What are environmental technologies?

Environmentally sound technologies protect the environment, are less polluting, use all resources in a more sustainable manner, recycle more of their wastes and products, and handle residual wastes in a more acceptable way than the technologies for which they were substitutes.

Environmentally sound technologies in the context of pollution are process and product technologies that generate low or no waste, for the prevention of pollution. They also cover end of the pipe technologies for treatment of pollution after it has been generated.

Environmentally sound technologies are not just individual technologies, but total systems which include know-how, procedures, goods and services, and equipment as well as organisational and managerial procedures.

(according to Chapter 34 of UN Agenda 21)

The European context

Environmental Technologies Action Plan

Environmental technologies are of the highest importance to meeting the environmental, economic and social challenges that Europe is facing. Contributing to technological innovation, they increase European competitiveness, unlock potential markets and create new, highly-skilled jobs. On 28 January 2004, the European Commission adopted the Environmental Technologies Action Plan (ETAP) with an aim to exploit their potential towards increasing the economic growth of Europe while improving both: the environment and competitiveness. Increasing research, development and demonstration of environmental technologies is one of the key action lines covered by ETAP.

The Competitiveness and Innovation Framework Programme

The Competitiveness and Innovation Framework Programme (CIP) brings together into a common framework specific Community support programmes and relevant parts of other Community programmes in areas critical to boosting European productivity, innovation, capacity and sustainable growth, whilst simultaneously addressing complementary environmental concerns. Especially innovation related to or using environmental technologies alongside with the sustainable use of resources should be promoted to sustain a strong European industrial base.

The Seventh Framework Programme for Research, Technological Development and Demonstration Activities

The EU needs to strengthen its position in world markets for environmental technologies. Such technologies contribute to sustainable consumption and production, help deliver sustainable growth while providing eco-efficient solutions to environmental problems at different scales and protect our cultural and natural heritage. Environmental requirements act as a stimulus for innovation and can provide business opportunities and higher competitiveness while at the same time ensuring a more sustainable future for next generations. Development and introduction of environmental technologies to the market and their subsequent application are also strongly correlated with socio-economic aspects e.g. in water resources management.

LIFE+

The LIFE+ Programme is aimed at the development, implementation monitoring, evaluation and communication of Community environment policy and legislation as a contribution to promoting sustainable development in the EU. LIFE+ will support in particular the implementation of the 6th Environmental Action Programme in such areas as: combating climate change, halting the decline in nature and bio-diversity, improving environment, health and the quality of life, promoting the sustainable use and management of natural resources and wastes and developing strategic approaches to policy development, implementation and information/awareness raising.

Working with partners to identify and solve environmental problems through science and technology...

ENVITECH-Net has an ambition to become a European network of research centres supporting the implementation of ETAP from the scientific perspective.

Goals:

- To consolidate Europe's R&D potential to further development and implementation of eco-innovations supporting the implementation of the Environmental Technology Action Plan (ETAP) on European, national and regional level,
- To identify the research needs and facilitate joint research supporting a "green" increase of the competitiveness of Europe's economy.
- Facilitate dissemination and exchange of knowledge and ideas on the scientific accomplishments in the area of environmental technologies and solutions.
- Promote the concept of eco-innovation

Thematically, the scope of ***ENVITECH-Net*** reflects the following areas identified as promising trends in environmental technologies development identified for ETAP purposes (*Developing an action plan for environmental technology COM(2003) 131 final*):

RESEARCH AREA 1: Water resources protection and management, including:

- improved water metering and leak detection systems and multi-sensors;
- decentralised distribution and sewage water systems;
- technologies for sustainable water recycling/reuse remote sensing,
- standards for measurement methods and data collection;
- mathematical models and civil works for flood prediction/prevention and impact mitigation,
- membrane based technologies,
- advanced oxidation, innovative separation and recycling technologies;
- tailor-made biofilms and advanced biological nutrient,
- removal processes; anaerobic treatments; sewage sludge technologies.

RESEARCH AREA 2: Global climate change prevention, including:

- Renewable Energy Sources (RES) such as wind, biomass, photovoltaics, wave or ocean energy,
- hydrogen production from fossil, renewable and other sources and its transport, storage and end-use
- fuel cell systems for clean decentralised energy supply;
- greenhouse gas-free energy options,
- technologies to sequester carbon dioxide from fossil fuels;
- near zero emission technologies.

RESEARCH AREA 3: Sustainable production and consumption, including:

- resource-based approaches to move us from quantity to quality, and away from mass produced single-use products towards value added services,
- nanoscience and nanotechnology;
- clean processes, products and materials accompanied by an emphasis on life cycle thinking,
- technologies for the treatment of waste, including hazardous waste, with recovery of materials.

RESEARCH AREA 4: Soil protection, including:

- biotechnology and life science technologies that improve our understanding of soil microbiology and microbial diversity, and are relevant to bioremediation of contaminated soils,
- technologies that fight land degradation, desertification, soil contamination and help protect vulnerable ecosystems,
- techniques for soil monitoring and the development of agri-environment indicators on soil erosion and degradation.

RESEARCH AREA 5: Cross-cutting research technologies, including:

- Information Communication Technologies (ICT) for better control of industrial production processes,
- Environment-related applications of biotechnology,
- Socio-economic research into developing policy tools.

To strengthen scientific collaboration and coherence of RTD actions, ***ENVITECH-Net*** facilitates exchange of experience, knowledge dissemination, identification of common problems, initiation, co-ordination and realisation of joint research and implementation efforts and personnel training among network members.

Member organisations may benefit from workshops, seminars, brokering events and conferences under a joint ***ENVITECH-Net*** initiative "Bank of environmental technology opportunities" aimed at supporting their participation in project consortia addressing research, development and demonstration of environmental technologies.

ENVITECH-Net has established collaboration with European Commission, DG Environment on the organisation of the *First European Forum on Eco-Innovation: "Financing Eco-Innovations"*. In Poland, the network serves as a scientific group to the Polish Platform of Environmental Technologies.

ENVITECH-Net is an open initiative. We welcome any new members from Poland as well as other countries, whose scope of RTD interest is reflected in the thematic focus of the network and who are interested in joint undertaking of RTD efforts.

ENVITECH-Net offers:

- interactive communication forum for scientists involved in R&D addressing environmental technologies
- promotion of members' research potential in ***ENVITECH-Net*** database,
- facilitated dissemination of information and experience exchange among members using ***ENVITECH-Net*** internet service,
- assistance in finding project partners from Central and Eastern European Countries,
- participation in events organised by the network under a common title *"Bank of Environmental Technology Opportunities"*.

For more details visit our web site or contact the ***ENVITECH-Net*** Co-ordination Office

Our mission is to integrate

applied research

on environmental technologies

with the **needs of industry**

to build a sustainable

future

ENVITECH Net

Co-ordination Office

Institute for Ecology of Industrial Areas
6 Kossutha Str.
PL-40844 Katowice, Poland
phone: +48.32.254.60.31 ext. 243, 269
fax: +48.32.254.17.17
e-mail: office@envitech-net.org
http://www.envitech-net.org

ENVITECH Net

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INTERNATIONAL THEMATIC SCIENTIFIC NETWORK FOR ENVIRONMENTAL TECHNOLOGIES