



# Environment fact sheet:

# industrial development



- Industrialisation has the potential to help achieve a variety of social objectives such as employment, poverty eradication, gender equality, labour standards, and greater access to education and healthcare.
- At the same time, industrial processes can have negative environmental impacts, causing climate change, loss of natural resources, air and water pollution and extinction of species. These threaten the global environment as well as economic and social welfare.
- The overriding policy challenge for the EU is to promote the positive impacts of industrial development while limiting or eliminating its negative impacts throughout the world.
- The development and application of environment-friendly technology, products and services, and management systems have the potential to achieve both environmental sustainability and economic growth.
- The EU is determined to ensure a pattern of economic and industrial development that is sustainable. A high level of environmental protection and sustainable resource use, economic growth and social cohesion are mutually reinforcing policy goals.

## Integrated product policy

All products cause environmental degradation in some way — during manufacture, during use or during disposal. Integrated product policy (IPP) seeks to minimise this by considering all phases of a product's lifecycle in an integrated way (to avoid shifting environmental impact from one part of the lifecycle to another) and to take action where it is most effective. The aim is to improve the overall environmental performance of a product.

The lifecycle of a product covers the extraction of natural resources, through its design, manufacture, assembly, marketing, distribution, sale and use, to its eventual disposal as waste.

At EU level, IPP was launched in 2003. With so many different products and actors there cannot be one simple policy measure for everything. Instead, there is a whole variety of tools that the IPP umbrella entails, both voluntary and mandatory. These tools include measures such as economic instruments, substance bans, voluntary agreements, environmental technologies, green public procurement, environmental labelling and product design guidelines.

## Fact 1: Current patterns of industrial development are unsustainable

Industrial processes play a major role in the degradation of the global environment. In industrialised countries, environmental regulation and new technologies are reducing the environmental impact per unit produced, but industrial activities and growing demand are still putting pressures on the environment and the natural resource base. In developing countries a double environmental effect is occurring: old environmental problems, such as deforestation and soil degradation, remain largely unsolved. At the same time, new problems linked to industrialisation are emerging, such as rising greenhouse gas emissions, air and water pollution, growing volumes of waste, desertification and chemicals pollution.

## Fact 2: Sustainable industrial development contributes to the eradication of poverty in a lasting way

The more developed a country's industrial capacity, the greater the potential for economic growth and development. If carried out in a sustainable manner, taking into account the often fragile nature of the surrounding environment, societal patterns and economic conditions, this can achieve lasting improvements in living standards, incomes, working conditions, education and healthcare. If, on the other hand, industrial development is coupled with environmental degradation and resource depletion, societal exploitation and economic recklessness, the associated benefits, if any, will not last.

Accordingly, there is a need to ensure access to basic services as well as to modern, safe and affordable energy in developing countries. Access to energy will also contribute to the Millennium Development Goals (MDGs) on achieving universal primary education and on promoting gender equality. Increasing energy efficiency and diversifying energy supply, among other things, by exploiting the opportunities of renewable energy, are important aspects in ensuring sustainable industrial development. The EU is implementing various initiatives to improve access to sustainable energy services and promote renewables, such as the EU energy initiative (EUR 220 million is available through the associated EU energy facility from 2006) and the Johannesburg Renewable Energy Coalition (JREC). The EU's water initiative contributes to the achievement of the MDGs on water and sanitation.

Industrial development that builds on an economically, environmentally and socially sound base is an engine for achieving the MDGs. The EU sees a mutually reinforcing relationship between environmental protection, competitiveness and social cohesion.

### IPP Toolbox

Economic and legal framework	Applying lifecycle thinking	Consumer information
Taxes and subsidies	Lifecycle information	Green public procurement
Voluntary agreements	Product design obligations	Corporate purchasing
Legislation	Environmental management systems	Labelling
Environmental technologies		

## Fact 3: EU environmental policies have reduced the negative impacts of industrial processes

Since the EU started legislating in the area of environment more than 30 years ago, it has driven development towards more environmentally sound technologies and systems.

One directive that is doing a lot to minimise pollution from around 55 000 major industrial and agricultural installations in the EU is the integrated pollution prevention and control (IPPC) directive from 1996. Unless they have a permit, installations are not allowed to operate. The permits must be based on

the concept of best available techniques (BATs). In many cases, BATs involve quite radical environmental improvements. In view of this, existing installations have until October 2007 to comply.

The environmental technology action plan (ETAP) is another tool for the promotion of environmental technologies and eco-innovation in Europe. It aims to get research into the markets, improve market conditions and promote responsible investment globally. Launched in 2004, ETAP covers 25 individual actions, including: the launch of technology platforms with stakeholders in areas such as hydrogen fuel cells, photovoltaics, water supply and sanitation; establishing environmental performance targets for products and services; making the most of funding schemes and public and private procurement policies; raising consumer awareness; and promoting responsible investments in, and use of, environmental technologies in developing countries and countries in economic transition.

The European eco-label is an environmental labelling scheme, created in 1992, allowing consumers to choose products that have been certified as environment friendly throughout their lifecycle. The eco-label 'flower' can be found on some 260 products and services from 23 product groups and their number is increasing by the year.

The eco-management and audit scheme (EMAS) from 1995 helps all organisations within the EU — private and public — to improve their environmental performance. Participating organisations must put in place a management system, actively involve their personnel, continuously improve their environmental performance and report on it, all under the scrutiny of external independent verifiers. In January 2006, there were about 4 600 registered organisations in the EU. The 2006 Winter Olympics in Turin used EMAS and the eco-label to become the first major 'green' sports event in Europe.

These measures come on top of a comprehensive body of legislation on air pollution and waste, which has boosted the development and use of abatement technologies and modern waste management and recycling methods, respectively.

Europe's drive towards environmental sustainability has become a comparative advantage. The EU eco-industries account for about one third of the global market and employ over 2 million people. The sector has enjoyed growth of around 5 % a year since the mid-1990s, well above the growth of the economy. The OECD estimates that environmental technology is one of the sectors with the greatest future potential.

#### **Fact 4: The EU is working on promoting sustainable industrial development throughout the world**

To be sustainable in the long term, industrial development needs to be based on sustainable use of natural resources. The EU promotes global resource efficiency and sound waste management, amongst other things, by supporting the implementation of relevant multilateral environmental agreements in developing countries. In development cooperation, provision of better access to basic services such as water, sanitation and energy, is contributing to achieving sustainable consumption and production.

In 2005, the European Commission launched a long-term strategy on the sustainable use of natural resources. The objective is to decouple environmental impacts related to the extraction and use of natural resources both in the EU and globally from economic growth. In a joint effort with the United Nations Environment Programme (UNEP), the Commission will establish an international scientific panel to provide information on key environmental impacts from the extraction and use of natural resources from a lifecycle perspective; to advise on policies and strategies to achieve decoupling; and to promote knowledge transfer and capacity building for developing countries.

The decoupling of environmental degradation from economic growth

### **'Green' public procurement**

'Green' public procurement (GPP) could have significant benefits for the environment. In the EU, around 16 % of GDP is spent by public authorities on purchasing goods, services and works, and it is possible to introduce environmental criteria into the various stages of the public procurement procedure.

'Green' purchasing can lead to savings both for the public authorities making the purchases and for society in general, when considering the lifecycle cost of the product or service. In establishing a GPP policy and communicating it, an authority demonstrates that action in this area leads to concrete results, setting an example for others to follow. Furthermore, it creates a market, giving significant incentives to industry to develop green products and technologies.

In 2004, the European Commission published a GPP handbook that explains in concrete and non-legal terms — making frequent use of best-practice examples — how environmental considerations can be integrated into public procurement procedures. The European Commission is working closely with EU Member States to advance GPP, and is strongly encouraging the adoption of national action plans on GPP.



## EU emissions trading — an open scheme promoting global innovation

In 2005, the EU launched a company-level CO<sub>2</sub> emissions trading scheme. It covers 11 500 energy-intensive installations across the EU, which are responsible for almost half of the EU's CO<sub>2</sub> emissions. The scheme helps to reduce emissions cost-effectively and boosts the development of low-carbon technologies. It is also linked to the Kyoto Protocol's project-based mechanisms, allowing European companies to invest in emission-saving projects elsewhere to meet their commitments at home. This helps transfer advanced technology to developing countries.

The installations receive emission allowances from their governments, giving them the right to emit a certain level of CO<sub>2</sub> per year. If they anticipate higher emissions, they can either take measures to reduce them — for instance by installing new technology — or they can buy additional emission allowances on the market, whichever is cheaper. Conversely, if they reduce emissions so they are lower than their allowances, they can sell the surplus allowances on the market.

In 2005, more than 260 allowances were traded (each covering 1 tonne of CO<sub>2</sub>) with an estimated value of EUR 5 billion.

As regards the Kyoto Protocol, EU Member States have put aside EUR 2.73 billion to purchase credits from the Kyoto Protocol's flexible mechanisms during 2008–12, which will result in significant transfers of technology and know-how to developing countries.

through business development, especially for SMEs, is another key objective of EU aid policy. A vibrant private sector must play its role as the main engine of economic growth and thus as a major actor in reducing poverty. The EU is also promoting corporate social responsibility (CSR). Voluntary business initiatives in the form of CSR practices can play a key role in contributing to sustainable development.

## Fact 5: Stimulating technological innovation is driving progress towards more sustainable industrial practices

The various policy tools that the EU has developed have encouraged more sustainable production and consumption patterns. On the production side, this owes much to the research and development of environmentally sound technologies, fostered by environmental regulation. Many air pollutants have been dramatically reduced, the pollution of Europe's waters is decreasing, landfills and incinerators are being cleaned up and recycling rates are rapidly rising. At the same time, industrial production has increased more than 50 % over the past 20 years. Production efficiency makes up a large proportion of these environmental gains and relies on technological innovation.

Such technological innovation cannot come about without the right incentives. More effective economic and other market-based instruments that incorporate the monetary value of negative external costs — such as the EU emissions trading scheme — are needed to drive environmental innovation further.

In addition, frequent dialogue, knowledge management, technology transfer, education, training and capacity building must be developed so that sustainable industrial practices can spread throughout the world. This will support developing countries in making strides towards sustainability. The social side of sustainable development must also be considered in terms of gender equality and workers' rights. Moreover, the costs of inaction must be acknowledged. The longer we allow for unsustainable methods of industrial development to go on, the less chance future generations will have to attain a healthy, wealthy and sustainable way of life.

### Useful resources

Integrated product policy (IPP):

<http://www.europa.eu.int/comm/environment/ipp/home.htm>

Green public procurement (GPP):

<http://www.europa.eu.int/comm/environment/gpp/index.htm>

European eco-label:

[http://europa.eu.int/comm/environment/ecolabel/index\\_en.htm](http://europa.eu.int/comm/environment/ecolabel/index_en.htm)

Eco-management and audit scheme (EMAS):

[http://europa.eu.int/comm/environment/emas/index\\_en.htm](http://europa.eu.int/comm/environment/emas/index_en.htm)

Environmental technologies action plan (ETAP):

[http://europa.eu.int/comm/environment/etap/etap\\_ref.htm](http://europa.eu.int/comm/environment/etap/etap_ref.htm)

Corporate Social Responsibility:

[http://europa.eu.int/comm/enterprise/csr/index\\_en.htm](http://europa.eu.int/comm/enterprise/csr/index_en.htm)

EU Energy Initiative:

[http://europa.eu.int/comm/development/body/theme/energy/initiative/index\\_en.htm](http://europa.eu.int/comm/development/body/theme/energy/initiative/index_en.htm)

EU Water Initiative:

<http://www.euwi.net>

Johannesburg Renewable Energy Coalition:

[http://europa.eu.int/comm/environment/jrec/index\\_en.htm](http://europa.eu.int/comm/environment/jrec/index_en.htm)