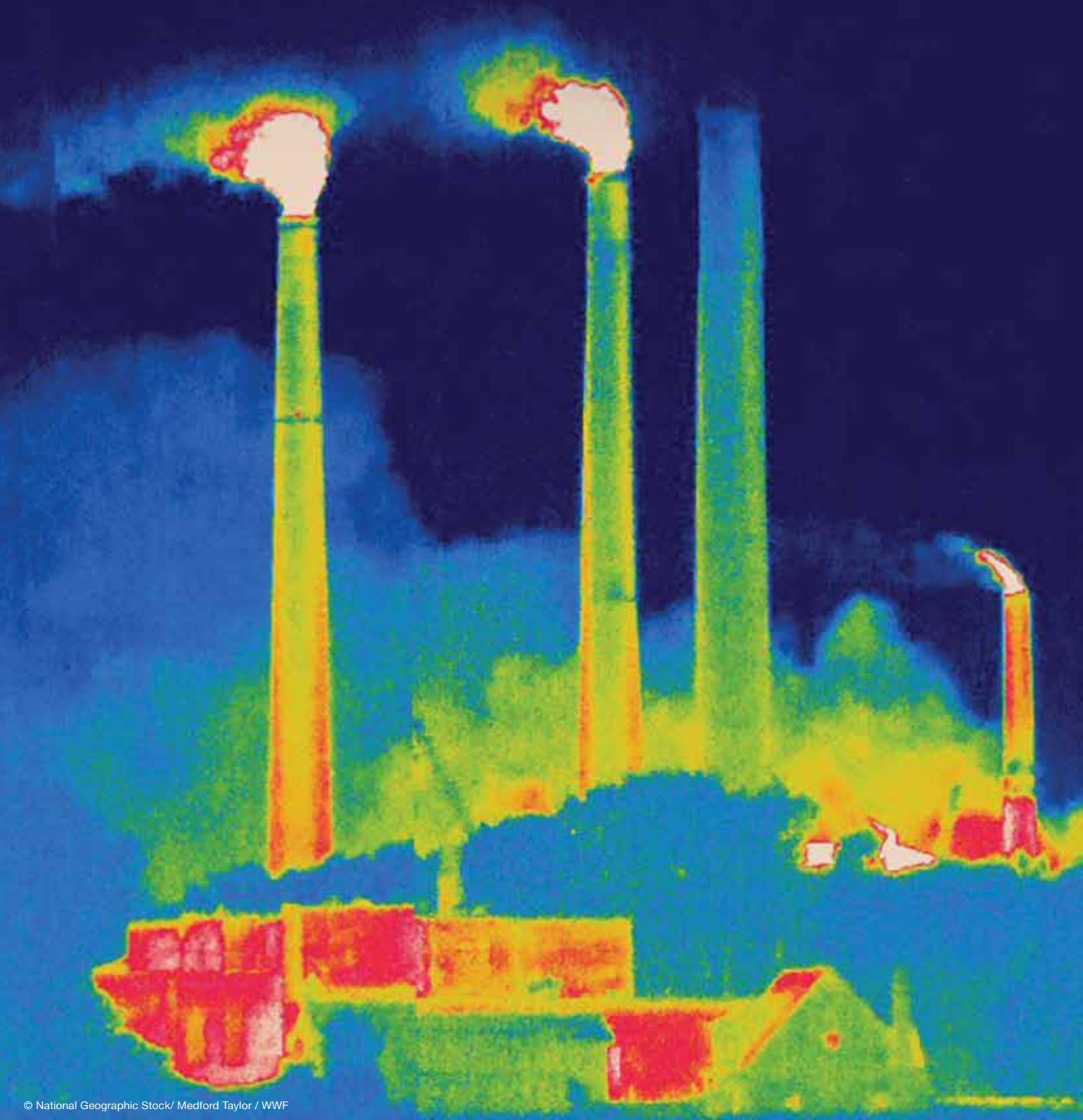
Evidence from consumption accounting tools such as EUREAPA tells us that improvements in technology cannot deliver our current lifestyles efficiently enough to reduce GHG emissions to levels required to avoid dangerous climate change. The scale of reduction required can only be achieved if final demand for given goods and services is reduced. The challenge policy-makers face, is how to do this without reducing the quality of life of EU citizens. This requires policy interventions that challenge the way citizens behave and the consumption patterns driven by this behaviour. This approach is far more controversial and difficult to implement than those which address production efficiency.

The challenge exists for Civil Society to describe a more sustainable lifestyle, make it relevant and attractive to citizens and policy makers and work out how to get from where we are, to the lifestyle we think is sustainable. EUREAPA could contribute significantly to the development of an approach like this. Application of EUREAPA EUREAPA could be used in a number of ways to support a programme of work investigating an issue such as that described above.

- **EUREAPA could be used to identify a priority category(s)** of consumption behaviour to investigate as a case study. It's not possible to deal with all aspects of behaviour at once so one or more categories (such as housing or transport) that contribute a high proportion of the impact could be identified for more detailed analysis.
- **EUREAPA could be used to identify the scale of change required** in the case study category. The relatively abstract number of tonnes of carbon can be compared to where we'd need to be in order to avoid dangerous climate change (using cumulative, global emissions targets). This brings urgency to the issues and clearly sets out the scale of change required. What would that mean in terms of functional units – X less miles travelled, X less units in energy, X less kilogrammes of food? This will help the communication of the issue and tell people why they need to act differently.

- The case studies could then be investigated in more detail to find the causes of the unsustainable levels of consumption.;
 - What are the particular activities that contribute most to the impact (using more detailed analysis in EUREAPA)?
 - Why do these activities occur – what need are they satisfying?
 - Are there any drivers that are fixing people in these unsustainable behaviour patterns – for example infrastructure or technology that encourage people to travel more or makes public transport unattractive?
- This will help people connect their action to the issue. It will help to understand causes and barriers – why would people act differently, why wouldn't they?
- EUREAPA could be used to explore how to reconfigure the system based on what is known about people's behaviour and impact hotspots. How might the case study system (s) be re-thought to remove barriers to more beneficial behaviour and avoid encouraging negative behaviour? This will provide a vision of how the needs that the current systems are meeting could be delivered in a different way. Some reconfiguration will be individual some will rely on government to change the way it develops infrastructure or regulates business. This will identify key campaigning leverage points for both individuals and for lobbying government.
 - EUREAPA could be used to quantify the impact of the reconfigured system(s) and provide robust evidence that the reconfigured system is actually sustainable.

“What can be done to ensure the EU takes full responsibility for the carbon emissions and environmental impacts resulting from EU consumption, both in terms of locally produced and imported goods and services?”





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Project Partners



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