

Economics of Sustainable Management

5. Environmental policy and instruments



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Environmental politics



- **Environmental politics** is an academic field of study focused on three core components:
 - the study of political theories and ideas relating to the environment
 - the examination of political parties and environmental movements
 - the analysis of public policy-making and implementation affecting the environment at international, national and local levels

Environmental policy – definition

- **Environmental policy (EP)**

- is any action deliberately taken to manage human activities with a view to prevent, reduce, or mitigate harmful effects on nature and natural resources, and ensuring that man-made changes to the environment do not have harmful effects on humans



Environmental policy – definition

- **Environmental policy**
 - the principal purpose of environmental policy is to provide a framework and guidelines for decision-making and activities at the international, national, regional and local level aimed at further improvements in the environmental quality as a whole and in the quality of environmental components
 - focuses on enforcement of sustainable development principles, continuing integration of the environmental perspective into sectoral policies, and increasing the economic efficiency and social acceptability of environmental protection programmes, projects and activities

The origin of environmental policy

- outcome knowledge adverse impacts of human activities on the environment
- different spatial dimensions (London smog of 1952 – 4 000 victims)
- perceived as a new type of social problems
- monitoring and analysis in the 1960s
- origin of environmental policies – beginning 1970s



Environmental policy

- **Environmental policy at macroeconomics level**
- **Environmental policy at microeconomics level**

Principles of Environmental Policy

- **the prevention principle**
 - it is better to solve environmental problems before they occur – can be more economically effective
- **the precautionary principle**
 - it is important to reduce the uncertainty
- **the polluter-pays principle**
 - polluter who causes the negative impact on the environment has to pay all costs (including externalities)
- **the principle of priority for economically effective or cost-effective solution**

Principles of Environmental Policy

- **the subsidiary principle**
 - environmental problems should be solved at society's most effective organisational level
- **the collaboration principle**
 - collaboration on the horizontal level of governance can increase the effectiveness of solutions to environmental problems
- **the sustainability principle**
 - integration of environmental, economic and social dimensions
- **the principle of complexity and integration**
 - it is important to introduce a system approach

Principles of Environmental Policy

- **the principle of equitable distribution of costs and benefits**
 - to avoid the situation where the costs of the environmental policy affect only some groups of population
- **the public information principle**
 - is becoming more and more important, especially when promoting private solution to environmental problems and public participation in solving the public environmental problems

Environmental policy

- The design of environmental policy requires answers to two central questions:
 - what is the desired level of environmental protection?
 - what policy instruments should be used to achieve this level of protection?

Environmental policy objectives

- **Objectives in factual terms:**
 - by components of the environment (water, soil, air...)
 - by sector (energy, transport, agriculture...)
 - by contamination (radioactive radiation, noise, vibration, waste...)
- **Objectives in terms of time:**
 - short, medium, long-terms objectives
 - possibly with a specific deadline for solving

Environmental policy in EU



- EP is a relatively recent EU policy area
- **1958 – Treaty of Rome** – was not mentioned environmental protection
- **1972** – was launched first European Environmental Action Plans (EAP)
- **1986** – The Single European Act – marked the beginning of a more prominent role for environmental protection
- EU environmental policy was substantially expanded by the Treaties of **Maastricht** (1992) and **Amsterdam** (1997)
- 2007 – **Lisbon Treaty** – reiterated the objective of sustainable development
- 2010 – **Europe 2020 Strategy** – a strategy for smart, sustainable and inclusive growth
- **2010** – EU renewed a number of environmental Directives to ensure the comply with the Lisbon Treaty
- now – is prepared **7th Environmental Action Programme**

National environmental policy

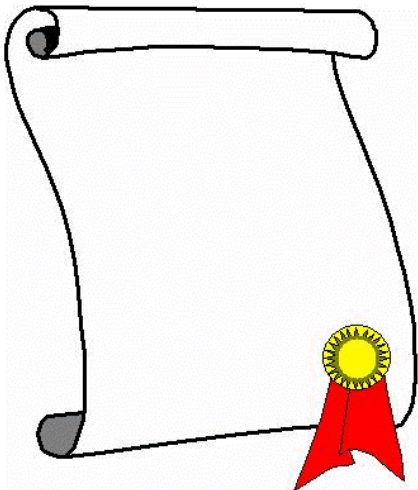


- environmental policy presents activities (mostly state), which set targets for the protection of the environment, defining the measures and the instruments to achieve them, and then apply these tools in practice
- EP is processed according to the specific conditions of individual countries, but there are common characteristic – notably with the formulation of objectives, respectively priorities and the means to achieve them

State environmental policy of the Czech Republic



- strategic document for the period 2012 - 2020
- defines a plan for implementation of effective environmental protection in the CR
- main objectives are:
 - to ensure a healthy and quality environment
 - contribute to efficient use of resources
 - minimize the negative impacts of human activities on the environment



State environmental policy of the Czech Republic



- focuses of the following thematic areas:
 - conservation and sustainable use of resources
 - protect and improve air quality
 - nature and landscape protection
 - safe environment – preventing the consequences of natural hazards (floods...)



Environmental policy instruments

- instruments for environmental policy are structured activities aimed at changing other activities in society towards environmental goals
- instruments of state to promote the objectives of the environment protection
- using tools of environmental policy in the individual countries is quite varied

Instrument mixes for environmental policy



- selected combination of tools applied in a particular economy or to solve a particular problem



Environmental policy instruments

- In the basic classification can be divided into:
 - **direct instruments** – quantitative regulation (standards, limits, quotas, prohibitions)
 - **instruments of indirect regulation** – especially environmental fees, taxes and many other market-based instruments

Classification of instruments

- Categorization OECD:
 - normative (administrative and legal) instruments
 - economic and market instruments
 - informative instruments
 - monitoring and preparing evaluations reports
 - voluntary instruments
 - strategic planning instruments
 - institutional instrument
 - research and development
 - environmental education, training and awareness



Classification of instruments

- **in terms of the moment of action:** preventive and corrective tools
- **in terms of method of stimulation:** instruments of negative and positive stimulation
- **in terms of rate action:**
 - I. Instruments of direct regulation
 - legal (normative) tools
 - II. Instruments of indirect regulation
 - economic instruments
 - III. Other instruments
 - informative tools, environmental education, training and awareness
 - voluntary instruments
 - institutional instruments, spatial planning
 - science and research
 - participation of the population, Agenda 21 etc.

Normative (administrative and legal) instruments

- are particularly imposing obligations in the form of various prohibitions, commands, and limitations, of which the recipients are obliged to abstain from something, something to tolerate or do something to protect the environment
- these obligations are set either by law, or may be imposed by law and within the normative or individual act of the competent authority for environmental protection

Classification of normative (administrative and legal) instruments

- **In terms of legal forms:**
 - legislation
 - general measures
 - administrative acts
 - actual instruction
 - enforcement measures
 - other acts
- **In terms of the effect:**
 - positive (authorization, permission)
 - negative (obligations, prohibitions)
- **In terms of content:**
 - imposing obligations (prohibitions, commands, restrictions)
 - administrative acts (permits, approvals, opinions, statements)
 - quality standards (limits)
 - categorization of protection objects
 - control, supervision
 - legal responsibility (liability, punitive tools)
 - enforcement etc.



Normative (administrative and legal) instruments

- **the main problem** – the authority which uses the tools mostly has only poor information about the amount of control costs of individual polluters
- **the positive side** – the administrative instruments can „act“ quite fast and avoid the costs that would occur if undertaking other, more time-consuming solutions
- **some of the instruments represent the first step toward improving property rights** – in the event that pollution limits are distributed to individual polluters

Economic and market instruments

- The set of economic instruments available for implementing an economic incentives approach to natural resource management and environmental protection spans a wide range of options and possibilities, and the potential permutations and combinations are virtually limitless.
- Any instrument that aims to induce a change in behavior of economic agents by internalizing environmental or depletion cost through a change in the incentive structure that these agents face (rather than mandating a standard or a technology) qualifies as an economic instrument.
- Different instruments have advantages over other instruments in different applications and circumstances, and severe limitations in others.

Economic and market instruments

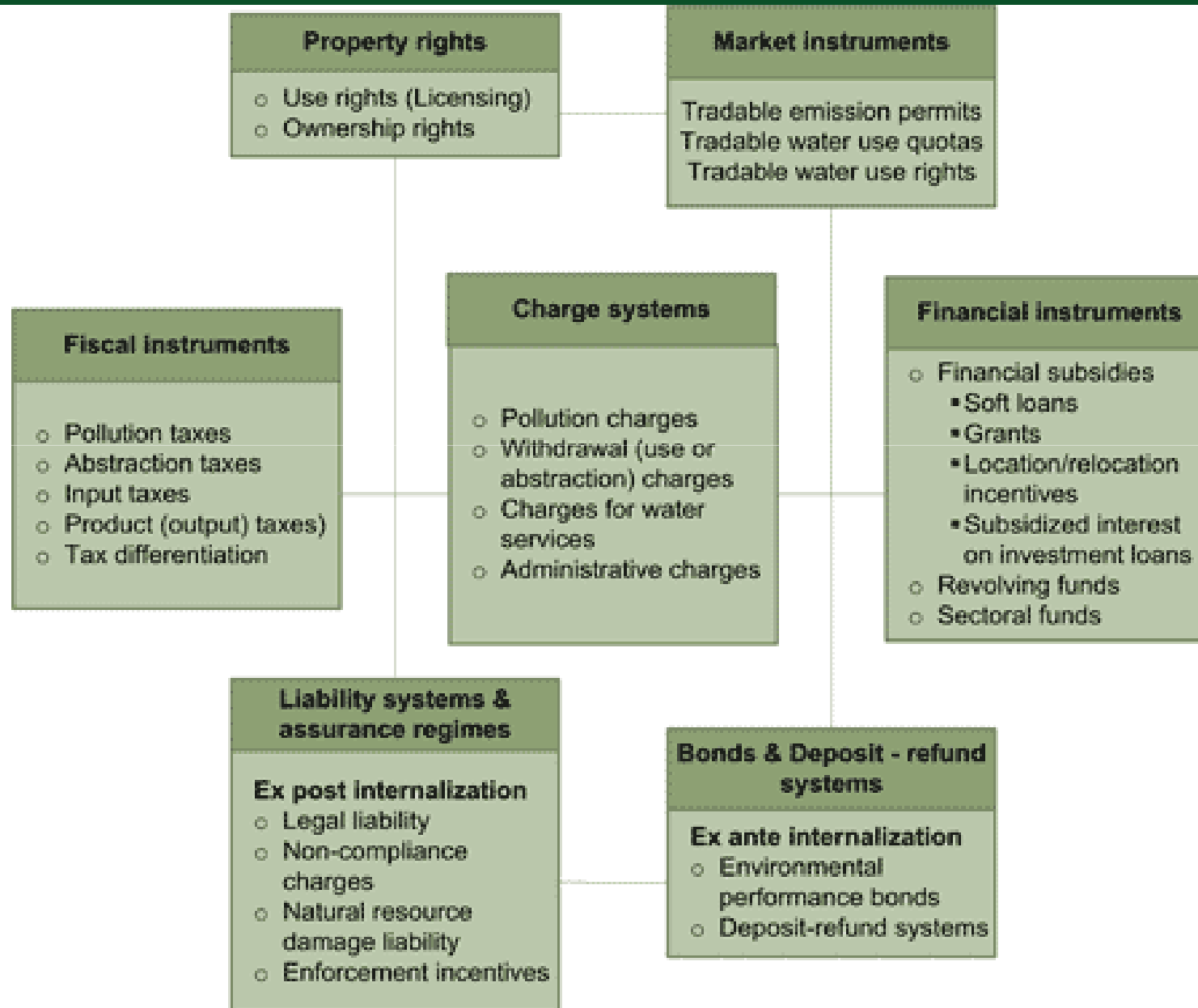
- **tools of negative incentives** – fees, penalties, respectively taxes
- **instruments of positive stimulation**, ie various forms of support
- **market-based instruments** should not be construed as narrowly defined tools in specific areas, but they need to be looked at from a broader perspective links the three pillars of sustainable development – economic, environmental and social spheres
- in this context, it is necessary to take into account in particular the issue of reform of harmful subsidies

Economic and market instruments

- Economic instruments may be classified into seven broad categories:
 - a) property rights
 - b) market creation
 - c) fiscal instruments
 - d) charge systems
 - e) financial instruments
 - f) liability instruments
 - g) performance bonds and deposit refund systems



Economic and market instruments



Green Tax Reform

- GTR is a special mix of environmental instruments
- on the one hand GTR reduces taxes on labor, on the other hand, it increases taxes on nature goods
- the result in public budgets should be zero
- many concrete models exist

Practical Examples of Economic Instrument

- Environmental Taxes and Charges in the Single Market. Communication from the Commission COM(97) 9 final
- OECD-EEA database of the environmental taxes and charges

<http://www2.oecd.org/ecoinst/queries/index.htm>

- (the Political Economy of Environmentally Related Taxes)

AUSTRALIA

New South Wales – Waste levy

Oil recycling levy

Aircraft noise levy

Ozone protection and synthetic greenhouse gas levy

AUSTRIA

Waste deposit levy

BELGIUM

Environmental taxes

Packaging charge

Flanders – Groundwater tax

Flanders – Tax on waste dumping and burning

Flanders – Manure tax

Flanders – Water pollution tax

Wallonia – Tax on waste collection

Wallonia – Tax on water withdrawals

Duty on nitrogen

Duty on pesticides

Duty on waste

Duty on sealed NiCd-batteries

Duty on carrier bags made of paper, plastics, etc.

Duty on tyres

Duty on polyvinyl chloride and phthalates

Duty on waste water

Excise duty on antibiotics and growth promoters

Tax on water quantity

FINLAND

Oil damage levy

Oil waste levy

Excise on disposable beverage containers

Tax on waste

FRANCE

General tax on polluting activities

Tax on groundwater extraction

Tax on tap water

Waste tax

Tax on the pollution of surface waters

NORWAY

Tax on final treatment of waste

Product tax on beverage containers

Basic tax on non-refillable beverage containers

Tax on lubricating oil

Tax on pesticides

Tax on trichloroethane and tetrachloroethane

SPAIN

Andalusia – Tax on emissions to air

Andalusia – Tax on radioactive waste

Andalusia – Tax on coastal wastewater discharge

Galicia – Tax on emissions to air

CANADA *(Examples only)*

British Columbia – Batteries tax
British Columbia – Logging tax
British Columbia – Mining tax
British Columbia – Tyres tax
British Columbia – Tax on lead acid batteries
Federal air conditioner tax
Manitoba – Non-deposit containers tax

Manitoba – Tyres tax
New Brunswick – Tyres tax
Nova Scotia – Tyres tax
Ontario – Alcoholic beverage container tax
Prince Edward Island – Tyres tax

CZECH REPUBLIC

Air pollution fee
Payments for production and import
of ozone depleting chemicals

DENMARK

Duty on raw materials
Duty on certain chlorinated solvents

Duty on certain retail containers

Duty on CFC, HFC, PFAC and SF₆

Duty on disposable tableware
Duty on electric bulbs and electric fuses

HUNGARY

Air pollution levy
Noise abatement levy
Product charge on packaging materials
Toxic waste levy
Product charge on tyres
Product charge on refrigerators and
refrigerants
Water pollution levy

ICELAND

Hazardous waste fee
Recycling charge

IRELAND

Plastic bag levy

ITALY

Aircraft noise taxes
Charge on air pollution
Tax on plastic bags

Tax on waste disposal

NETHERLANDS

Levy on water pollution

SWEDEN

Tax on waste
Natural gravel tax
Tax on pesticides and artificial fertilisers

SWITZERLAND

Tax for remediation of contaminated sites
Incentive tax on volatile organic compounds

UNITED KINGDOM

Aggregate levy
Landfill tax

UNITED STATES *(Examples only)*

Alabama – State severance tax
Alabama – Local severance taxes
Arkansas – Severance tax

Arkansas – Waste tyre fee
Federal – Ozone depletion tax
Indiana – Solid waste management fee
New Jersey – Landfill closure and contingency
tax
New Jersey – Public community water system
tax
New Jersey – Spill compensation and control
tax
New Jersey – Litter control tax
Utah – Mining severance tax

Informative instruments

- to support public administration, effective monitoring, evaluation and publication of environmental information





Monitoring and preparing evaluation reports

- an essential part of the action in the EU and integration into international structures is also a collection of information, regular transmission of the required information and reports (ie reporting), and exchange and regular evaluation



Voluntary instruments

- activities of business and other entities that aim to reduce the negative impacts of their activities on the environment, and these entities are introduced and implemented on the basis of their free (voluntary) decision and go beyond the requirements of the applicable legal standards

Voluntary instruments

VAA are such activities which

- **go beyond the current environmental law** or substitute for them
- **should lead to effective or cost-effective solutions** to the given environmental problems
- **belong predominantly to a combination of environmental policy instrument** (instrument mix)
- **can be used to alleviate the economic impact** of new environmental laws on heavily affected sectors
- are **based on the increased activity** of polluters
- **can lead to environmental improvement as well as to economic and other positive benefits** for the parties involved

Voluntary instruments

- **Voluntary regulatory tools:**

- Implementation of environmental management systems
- Ecodesign
- Ecolabeling ("Environmentally Friendly Product", "Environmentally Friendly Service")
- Monitoring and targeting leading to a reduction in energy consumption



- **Voluntary informative instruments:**

- Life Cycle Assessment (LCA)
- Assessment of cleaner production
- Environmental management accounting
- Environmental benchmarking
- Environmental reporting
- Self-declared environmental claims
- Type III environmental declaration



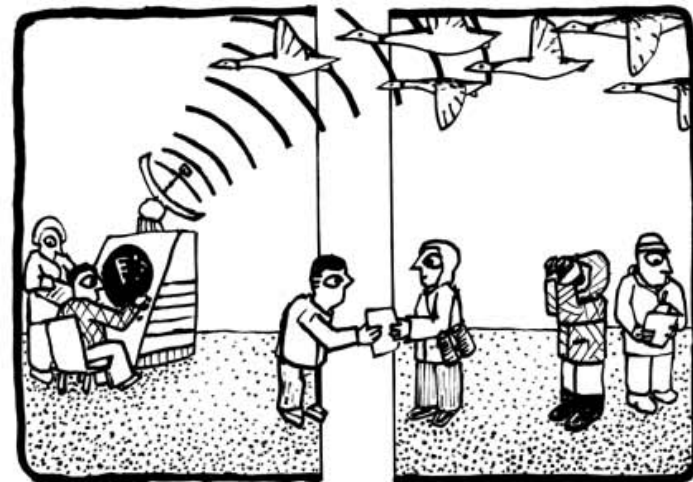
- **Voluntary educational tools:**

- Training aimed at protecting the environment



Strategic planning instruments

- include strategies, policies, concepts, programs and plans are a crucial part of the implementation of the National Environmental Policy
- a necessary condition for their effectiveness is the mutual coherence of the proposed objectives and is often an integral part of the Environmental impact assessment (EIA)



Institutional instruments

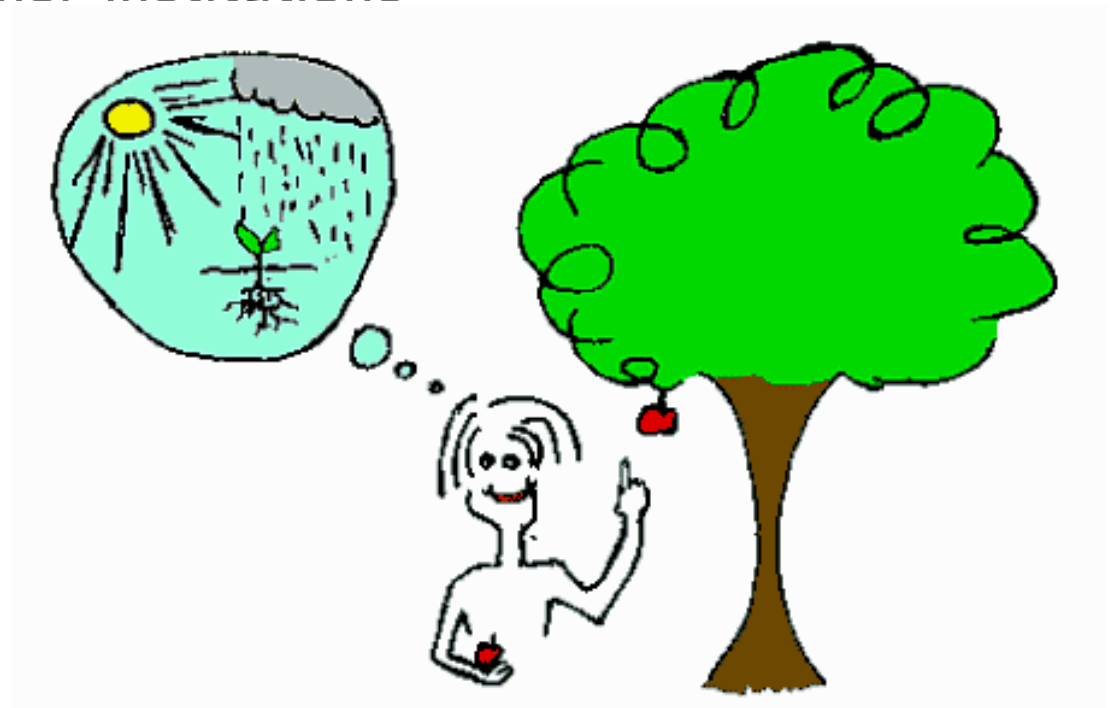
- governing the functioning of public administration institutions in the area of market surveillance, security, risk reduction, etc.

Research and development

- its outputs lead to a reduction in the negative impact of human activities on the environment, provide remediation and elimination of damage and monitor changes in environmental quality
- new technology is a significant potential for protecting and improving the environment and sustainable development

Environmental education, training and awareness


- is a long-term preventive tool in the environment, which is designed to reduce future damage to the environment caused by insufficient knowledge or ignorance, and the resulting incompetent decision-making, for example, at the level of companies, offices and other institutions



Environmental policy at microeconomic level

- environmental policy at the enterprise level
- how companies approach to environment
- how companies improve the environment
- which of the environmental policy instruments the companies use



- 
- choose one firm
 - describe environmental policy of this firm; how this firm protects the environment; which instruments are used
 - your opinion – what could be better
 - max. 1 page A4

ENVIRONMENTAL POLICY

The McCorry Group is committed to reducing the environmental impacts caused by its operations as a supplier and a producer of predominantly timber-based products for various industries.

We recognize our responsibility to the staff, the local community and to the wider community including customers and suppliers, to operate in a socially, environmentally conscious and responsible manner by:

- Working with others to ensure the development and operation of a sustainable forest industry;
- Commitment to responsible purchasing of products in line with Global Forestry Trade Network/Global Forestry Services (GFTN/GFS) requirements;
- Meeting or exceeding regulatory requirements and government policy;
- Supporting the Forest Stewardship Council's (FSC) principles and criteria and the certification of its supply sources by FSC approved certifiers. The Group through its subsidiary, McCorry & Co. Ltd. is a FSC accredited supplier.
- Promoting research and development (R&D) to improve yields and produce higher quality products by applying new technology. R&D initiatives are focused on reducing stress on forests and the environment;
- Dealing with suppliers who are environmentally conscious and responsible;
- Actively supporting suppliers in setting reforestation policy and getting credible certification;
- Conducting regular performance audits to ensure that environmental commitments have been met or exceeded
- Avoiding the purchase of products which are derived from conservation forest areas that could contain high conservation value plants and wildlife.

Revised on 10/03/07



Topics

- definition of environmental policy
- environmental policy objectives
- principles of environmental policy
- environmental policy in EU
- national environmental policy
- instruments of environmental policy
- environmental policy at microeconomic levels





Thank you for your attention...

...any questions?