

Smarter and Cleaner

**Consuming and
producing sustainably**



EUROPEAN
COMMISSION



environment

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1. INTRODUCTION

The need to live within environmental limits

To live sustainably, the Earth's natural resources must be used at a rate at which they can be replenished. However, our consumer-driven society is putting enormous pressure on the planet.

Europe's environmental footprint is one of the largest on the planet. If the rest of the world lived like Europeans, it would require the resources of more than two earths to support them.

Economic growth and the development of modern technologies over many decades have brought new levels of comfort to our lives. This has led to an ever-greater demand for products and services and, in turn, to a growing demand for energy and resources.

The way we produce and consume is contributing to many of today's environmental problems, such as global warming, pollution, the depletion of natural resources and biodiversity loss.

The impacts of our consumption are being felt globally: the EU is dependent on imports of energy and natural resources and an increasing proportion of products consumed in Europe are produced in other parts of the world.

Unsustainable consumption and production patterns are increasingly affecting the natural environment, society, the economy, and business. We need to live more sustainably. That means doing more with less.

Our quality of life, prosperity and economic growth depend on living within the limits of the resources available. To do this we must change the way we design, make, use and dispose of products. Achieving this change will involve all of us – individuals, households, business, local and national governments, as well as the global community.

This brochure explains how such a change can happen. It looks at how we can ensure sufficient natural resources and a better environment for future generations by becoming smarter, cleaner and more energy and resource-efficient.

EU citizens make up less than 10% of the world's population yet they consume half of the world's meat production, one quarter of its paper and 15% of its energy.



2. What is sustainable consumption and production?

Sustainable consumption and production means using natural resources and energy more efficiently and reducing greenhouse gas emissions and other environmental impacts. It is all about producing and using products and services in a way that is least harmful to the environment. The aim is to meet our basic needs for goods and services while bringing about a better quality of life and also ensuring that there are sufficient resources left for future generations.

Consuming sustainably concerns our lifestyle, buying behaviour and how we use and dispose of products and services. Sustainable production focuses on reducing the environmental impacts of production processes and designing better products.

Resource and energy efficiency are the basis of Europe's future competitiveness. Sustainable consumption and production maximises the potential of business to transform environmental challenges into economic opportunities while providing a better deal for consumers.

Homes, household goods, food and travel are together responsible for between 70 and 80% of all environmental impacts, ranging from pollution and greenhouse gas emissions to land use and waste.

3. What is the EU doing about it?

Much can be done to make the way we consume and produce in Europe more sustainable, without additional costs, and with benefits for companies and households.

The European Union and its Member States recognise that a shift to more sustainable economies and lifestyles is vital and is taking action. In July 2008, the European Commission presented an Action Plan on Sustainable Consumption and Production and Sustainable Industrial Policy.

This aims to improve the overall environmental performance of products throughout their entire life cycle, to promote and stimulate the demand for better products and production technologies, and to help consumers make better choices. It also seeks to encourage EU industry to take advantage of opportunities to

innovate in order to ensure its continued leadership in environmental performance.

The action plan builds on existing approaches, such as legislation on the design of energy-using products, labelling schemes, environmental management systems and incentives for citizens and public authorities for buying environmentally friendly products. It complements these and provides for new actions where gaps exist to make them work together in an integrated way. It also explores ways of promoting sustainable production and consumption internationally.

EU measures on sustainable consumption and production focus on four main objectives: better products, smarter consumption, leaner and cleaner production, and supporting global efforts.

http://ec.europa.eu/environment/eussd/escp_en.htm

http://ec.europa.eu/enterprise/environment/sip_new_pages/sip_a1_en.htm

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4. The Sustainable Consumption and Production and Sustainable Industrial Policy Action Plan

Better products

Better products

Many of the products we buy and use every day have a significant impact on the environment, from the materials used to make them, to the energy needed to use them and the waste they create once they are obsolete.

If modern society is to be sustainable in the long term, the products that cause the least environmental harm must become the accepted standard.

Designing in energy and resource efficiency

The first important step is to phase out products that use excessive energy and natural resources, or that contain hazardous substances or release harmful emissions. The next step is to promote energy and resource-efficient products with good environmental performance. This means starting at the design phase. It is estimated that 80% of all product-related environmental impacts are determined at this stage.

In 2005, the EU adopted a law to make manufacturers focus on energy use and other environmental aspects during the conception and design phase of a product.

Under the Directive on Ecodesign of Energy-using Products, product-specific measures can set performance requirements for a vast range of everyday products that use a large amount of energy, such as boilers, water heaters, computers or televisions. Products that do not meet these requirements cannot be placed on the European market.

Although its main purpose is to reduce energy use, the Directive imposes an obligation to consider the entire life cycle of products. This allows environmental considerations, like materials use, water use, emissions, waste issues and recyclability to be taken into account.

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The action plan extends the Directive to include energy-related products. It will cover products which do not consume energy during use but which have a direct impact on energy consumption, such as water-using devices or windows. Water-saving taps and shower heads, for example, can reduce water consumption and therefore decrease the amount of energy used to heat the water, saving money as well as resources. Under the enlarged Directive, compulsory minimum standards can also be set for these products.

In addition to minimum requirements, the revised Ecodesign Directive will also define voluntary environmental performance benchmarks. For example, if certain water boilers reduce their energy consumption by more than other similar products, the standard of these boilers should serve as a benchmark for the entire industry. Requirements and benchmarks will be revised periodically to take into account technological progress.

In 2012, the Commission will carry out a review of the effectiveness of the enlarged Ecodesign Directive and consider whether it should be extended to all products. The action plan will also be reviewed at this time.

http://ec.europa.eu/enterprise/eco_design/index_en.htm

Consistent data and methods

Consistent and reliable methods and data are essential for policy-makers and businesses to assess the overall environmental performance of products and to monitor progress. The European Commission is in the process of defining quality-assured methods for assessing environmental performance of products over their entire life cycle. These will be made available in a handbook for industry and commerce.

Smarter consumption: shopping for sustainability

Smarter consumption: shopping for sustainability

Consumers can play an important role in protecting the environment through the choices they make when buying products. Buying green is easier than you may think. There are a number of labelling systems that help consumers by providing details about the environmental performance of certain products. While EU legislation like the Ecodesign Directive ensures technical improvement of products, labelling is helpful in providing crucial information for consumers to make informed choices.

Look for the labels

The EU's Energy Labelling Directive already requires manufacturers and retailers to provide consumers with labels showing the energy consumption of household appliances, such as washing machines or dishwashers.

The action plan extends this labelling to a wider range of products, including energy-using and energy-related products. This will bring multiple benefits. Labels indicating the insulation capacity of windows can, for example, enable consumers not only to choose better windows when renovating their homes but also to save money on their energy bills.

Another easy way for both public and private consumers to choose the most environmentally friendly products on the market is to look out for the EU Ecolabel which is easily recognisable by its flower logo. The label takes into account the main environmental impacts of a product as well as its environmental performance. Only those goods with the lowest environmental impact – about 10-20% of products – will be able to meet the EU Ecolabel criteria. The EU Ecolabel currently covers cleaning products, appliances, paper products, clothing, home and garden products, lubricants and services such as tourist accommodation.

The action plan strengthens the EU Ecolabel, widening the number of products and services covered and focusing on those with the most significant environmental impacts and highest potential for improvement. This broader scope includes the possibility to develop criteria for food and drink products. The revised EU Ecolabel will also reduce bureaucracy and simplify criteria for companies applying for the label.



http://ec.europa.eu/energy/efficiency/labelling/labelling_en.htm

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Buying and selling green

If we are to change our consumer habits then we need to know where and how to buy environmentally friendly products. As key messengers between consumers and producers, retailers have enormous power to raise awareness and influence shopping choices by putting more sustainable options on our shelves.

Retailers are increasingly recognising sustainability as a significant opportunity for their businesses to grow, compete and innovate. However, greater efforts are needed in the retail sector and its supply chain to promote more sustainable products and give better information to consumers. They can commit, for example, to offering more sustainable timber products, promoting the purchase of energy-saving light bulbs, and reducing their own environmental footprint.

To help achieve this, the European Commission has set up a Retail Forum, involving a number of other stakeholders, including producers, as well as consumer and other non-governmental organisations.

The aim is to get large individual retailers to commit to a series of ambitious and concrete

environmental actions, which will be monitored regularly. The European Commission will also support measures to increase consumer awareness and help shoppers make more sustainable choices.

http://ec.europa.eu/environment/industry/retail/index_en.htm

Besides the work of the Retail Forum to promote sustainable shopping, a number of tools have been developed to provide information to young people and adults about sustainable consumption, among other issues. These include the Europa Diary for young students, which is distributed in schools in the EU, and an online information and education tool which will include a module on sustainable consumption from November 2009.

<http://www.dolceta.eu>

http://ec.europa.eu/consumers/empowerment/cons_education_en.htm#diary



Spending public money wisely

Europe's public authorities are influential consumers. Every year, they spend 16% of the EU's GDP – or around €2 000 billion – on goods and services. By including environmental considerations in their tendering procedures, public authorities can save energy, water and resources and reduce waste and pollution, while getting best value for money from their contracts. This so-called green public procurement (GPP) can play an important role in stimulating new products, green technologies and innovation.

The European Commission has proposed that half of all tendering procedures in the EU Member States should be green by 2010. This target is linked to a process for setting common criteria for 10 priority product and service groups. The Commission provides a training toolkit and guidance to help public authorities apply the criteria, which have been developed in cooperation with Member States and stakeholders.

A recent study shows that practising GPP in the ten priority sectors could lead to an average reduction of 25% in CO₂ emissions

The ten priority product and service groups for GPP

1. Construction
2. Food and catering services
3. Transport
4. Electricity
5. Office IT equipment
6. Textiles
7. Copying and graphic paper
8. Furniture
9. Cleaning products and services
10. Gardening products and services

http://ec.europa.eu/environment/gpp/index_en.htm

and reduce the overall cost of public purchasing by 1%. The same study also shows that, on average, in the seven best-performing Member States (Austria, Denmark, Finland, Germany, the Netherlands, Sweden and the UK), 45% of the total procurement value and 55% of the total number of procurement contracts included environmental considerations.

New legislation has recently introduced mandatory GPP criteria in certain sectors. The Energy Star Regulation sets minimum

energy efficiency standards for the purchase of IT equipment by central governments and EU institutions. The Directive on the procurement of clean and energy efficient vehicles obliges public authorities and operators to take into account the lifetime costs of energy consumption, CO₂ and pollutant emissions. For energy-related products, the Commission has proposed the setting of mandatory GPP levels for public authorities in its revision of the Energy Labelling Directive.

Incentives for buying green

A number of EU Member States already provide incentives to encourage consumers and companies to buy/produce greener products and services. The criteria they

have to meet can, however, vary substantially from one country to another.

Under the action plan, certain priority products will have to meet a specific level of energy or environmental performance to be eligible for incentive initiatives and for purchase by public authorities in Member States and the EU institutions.

This level will be identified through one of the labelling classes, when mandatory labelling is set for a particular product group. It will be up to Member States to decide whether and in which form to provide incentives. The European Commission is also examining options for providing tax breaks for consumers who buy green products.



From vicious to virtuous circle

Although environmental awareness is increasing, most people find it difficult to relate their personal consumption habits with large-scale issues, such as climate change.

Yet the full cost of producing and consuming goods and services is not reflected in market prices. They do not take into account the environmental problems generated by consumption and production, such as climate change impacts associated with greenhouse gas emissions, loss of biodiversity resulting from the excessive use of natural resources and human health problems due to pollution.

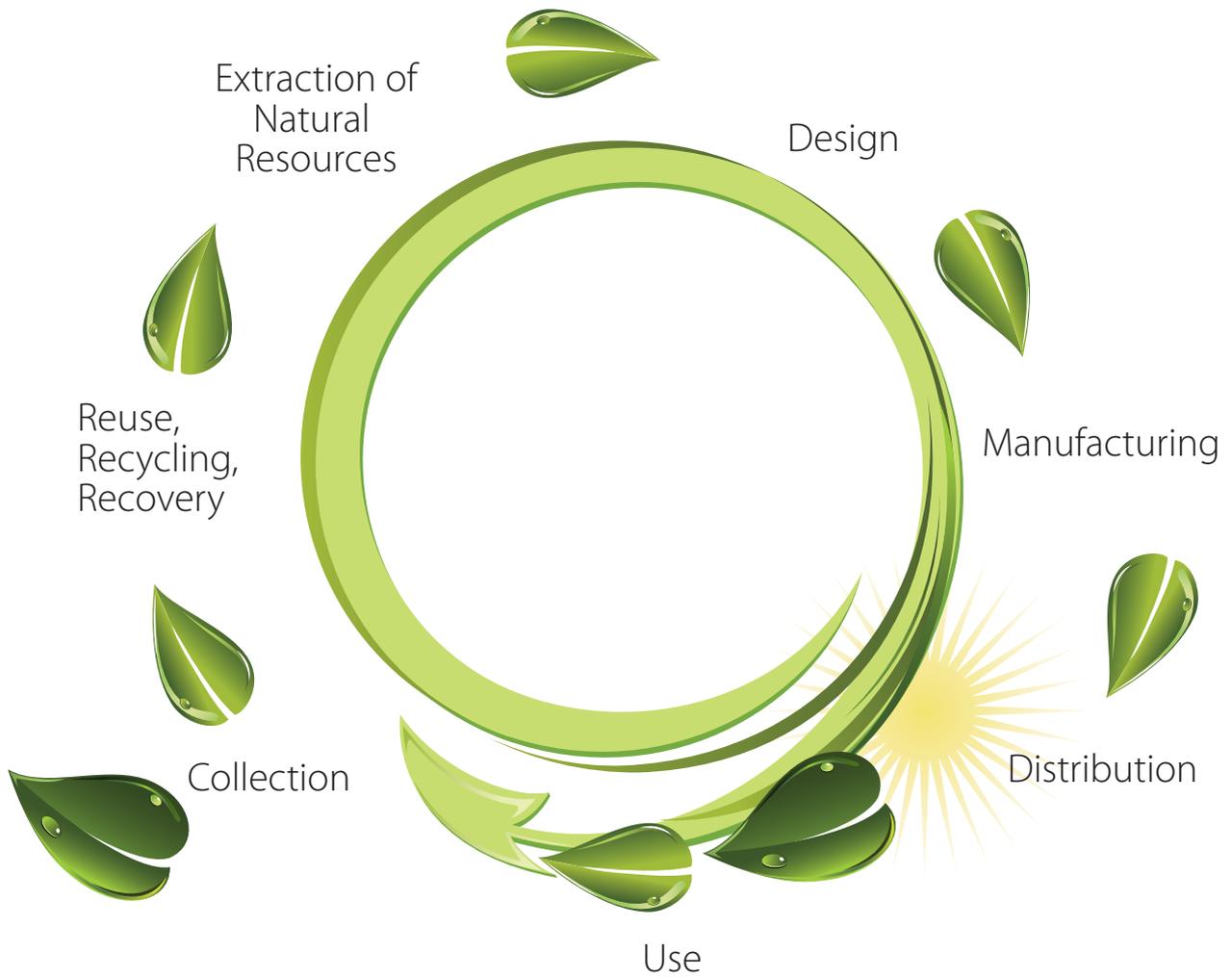
Consumers often do not choose products that perform better from a life cycle perspective

because of the often higher upfront costs and, in some cases, lack of knowledge of their future impacts and pay-offs.

Low levels of demand do not encourage companies to invest in product design that reduces negative environmental impacts associated with their production, use and disposal. Technological lock-in is maintained, and better products and services – from the environmental perspective – are not always present on the market.

The challenge is to turn this vicious circle into a virtuous circle. This requires improving the overall environmental performance of products throughout their life cycle, promoting and stimulating the demand for better products and production technologies, and helping consumers to make better choices through more coherent and simplified labelling.





Life cycle of products



Leaner and cleaner production

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EU policies have achieved a good deal of success in cleaning up industrial production and encouraging more efficient processes, leading to significant reductions in pollution and waste and higher levels of recycling. However, more needs to be done to promote the efficiency of materials and propel the most innovative technologies into the mainstream.

Improving resource efficiency reduces dependency on raw materials, encourages optimal resource use and recycling, and can significantly reduce running costs for businesses.

Resource productivity – how much economic value is created per resource used – has improved in the EU by 2.2% annually over the last ten years, largely through improvements in efficiency and the growing role of services in the economy. Under the action plan, further tools are being developed to monitor and benchmark resource efficiency.

New solutions for new challenges

Green technology – environmentally friendly and resource-efficient technologies – has an

important role to play in contributing to environmental protection and to a more efficient use of resources in Europe. Activities in this field are implemented by the EU's Environmental Technologies Action Plan (ETAP). The eco-industries are one of the fastest growing sectors of the EU economy and an area where Europe is a global leader. Europe has roughly one-third of the world market for eco-technologies, which is projected to be worth more than €2200 billion by 2020.

These industries provide solutions for measuring, preventing and correcting environmental damage to water, air and soil, and for problems such as waste, noise and damage to eco-systems. This includes sectors such as waste and waste-water management, renewable energy sources, environmental consulting, air pollution and sustainable construction.

One way we can measure innovation levels is by looking at the number of patents awarded. Eco-innovation patents in the EU are on the rise and the best-performing Member States grant 3.5 patents per €1 billion of GDP. Tools

will be developed to monitor benchmarks and boost uptake of eco-innovation in the European Union as part of a wider EU innovation policy. These will include patent-based indicators, statistical tools and annual surveys.

The European Commission is carrying out a study to discover the main barriers to the expansion of the eco-industries. This will look at administrative burdens and obstacles to financing innovation. The objective is to foster growth in eco-industries through the creation of a business-friendly regulatory environment and by exploring the potential for other sectors, such as information and communication technology (ICT).

http://ec.europa.eu/environment/etap/index_en.html

Validating the environmental performance of new technologies

The potential of eco-innovation to help solve environmental problems still remains largely untapped. One of the main reasons for this is the lack of reliable information on performance.

The Commission is proposing the creation of an EU-wide environmental technology verification scheme to provide third-party

verification of the environmental performance of new technologies. This would be voluntary and partially self-financed, using existing institutions and expertise in Member States.

The scheme is targeted at small and medium-sized companies lacking the resources or capacity to demonstrate the performance of new environmental technologies to attract first-time investors and customers.

Under the scheme, verification would be based on claims by technology developers, and results – in the form of a verification statement – would be publicly available.

Harnessing industry's full green potential

One way that organisations can improve their efficiency is through environmental management systems such as the EU's Eco-Management and Audit Scheme (EMAS). This is a voluntary system that helps optimise production and working processes and make more effective use of resources.

The scheme offers big benefits to those who commit to protecting the environment and are constantly improving the way they work.



Organisations can cut costs by reducing consumption of resources, such as energy and water, and minimising the use and waste of materials. Those who have joined the scheme have seen significant cuts in greenhouse gas emissions through changes to their production systems and working processes.

The Commission has revised the scheme to make it more attractive for organisations, especially small and medium-sized businesses, by reducing costs and administration.

http://ec.europa.eu/environment/emas/index_en.htm

Helping small and medium-sized business

Small and medium-sized enterprises (SMEs) are the backbone of Europe's economy, making up 99% of all businesses and employing more than 100 million people. However, many SMEs find it difficult to fully exploit the business opportunities offered by sound environmental management. The reasons for this include a lack of information, insufficient expertise and the scarcity of financial and human resources. The European Commission recognises the pressures facing small

businesses and is taking action to help them. It offers support to SMEs through a number of initiatives, including the Environmental Compliance Assistance Programme (ECAP). This aims to improve the environmental performance of SMEs by helping them adopt easy-to-use environmental management schemes, increasing locally available environmental expertise and providing targeted funding and information. SME support organisations, including the Commission's Enterprise Europe Network, are key partners in implementing the programme and are actively encouraging SMEs to adopt environmentally friendly and energy efficient solutions. Actions to achieve this include developing content for training programmes and providing tailor-made know-how about energy saving and environmental compliance. This will complement the support provided to SMEs through the EU's Competitiveness and Innovation Programme which supports eco-innovation activities, provides better access to financing and encourages the competitiveness of European businesses.

<http://ec.europa.eu/environment/sme/>

http://www.enterprise-europe-network.ec.europa.eu/index_en.htm



Supporting global action

Promoting global good practice

The number of consumer goods and industrial supplies imported into Europe has increased significantly in recent years. This means the negative environmental effects of our consumption occur not just at home, but also in countries all over the world that are producing the goods we use. Often, the producing areas are developing countries which are the least able to deal with the mounting pressures on the environment.

Many of these producer countries are growing both economically and in population. As they become more prosperous, the global demand for resources and energy also increases. Sustainable consumption and production policies offer a resource-efficient alternative for long-term development. To

achieve this, the EU is working closely with other countries to promote a shift towards low-carbon and resource-efficient economies internationally.

This includes a strong involvement in the Marrakech Process which is helping countries and regions globally to develop sustainable consumption and production programmes and policies. The EU also represents the European Region on the Advisory Committee to the Marrakech Process, which gives advice on the drafting of a 10-Year Framework of Programmes to link these initiatives. The EU Action Plan on Sustainable Consumption and Production and Sustainable Industrial Policy serves as an important contribution both to the Marrakech Process and to the 10-Year Framework of Programmes, as a regional action plan.

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Switching on to sustainability

In response to the need for cleaner and more energy-efficient industry in Asia, the European Commission has launched the SWITCH-Asia Programme. The programme targets small and medium-sized businesses and promotes the use of environmentally friendly technologies and practices, as well as a switch in consumption patterns towards less-damaging products and services. It contributes to poverty alleviation both directly, through increased employment and income (from increased production and greater competitiveness) and indirectly, by improving living conditions (through the reduction of water, waste and air pollution).

The European Commission also supports national round tables on sustainable consumption and production to exchange experiences

and best practice. Round tables have already been held in China, India and South Africa.

Further efforts aim to promote the development and spread of low-carbon technologies and environmentally friendly products and services. The EU continues its efforts for trade policy and industry dialogue to work towards the elimination of tariffs for such goods and services. The adoption of international environmental and energy efficiency standards is key to developing markets for more sustainable products, and can provide new opportunities for eco-innovative companies.

http://ec.europa.eu/europeaid/where/asia/regional-cooperation/environment/switch_en.htm

<http://esa.un.org/marrakechprocess/>

Science-based policy-making

The International Panel for Sustainable Resource Management is a scientific body set up by the European Commission and the United Nations Environment Programme in 2007 to provide an independent assessment of the environmental impacts of resource use over the full life cycle and offer advice on how to reduce them. The panel advises governments and organisations and provides an important knowledge base to underpin the delivery of sustainable consumption and production policies. Its aim is to increase resource efficiency globally and ultimately to break the link between economic growth and the deterioration of the environment.

10 ways to reduce your environmental footprint

Choose products that come with little packaging and buy refills where possible – you will cut down on waste production and energy use.

Save energy. Switch off lights and appliances and unplug chargers when you are not using them.

Think before you shop. Throwing food away is a waste of energy, resources and money. Only buy what you need and check the expiry date.

Check the label. The EU Ecolabel, recognisable by its flower logo, identifies the most environmentally friendly products and services ranging from paint to campsites. Before you buy electrical or electronic products check the EU energy label, showing how much energy they consume.

Take an eco-holiday. A growing number of tour operators are offering more sustainable options, either by reducing the impact of accommodation or travel or by helping you play a positive role in improving the environment.

Go seasonal. Buy and eat fruit and vegetables when they are in season, from local sources. This avoids the energy and resources used to transport goods long distances, or for intensive production in greenhouses.

Eat less meat. Meat production is far more resource intensive and has a much larger environmental impact than other food sources, so cutting out some meat from your diet can make a difference.

Switch to green electricity. Most countries now have energy companies which can supply your home or workplace with electricity from renewable sources. If you want to go one step further, you can generate your own power with a wind turbine or solar panels or photovoltaic cells in your home. Many local authorities offer financial incentives to 'micro-generate'.

Use alternatives to the car. Help ease traffic congestion and reduce air pollution from road transport by taking public transport, cycling or walking.

Use water carefully. Do not leave the tap running while you are brushing your teeth as this wastes valuable drinking water.

European Commission

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