



THE EUROPEAN
UNION
EXPLAINED

Environment

A healthy and
sustainable
environment
for present
and future
generations

Protecting the environment and
maintaining our competitiveness
goes hand-in-hand



THE EUROPEAN UNION EXPLAINED

*This publication is a part of a series that explains
what the EU does in different policy areas,
why the EU is involved and what the results are.*

You can find the publications online:

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Europe in 12 lessons
Europe 2020: Europe's growth strategy
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The EU explained: Environment

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Why do we need an environmental policy?

By its nature, the environment transcends political, legal and man-made boundaries. As a result, cross-border cooperation within the European Union and between the EU and the rest of the world is essential if we are to tackle challenges which impact on us all. These range from droughts and floods to pollution and threats to Europe's rich biodiversity.

The underlying aim is to improve the quality of the environment, protect human health, achieve prudent and rational use of natural resources, and promote international measures to address global or regional environmental problems. A coordinated environmental strategy across the Union ensures synergies and coherence between EU policies and, given the relevance of environmental legislation for many business sectors, will ensure a level playing field for their activities and prevent obstacles undermining the single market.

The impact we have on the environment today is making a big difference to the world of future generations.



Many take the environment for granted, but pressure on the Earth's finite resources is growing at an unprecedented rate. Efforts must be made to raise general awareness, use resources more efficiently and eradicate damaging and wasteful behaviour. Otherwise, future generations will be deprived of their legitimate inheritance. This requires collective action involving the EU, national, regional and local governments, businesses, NGOs and ordinary individuals.

Pressure of rising demand

Our behaviour makes huge demands on the planet. During the 20th century, the world increased its use of fossil fuels by a factor of 12 and extracted 34 times more material resources. Demand for food, animal feed and fibre may increase by 70 % by 2050. If we carry on using resources at the current rate, we will need more than two planets to sustain us.

Evolving strategy

The major environmental challenges facing Europe have evolved since the early days of European environmental policymaking. In the 1970s and 1980s the focus was on traditional environmental themes such as protecting species and improving the quality of the air we breathe or the water we drink by reducing emissions of pollutants. Now, emphasis is on a more systematic approach that takes account of links between various themes and their global dimension. This means moving from remediation to prevention of environmental degradation.

It involves ensuring that other areas such as agriculture, energy, transport, fisheries, regional development, research, innovation and external aid take fully into account the environmental consequences of their policy and funding decisions. This mainstreaming will ensure a more coherent approach towards environmental challenges and maximise synergies.

After more than four decades of policymaking at EU level, much of our environment is protected by a body of European legislation. But the implementation of these policies remains problematic. This is a key challenge that needs to be tackled for the full benefits of these laws to be enjoyed by all. The new EU environment action programme (see the 'The road ahead' chapter) will address this.

Environment and economy in harmony

In short, environmental and economic considerations are complementary, like two sides of the same coin. Greening the economy reduces environmental costs through more efficient use of resources, while new environmentally friendly technologies and techniques create employment, give a boost to the economy and strengthen the competitiveness of European industry.

The European Commission is showing the way with its Europe 2020 strategy, the EU's growth strategy for the coming decade. This firmly embeds efficient use of our finite natural resources as one of seven flagship initiatives. Environmental policy can help meet the strategy's overall objectives of moving to smart, sustainable and inclusive growth that will transform Europe into a knowledge-based, resource-efficient economy.

For instance, strengthening the resilience of our ecosystems, which provide food, fresh water, raw materials and many other benefits, contributes to productivity and quality of life, while reducing public health bills.

Today, environmental and economic considerations are two sides of the same coin.



Working across borders

The environment does not stop at the Union's borders. Air, water, seas and wildlife know no boundaries. The more the EU can encourage neighbouring countries — and ideally the whole world — to adopt its high standards, the better the quality of our own environment will be.

It works closely with its neighbours to encourage them to do the same and plays an active role in international negotiations on sustainable development, biodiversity and climate change. The EU's longer-term objective of environmental sustainability is one of the United Nations' millennium development goals.

Public support

There is strong public support for EU measures to improve the environment. A pan-European opinion survey in mid-2014 revealed that 95 % of respondents consider that protecting the environment is important to them personally. Almost three quarters agree that protecting the environment can boost economic growth, and over three quarters agree that EU legislation is necessary to protect the environment in their country. The most widely voiced environmental concerns were pollution of air and water, waste generation and the depletion of natural resources.

How the EU develops environmental policy

Implementation

Since the 1970s, the EU has agreed over 200 pieces of legislation to protect the environment. But legislation alone counts for little if it is not properly applied and enforced. So, the challenge now is to implement effectively what has been agreed. This is complex since many different tasks are done by diverse groups ranging from national inspectors and courts to NGOs and citizens exercising their participatory rights. Failure to implement legislation has many adverse consequences. It can undermine fundamental environmental objectives, harm human health and present industry with regulatory uncertainty as agreed standards are applied unevenly across the Union. Meanwhile, proper implementation can bring financial benefits. If EU waste legislation is fully applied it would generate 400 000 jobs and reduce annual net costs by EUR 72 billion.

The European Commission can, through the European Court of Justice, take legal action against a Member State which fails to implement legislation correctly. These infringement cases — more of them concern the environment than any other area — are not only embarrassing for governments, but can ultimately lead to fines for repeated failure to implement EU rules.

But legal action is a last resort. The European Commission attaches greater importance to helping Member States with effective implementation. Capacity-building and financial support are available, alongside better knowledge of the state of the environment as well as information on the way Member States deliver on their EU commitments in practice. It has recommended that each Member State should establish an independent national review body, such as an ombudsman, to handle environment-related complaints from the public.

Using the market

The market is one cost-effective way to protect and improve the environment and ease pressure on scarce resources. Taxes and subsidies can be used to act as incentives or deterrents to persuade companies and consumers to opt for greener manufacturing methods and products. Many already exist, such as fees for cutting trees or disposing of waste. The European Commission would like to see the gradual removal of subsidies for industry, transport, farming and energy that encourage use of polluting or energy-intensive products and processes.

Policies must be based on sound evidence that provides an understanding of the causes and impact of environmental change so that appropriate responses and strategies can be devised. Much of this data comes from national sources complemented by Pan-European datasets and is analysed by the European Environment Agency, which provides input into the EU's environmental policy.

The EU has put in place different programmes to encourage the development of robust and accurate data and ensure it is widely shared. The Copernicus programme, for instance, provides Earth Observation satellite data and information combining space data with data from land, sea and air monitoring stations. The aim is to produce a wide range of datasets to help environmental policymaking and support its implementation.

The European Environment Agency

The European Environment Agency (EEA) collects national data to produce European datasets. It develops and maintains indicators and reports on the state of the environment. Based in Copenhagen, it began work in 1994.

Its mandate is to help the EU and its member countries to make informed decisions about improving the environment, integrating environmental considerations into economic policies to move towards sustainability and to coordinate the European environment information and observation network.

Encouraging eco-innovation

Eco-innovation is any form of innovation aiming at, or resulting in, significant and demonstrable progress towards the goal of sustainable development, by reducing impacts on the environment, enhancing resilience to environmental pressures or achieving a more efficient and responsible use of natural resources.



Taxes and subsidies can act as incentives to persuade companies and consumers to go green.

Awareness raising

The European Commission promotes awareness of the environment in many imaginative ways. An annual highlight is Green Week in Brussels when thousands of participants debate a key environmental issue, such as biodiversity or water, over 4 days.

Competitions are another popular stimulus. The EU's Green Capital Award showcases the environmental care and imagination which cities across Europe are making. Each year, competition to win the coveted title becomes more intense. Other awards recognise the contributions which businesses, public authorities and individual projects make to the environment.

Green Capitals

To win the title, a city has to have a consistent record of achieving high environmental standards, be committed to further sustainable development goals and serve as a role model for others. Winners:

- 2010: Stockholm
- 2011: Hamburg
- 2012: Vitoria-Gasteiz
- 2013: Nantes
- 2014: Copenhagen
- 2015: Bristol
- 2016: Ljubljana

<http://www.europeangreencapital.eu>

Encouraging innovation

Environmental technology industries are already an important part of the EU economy. However, with the exception of renewable energy, eco-innovation has penetrated markets relatively slowly. Bottlenecks include the failure of market prices to accurately reflect environmental costs and benefits, and incentives and subsidies that sustain wasteful practices and rigid economic structures.

The EU's Eco-innovation Action Plan highlights the specific drivers of eco-innovation and barriers to its uptake. Support is available to finance research, innovation and eco-innovative companies. To encourage greater take-up of green technologies, the EU is promoting green public procurement, costing products over their life-cycle and eco-labelling.



What the EU does

Resources are necessary for the economy and environment to function. But the days of plentiful supply of inexpensive raw materials — a key factor in the major economic progress made during the last two centuries — are over.

Population growth and rising living standards are increasing demand and raising the price and scarcity of natural resources like the metals, minerals and foodstuffs we depend upon. Every day, the global population increases by 200 000. By the end of the next decade, an additional 2 billion people may have joined the high-consumption middle classes in developing countries.

Demand and supply are increasingly going in different directions. If resource use continues at the present rate, mankind will require the equivalent of more than two planets by 2050 to satisfy its needs and the hopes of millions for a better quality of life will be dashed.

Resource efficiency

To address the challenges, the European Commission has made resource efficiency one of the flagship initiatives of its 2020 strategy. This means producing more value with less input, using resources in a sustainable way and managing them more efficiently throughout their life-cycle. It requires innovation, changes in production and consumption patterns and the right incentives and price signals.

In late 2011, EU governments adopted the Roadmap to a Resource-Efficient Europe. This emphasises the need for a sea change in economic, political and personal behaviour. It contains milestones across different policy areas to arrive at a European economy within 40 years that provides a high standard of living with a much reduced impact on the environment.

Recycling reduces pressure on primary raw materials.





The Natura 2000 network covers almost 18 % of EU territory and protects species and habitats in their natural environment.

The need to make efficient use of finite resources is a theme being integrated into all EU policies. To encourage individuals to change their behaviour, the European Commission launched a public information campaign in autumn 2011. To drive the process forward, it created a high level panel of policymakers, industrialists and experts with extensive economic and environmental expertise, who delivered a set of recommendations in the spring of 2014.

Resource efficiency

Resource efficiency aims to decouple economic growth from resource use. It pushes the economy to create more with less, delivering greater value with less input, using resources in a sustainable way and minimising their impact on the environment.



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Healthy ecosystems are key to Europe's biodiversity.

Biodiversity

A well-managed network like Natura 2000 can make a major contribution towards the EU's wider environmental objectives. One of these is to halt and reverse the loss of biodiversity — the term used to emphasise the richness of the natural world with all its species and genetic variety — and ecosystems by 2020.

These are important in their own right, but they also provide a vital stream of goods notably food, fibre, fuel and medicines and essential services such as climate regulation, flood prevention, water purification, pollination and soil formation. All are necessary for economic prosperity, security, health and quality of life.

In 2011, just months after the world agreed an ambitious global agenda in Nagoya, the EU adopted an updated biodiversity strategy. This has as a headline target halting the loss of biodiversity and degradation of ecosystem services in the EU by 2020, restoring them as far as feasible and increasing Europe's contribution towards averting biodiversity loss globally.

Protected areas

Recognising that nature does not respect national borders, the EU has strong nature protection legislation. This has culminated in the creation of Natura 2000, a pan-European ecological network of areas designed to protect species and habitats in their natural environment. Consisting of over 26 000 sites, the network is the largest in the world. Now virtually complete, it covers almost 18 % of EU territory — an area equivalent in size to Germany, Poland and the Czech Republic combined.

The seeds of the network were sown in 1979 when the EU passed its first major piece of nature protection legislation, the birds directive. This protects all wild birds in the EU (some 500 species) and requires EU countries to identify and protect particularly important sites.

The second trigger was the habitats directive. This obliges EU countries to protect the habitats of endangered species of plants, animals and habitats. It now covers some 1 500 rare and threatened

plants and animals, as well as around 230 valuable habitat types, such as hay meadows, heathland and salt marshes, which act as building blocks for ecosystems.

Natura 2000 recognises that humans are an integral part of nature and that the two work best in partnership with one another. Its aim is not to exclude economic activities but rather to place certain limits on them so as to safeguard valuable species and habitats. Its financing is integrated into key EU policy sectors. Agriculture, particularly its rural development strand with agri-environment and forest measures, is the most important of these. Cohesion policy plays a major role in funding investments, especially in the new Member States.

Natura 2000 nurtures healthy ecosystems which provide valuable services such as fresh water, carbon storage and protection against floods and coastal erosion. Collectively, these services are estimated to be worth €200-€300 billion a year — significantly more than the annual cost of some €6 billion to manage the network.

The EU's economy uses 16 tonnes of materials per person per year, of which 6 tonnes becomes waste.



Other main EU achievements

In addition to the two cross-cutting policy areas of resource efficiency and biodiversity protection, the Union is highly active on specific environmental issues.

CHEMICALS: Chemicals are an essential component of our daily lives. However, some can severely damage human health and others could be dangerous if not properly used. To ensure chemicals are safe, to protect the environment and to encourage the competitiveness of one of Europe's major industries, the EU has the most advanced chemicals legislation in the world; it is called REACH (Registration, Evaluation, Authorisation and Restriction of Chemicals).

All chemical substances manufactured or imported into the EU must be registered with the Helsinki-based European Chemicals Agency. By 2018, every chemical used in the EU will have to comply with this requirement. If not, it cannot be sold in the Union. Particularly strict rules apply to the most hazardous products.

Companies are responsible for assessing and managing any risks from the chemicals they use or sell in the Union and for providing customers with the appropriate safety advice on how they should be handled.

WASTE: The EU's economy uses 16 tonnes of materials per person per year, of which 6 tonnes becomes waste, half of it going to landfill. If waste cannot be avoided, then the European Commission's message is to reuse, recycle and recover what can be a valuable resource. Landfill taxes and 'pay as you throw' schemes can help achieve this. Some Member States have already achieved recycling rates of over 80 % and have virtually eliminated landfill. Others still have some way to go.

Legislation on specific items such as waste electrical and electronic equipment, packaging, batteries and accumulators or end-of-life vehicles is already in place and contributing to resource efficiency.

AIR: Over the past 20 years, the EU has successfully reduced the levels of a number of pollutants. Lead emissions, for example, have fallen by some 90 %. Despite the progress made, air pollution ranks high among Europeans' environmental concerns and causes many premature deaths every year. The Union still has some way to go to meet its aim of securing levels of air quality that do not give rise to significant negative impacts on, and risks to, human health and the environment.

In 2013, taking account of the latest science and cost-effective measures, the Commission presented a 'Clean Air' policy package of measures to further improve air quality, updating existing legislation and reducing harmful emissions from industry, traffic, energy plants and agriculture, with a view to lowering their impact on human health and the environment.

WATER: In recent decades, the EU has put in place a comprehensive policy to ensure the quality of Europe's water. Initially, this addressed health concerns. It was followed by measures to address the impact on the environment of major water-using sectors such as agriculture, industry and domestic households.

The EU's main piece of water legislation, the water framework directive, requires all rivers, lakes, coastal waters and groundwater to be clean by 2015. Member States have to check the state of their waters and draw up plans explaining how they will clean them.

Another piece of European legislation, the marine strategy framework directive, adopts a coordinated approach to managing human activities that have an impact on the marine environment. It requires national measures to be introduced from 2015 to ensure marine litter does not harm the coastal and marine environment and aims to have marine waters healthy by 2020.

A European Commission blueprint to safeguard Europe's water resources up to 2020 and beyond should help the EU meet its targets. This will operate like a toolkit to improve the implementation of water management, mainstreaming it into other policy areas.

Bathing water

The annual European bathing water quality report provides the most up-to-date picture of the state of health of over 22 000 coastal and inland bathing sites across the 28 EU Member States plus Switzerland and Albania.

It confirms that the overall quality of bathing waters in the EU has improved markedly since 1990. In that year, 9.2 % of coastal sites and 11.9 % of inland bathing areas did not comply with the EU legislation in place. By 2013, those figures had fallen to 1.9 % and 2.4 % respectively.

It is now easy for the public to check the status of the water wherever they plan to swim. The bathing water section of the Water Information System for Europe (WISE) can be consulted on the EEA's bathing water website. The Eye on Earth — water watch application can be used to zoom in on a section of the coast, riverbank or lake in either street map or bird's eye format.

<http://www.eea.europa.eu/themes/water/interactive/bathing/state-of-bathing-waters-1>

NOISE: Noise pollution has been linked to a range of health problems. It also harms wildlife. The EU regulates noise from a number of sources, including motor vehicles, trains and equipment used outdoors. Under the EU directive on environmental noise, passed in 2002, Member States must draw up maps of noise levels in their larger towns and cities, and for major roads, railways and civil airports. They then need to come up with plans to tackle the problem.

FORESTS: Forests are being cut down at an alarming rate around the world. The EU has called for global deforestation to be halved by 2020 and halted entirely by 2030. It is working with various timber-exporting countries to improve forest governance. EU legislation now minimises the risk of illegally harvested timber being sold in the Union.

SOIL: There is no specific EU legislation on soil, but many of the problems affecting soils are addressed by specific measures for water, waste, chemicals, industrial pollution, nature protection and pesticides. The EU has a strategy specifically addressing all the different threats to soil, particularly from farming practices and industrial processes. In 2012, the European Commission produced guidelines drawing attention to the dangers of covering soil with impermeable material such as concrete and offering more sustainable alternatives.

Thanks to EU environmental legislation, the overall quality of bathing water in the Union has improved markedly over the past two decades.



The road ahead

Ensuring the sustainability of our environment, the preservation of our natural resources and the conservation of our marine biological resources are key policy objectives requiring action at all levels. Protecting the environment and maintaining our competitiveness can go hand-in-hand, and environment policy also plays a key role in creating jobs and stimulating investment. Europe's economy needs to be transformed to derive more value from fewer materials and changes in consumption patterns are necessary. Policies to encourage research, bring eco-innovation to the market and raise consumer awareness can all contribute to this transformation.

The EU's Environment Action Programme (EAP) until 2020

The general EU Environment Action Programme to 2020 sets out a long-term environment strategy designed to be sufficiently flexible to respond to the challenges ahead and the increasingly systemic risks they contain. It provides an overall approach towards the environment, setting the course for a green and competitive economy that will safeguard our natural resources and health for present and future generations.

Demand for food, feed and fibre may increase by 70 % by 2050. If we carry on using resources at the current rate, we will need more than two planets to sustain us.



The EU has a well-developed environment policy with a complete and mature legal framework, which needs to be implemented. In addition to the significant advantages for health and the environment, the benefits of ensuring that EU environment legislation is actually implemented are threefold: the creation of a level playing field for economic actors operating in the internal market; the stimulation of innovation; and the promotion of first-mover advantages for European companies in many sectors. The costs associated with failure to implement legislation, by contrast, are high, broadly estimated at around €50 billion a year, including costs related to infringement cases. The Commission also receives numerous complaints directly from Union citizens, many of which could be better addressed at Member State or local level. Improving the implementation of the Union environment *acquis* at Member State level will therefore be given priority in the coming years.

Individual areas

More than ever before, environment policy leading up to 2020 will stress the merits of switching to a greener, more circular economy. This is the simplest short cut to solving a number of longstanding problems such as health concerns, environmental degradation and unemployment while achieving sustained economic growth. Eco-design, waste prevention, recycling and reuse can bring net annual savings for EU businesses of up to €600 billion, while also bringing significant reductions in the EU's greenhouse gas emissions. It is now widely accepted that improving the state of the environment cannot be delivered through environment policy alone, and that environmental objectives need to be embedded in other policy domains as well. Achieving the targets of the EU biodiversity strategy, for instance, and halting biodiversity loss within the EU by 2020 will require the protection of biodiversity and ecosystems to be an integral part of other EU policies, especially agriculture and fisheries. Economic prosperity, growth and wellbeing will not be sustainable if better care is not taken of the planet's natural capital since this is essential for so many industries and economic sectors.

Challenges

There is no escaping the fact that Europe and its environment face some serious global challenges. These include an increasing world population, growing middle classes with high consumption rates, rapid economic growth in emerging economies, constantly rising energy demand and intensified global competition for resources. Most of these are outside Europe's direct influence, but it can help other countries to move toward more sustainable development by promoting more effective environmental governance globally. However, a lot can be done to make the European environment more resilient to future risks. The EU has unparalleled information resources and technologies, new resource accounting methods, an established culture of precaution and prevention, a strong record of rectifying damage at source and making polluters pay. Environmental governance can become more effective through a broader commitment to environmental monitoring and up-to-date reporting of environmental pollutants and waste, using the best available information and technologies. Better implementation of existing policies will help achieve the EU's goals and provide regulatory stability for businesses.

Vision

All this aims to ensure that by 2050 EU citizens live in a safe and healthy natural environment which is managed in ways that respect environmental limits and ensure ecological resilience. The following 2050 vision from the general EU Environment Action Programme is intended to help guide action up to and beyond 2020: 'In 2050, we live well, within the planet's ecological limits. Our prosperity and healthy environment stem from an innovative, circular economy where nothing is wasted and where natural resources are managed sustainably, and biodiversity is protected, valued and restored in ways that enhance our society's resilience. Our low-carbon growth has long been decoupled from resource use, setting the pace for a safe and sustainable global society.'

Further reading

- ▶ For an overview of EU environmental policy: http://ec.europa.eu/environment/index_en.htm
- ▶ For information on the European Environment Agency: <http://www.eea.europa.eu>
- ▶ For specific information on the registration, evaluation, authorisation and restriction of chemical substances (REACH): <http://echa.europa.eu>
- ▶ Questions about the European Union? Europe Direct can help: 00 800 6 7 8 9 10 11
<http://europedirect.europa.eu>

