



# Addressing the social dimensions of environmental policy

## A POLICY BRIEFING

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*This report was financed by and prepared for the use of the European Commission, Directorate-General for Employment, Social Affairs and Equal Opportunities, Unit for Social and Demographic Analysis. It does not necessarily reflect the Commission's official position.*

**European Commission**  
Directorate-General "Employment, Social Affairs and Equal Opportunities"  
Unit E1 - Social and Demographic Analysis

Manuscript completed in July 2008



European Commission

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This study was carried out for the Directorate-General for Employment, Social Affairs and Equal Opportunities of the European Commission (contract VT/2006/004), with participation from the following partner organisations (and team leaders):

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## Policy briefing

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### Introduction

Sustainable development has become a major policy goal over recent decades, but this goal is still very often seen as conflicting with traditional economic and social policy goals. More recently, the cost of climate change has received more attention and an economic case for sustainable development has been made. Investigations on the links between social policy goals and sustainable development, by contrast, are still in their infancy, except perhaps for the potential of 'green' jobs.

Recognising the knowledge gap on the linkages between social policy objectives and sustainable development, in 2006 the European Commission initiated a major study based on the following three research questions:

- Who causes most of the environmental problems resulting from consumption of goods and services?
- Which groups in society suffer most from environmental pollution and hazards, and other issues associated with unsustainable natural resource use?
- Are social policy and sustainable development goals in conflict with each other or are there synergies that can be developed?

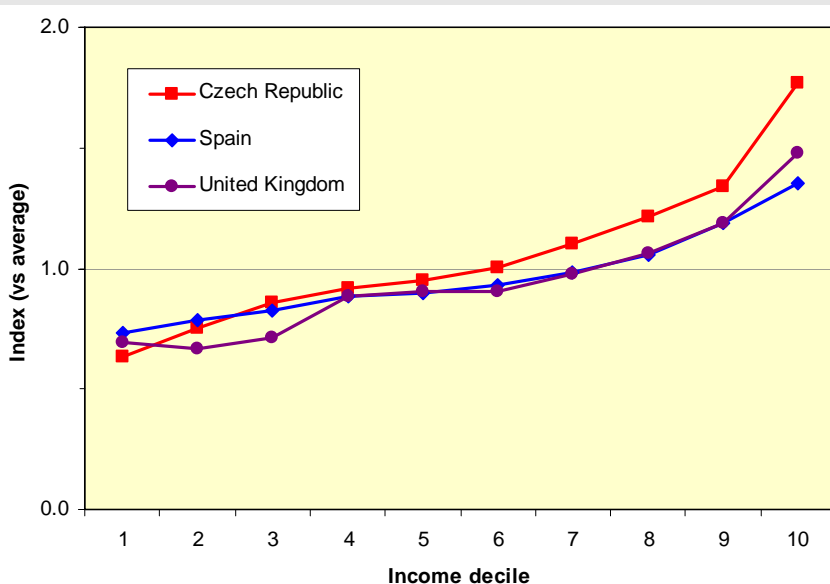
This policy briefing highlights the main messages emerging from the above research questions, discusses the implications for policy makers and puts forward recommendations to be considered by the policy community. Further information on the analysis and detailed findings can be found in the set of project reports.

## Higher income groups create more environmental damage through their consumption of good and services

An analysis of consumption levels (as measured by expenditure) across different population groups identified those groups that caused the most environmental damage. The total environmental impacts (i.e. both direct and indirect) of different household classes were estimated based on eight individual environmental dimensions (e.g. global warming potential, human ecotoxicity etc.).

The findings demonstrate that per capita environmental impacts are considerably higher in high income groups than in lower income groups (see Box 1). While the finding in itself is not surprising, the extent of the differences between the lowest and highest income deciles is. On the other hand, a review of green consumption found that it was generally the higher socio-economic groups who bought 'green' products, which can be partly explained by their higher levels of disposable income that can be spent on these, generally more expensive, goods.

**Box 1. Total environmental impact score per capita by income group**



The graph shows the aggregate environmental impact (across the eight different dimensions) per capita by population decile (1= low income and 10 = high income) for three Member States. The figure shows scores indexed against an average value of 1.

The impact per capita for the high income groups is at least 100% higher than that of the low income group for each of the countries.

Such findings are important for policy makers (and thus policy design) for reasons of equity, as it is the higher income groups that cause more environmental damage, while it is the more disadvantaged groups that often suffer higher associated impacts (see below).

### Policy recommendations

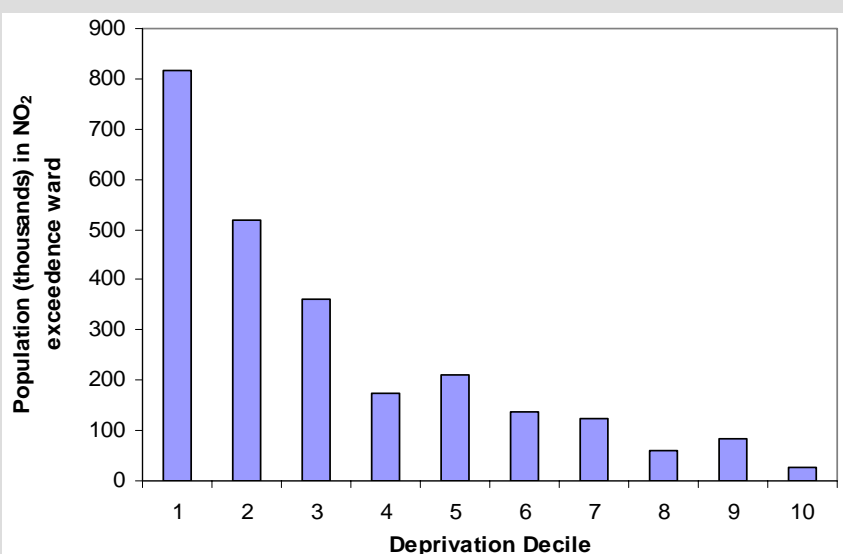
- The polluter pays principle needs to be applied fully in policy design by, for example, ensuring that the price of products and services includes, as far as possible, the environmental and social costs that have been incurred.
- Policy needs to address, as appropriate, the fact that 'greener' products, i.e. those associated with less environmental damage, tend to be more expensive than less damaging products. For example, means-based subsidies or grants can be used to improve the energy efficiency of homes of vulnerable groups, thus lowering their energy costs (see Box 4).
- The fact that different groups consume (and therefore pollute) differently needs to be recognised in strategy and policy design, and resources need to be targeted, accordingly, so that the subsequent impacts of the policies do not exacerbate environmental and social inequalities.

## Socially-disadvantaged groups are more likely to suffer from environmental problems and risks

There is evidence, particularly from UK studies, that socially-disadvantaged groups, e.g. those on low incomes or the elderly, can suffer most from environmental problems, either because of where they live or simply because they are more vulnerable to the associated impacts than other groups.

Much of the recent UK research on so-called “*environmental inequalities*” has been led by the Anglo-Welsh Environment Agency (EA; see Box 2 below) and the Scottish Government. These studies have shown that the most deprived communities often experience *above average* environmental damage, e.g. pollution levels, or risk, e.g. of flooding; in addition, these communities are often *more likely* to experience worse environmental quality than other groups.

### Box 2. NO<sub>2</sub> air pollution in England across different population groups (classified by level of deprivation)



This figure (from the EA study by Walker et al. 2003) shows the population living in wards<sup>1</sup> where NO<sub>2</sub> pollution exceeds permitted levels classified by deprivation decile. The measure of ‘deprivation’ takes account of a range of factors – including housing, health and access to services, as well as poverty (1 indicates high deprivation; 10, no deprivation).

It is clear from this figure that it is the most deprived communities that experience the worst air pollution.

Recent research, particularly from Germany and the Netherlands, shows similar trends to those observed in the UK. These findings are important for policy makers because they indicate that more attention needs to be paid to the groups that are most likely to suffer from environmental degradation. The first step is for the relevant authority (local, regional or national) to map the socio-economic profile and state of the environment of its locality or region in a way that enables the environmental inequalities to be identified, e.g. similar levels of data resolution are needed. This process is clearly driven by data availability, so the relevant national statistical and environmental agencies also potentially need to be on board, as appropriate.

### Policy recommendations

- Local, regional and national authorities should, as appropriate, develop the capacity to identify and monitor potential environmental inequalities across different social groups.
- At the regional and local levels, authorities should actively engage with disadvantaged groups and address their needs and issues in the course of local strategy and policy development, where possible and appropriate, e.g. as has been done in the development of transport policies in London, e.g. its Low Emissions Zone.

<sup>1</sup> ‘Ward’ is a UK designation indicating a small part of a town for electoral purposes.

## Environmental policy interventions are likely to be regressive unless designed to mitigate such effects

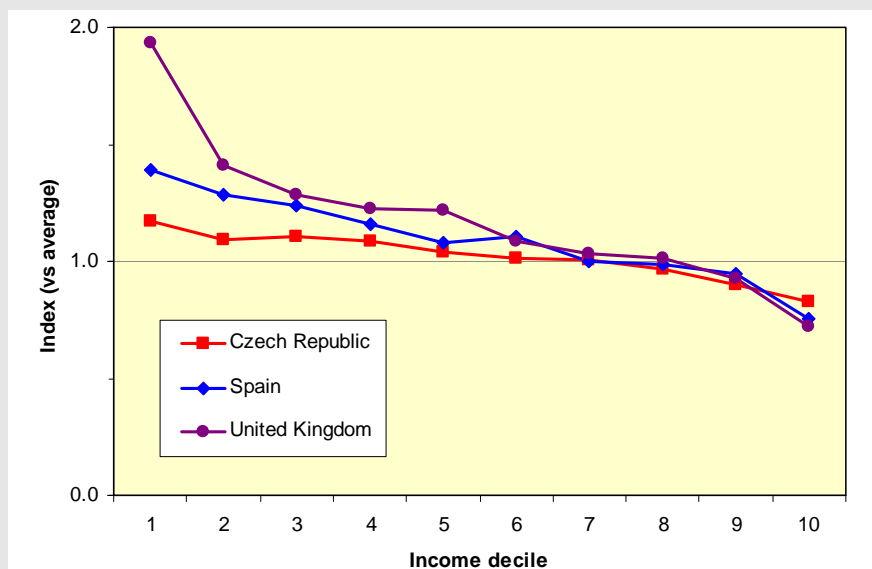
Relative to their disposable income, it is the lowest income households, those where the household head is unemployed and single-parent households that have the highest environmental impact, while the richest households have the lowest impact (see Box 3). This is because they spend a greater proportion of their income on food and household energy, which both have high environmental impacts per euro of expenditure. Consequently, to the extent that the resultant costs are passed on in price increases, any environmental policy intervention which focuses on these high-impact areas is likely to have regressive impacts, hitting some of the most socially vulnerable households the hardest. This is particularly true for environmental taxes and charges imposed directly on household consumption. Analysis for five EU Member States found that, with the exception of Sweden, the tax burden (as a per cent of income) arising from direct taxes on the consumption of household energy and charges for water supply and waste collection decreases as household income rises. However, the overall environmental tax burden across income groups is more equitable, reflecting the distribution for taxes on motor fuels.

### Box 3. Total environmental impact score per unit income by income group

The figure shows the aggregate environmental impact score per euro of household disposable income for each income decile, indexed against an average value of 1.

Environmental impact per unit income for the lowest income decile is around 75% greater than for the highest income decile.

Note: Reported income for the lowest decile in the UK appears to be understated. Hence the impact per unit income is likely to be overstated.



These findings highlight the need to consider the distributional impacts of environmental policy interventions (of any form) and to minimize these in the design of the intervention (e.g. block tariff structures for utility charging, allocation of personal carbon allowances, etc.), or build-in explicit offsetting measures to mitigate undesirable impacts. Such measures might include increased social benefit payments to vulnerable groups, targeted subsidies for improved home insulation or energy-efficient products (e.g. the UK Warm Front programme), or general subsidies for public transport.

### Policy recommendations

- In the design of environmental policy interventions, there should be a greater balance between the distributional implications, particularly for socially vulnerable groups, and the need for environmental effectiveness and economic efficiency.
- The impact assessment process should be strengthened to ensure that the potential adverse distributional impacts of environmental policy interventions (and other social impacts) are properly assessed.

## Synergies between social and environmental policies are possible

Better integration of social and environmental policy agendas is important to ensure that the objectives of both policy areas are enhanced and that policies do not conflict. Improving synergies would also have the effect of ensuring that the equity issues highlighted in this briefing were addressed in the policy design process.

At the EU and national levels, an important mechanism to address issues of policy design is the impact assessment (IA) process. It is at this stage that Commission Directorates-General and national governments can best identify and assess the social concerns arising from environmental policy, e.g. environmental inequalities and the financial burden of policy.

This study identified a range of 'good practice' case studies where social and environmental policy considerations have been taken into account at the design and implementation stage, primarily at the national or local level. Two case study examples are provided in Box 4 below.

### Box 4. Social-environmental policy initiatives at the local level

#### Promoting sustainable transport and health in Germany

An example of an initiative that tried to address health (social) concerns and environmental problems associated with traffic congestion was the „Mit dem Rad zur Arbeit“ initiative (cycling to work). This was a joint initiative of the ADFC (*Allgemeiner Deutscher Fahrradclub*), a large national cycling association, and AOK, Germany's biggest health insurance organisation.

The programme required people to cycle to work for a minimum of 20 days during summer months of each year with the main incentive being inclusion in regular prize draws. The initiative took place for the first time in 2001, with 828 participants from 58 companies. In 2005, over 100,000 participants from 11,740 companies cycled to work during the participation period.

#### Improving energy efficiency and addressing fuel poverty in the UK

The Warm Front Programme in the UK works primarily as a grant scheme, providing funding of up to €6,000 to improve heating systems and insulation in private homes. Its purpose is to help fuel-poor households save on their fuel bills by improving properties' energy efficiency in order to help reach the goal of eliminating fuel poverty in vulnerable households by 2010. Packages are tailored to each property and include a range of different insulation, heating system conversions, repairs and upgrades.

Since 2000, 1.1 million households have received assistance under the Warm Front Programme. The latest Warm Front report states that from April 2006 to March 2007 a total of 253,079 households were assisted. CO<sub>2</sub> emissions in the average household were reduced from 6.97 tonnes to 6.16 tonnes per year. Each household that received assistance could save up to €250 in energy running costs every year.

Recognising and developing such synergies could greatly contribute to the public acceptance of measures to reduce pollution and greenhouse gas emissions.

### Policy recommendations

- The European Commission, as well as national and regional authorities, can play an important role in raising the profile of the socio-environmental agenda through conferences, dissemination of best practice, funding further research and ensuring that any recipients of funding, e.g. via structural funds, clearly maximise the potential synergies between environmental and objectives.
- National and regional authorities, as well as the European Commission could also review their relevant social and environmental strategy documents to ensure that they fully recognise and develop the potential synergies across these agendas.

## Developing indicators to capture the links between environmental and social policies

Indicators that monitor progress towards integration between social and environmental policies are necessary. An important monitoring tool is the EU's Sustainable Development Indicator (SDI) set that provides policy makers with information on progress towards sustainable development. Currently, 15 of the 57 indicators reflect both economic and environmental considerations; however, no indicator currently represents the interaction between the social and environmental dimension.

### Box 5. Proposed indicators

- **Energy consumption and greenhouse gas emissions by income group.**  
Income is the most important factor in driving differences in energy consumption between households. The current SDI set contains "Electricity consumption by households" and "Greenhouse gas emissions by households" as "best available" indicators. The social dimension could be introduced by using expenditure data from national statistics/household budget surveys.
- **Employment generated by environmental industries and services.**  
Creating employment is crucial for social cohesion. This indicator is particularly relevant for capturing the links between the social, environmental and economic dimensions, although disadvantaged parts of the population might not necessarily benefit from new employment in the environmental sector. Currently, the data available on employment in the environmental sector are not sufficient but there are ongoing efforts – at both national and EU level – to improve the data.
- **Proportion of the population that uses bicycles for every day transport by income group.**  
Against the backdrop of increasing emissions from transport, obesity and related diseases caused by a lack of exercise, the promotion of sustainable transport, in particular human powered mobility, is amongst the very best initiatives to promote both social and environmental objectives.
- **Population perception of suffering from noise and pollution by income group.**  
There is evidence that socio-economic status has an impact on vulnerability to air quality impacts, and that socially deprived areas are likely to be noisier. Thus, including an indicator that measures environmental inequalities in terms of noise and air pollution would greatly strengthen the social-environmental linkage.
- **Ratio of passenger km public transport/private car transport by income group.**  
As greater income is a driver of increased transport volumes and higher transport speeds, this indicator is particularly suited to show the interaction between environmental and social policies. Relevant European data on modal split are available but lack a breakdown by income group.

Within this study, we considered how to strengthen the social-environmental interface in the SDI set by identifying indicators that were able to articulate the interplay between the environmental and social dimensions. A long list of indicators was initially identified, mainly focused on income groups, and based on three criteria – policy relevance, relevance to both environmental and social issues, and data availability. Many potential indicators cannot currently be made operational due to data availability issues. A number of indicators were eventually proposed (see Box 5).

### Policy recommendations

- The European Commission should ensure that its relevant indicator sets capture the interactions between social and environmental policies, e.g. by adopting the above indicators. Member States, as well as regional and local authorities, should ensure that their indicator sets similarly capture such interactions.
- The European Commission needs to address data availability issues, which is one of the main barriers to making any of the proposed indicators operational, by ensuring that the data is available and collated in a consistent manner for any of the indicators adopted.



## Conclusions

Social impacts of environmental policy are evident, albeit under-researched: They range from low income groups living in poorer environments or at greater risk of environmental hazards to regressive impacts of policy on low income groups. Vulnerable social groups are at risk of suffering disproportionately while paying disproportionately for the environment damage caused by higher income groups. It follows that policies need to be designed and implemented in a way that avoids or addresses these inequitable outcomes.

To be able to do this, it will require improved data and analytical approaches, and policies to be designed and implemented to address these issues, while taking account of environmental effectiveness and economic efficiency.

An important concept that could be adopted in policy making to ensure that these concerns are addressed is that of *environmental justice*. As is evident from the results of the research, richer people pollute more and poorer people suffer more of the consequences. This is arguably a breach of the concept of *environmental justice*, which in its broadest sense calls for *ensuring good environmental quality for all and a fair sharing of the costs of achieving this high level of environmental quality*.

The adoption of environmental justice as a guiding policy principle for strategy and policy design would provide a framework within which:

- All groups in society participate in the policy design and implementation process – the lack of participation of disadvantaged groups needs to be addressed by actively engaging such groups.
- Adequate protection is afforded to those in society who are exposed to worse environmental quality.
- The financial burden of environmental policy would not disproportionately impact on lower income groups.

Crucially, this framework would also promote further integration of social and environmental policy objectives, as it would ensure that social concerns were placed at the heart of environmental policy making (and vice versa). Such integration is important if more policies are to be developed that are beneficial for both social and environmental policy objectives and is crucial for the political acceptability of sustainability policies.