



Polish priorities in the environmental studies

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Introducing myself...

The Silesian University of Technology is **the biggest technical university in our region** and one of the biggest in Poland, currently educating about 30 000 students on 12 Faculties in 48 engineering disciplines. We provide graduates of engineering who are ready to work as managers of Silesian industry and of enterprises far beyond our region.

As an organization with a great research and teaching potential we exert a stimulating impact on the growth of Silesia and Zagłębie and significantly contribute to the creation of the economy based on knowledge management.



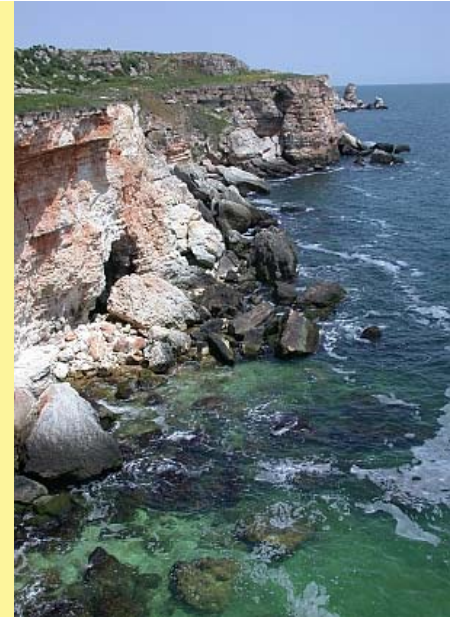
Polish activities in FP5

- Water protection and wastewater treatment
- biodiversity and landscape research
 - environment monitoring
 - sea coastline protection
 - urban transport
 - air protection
- natural disaster research
- data standardization



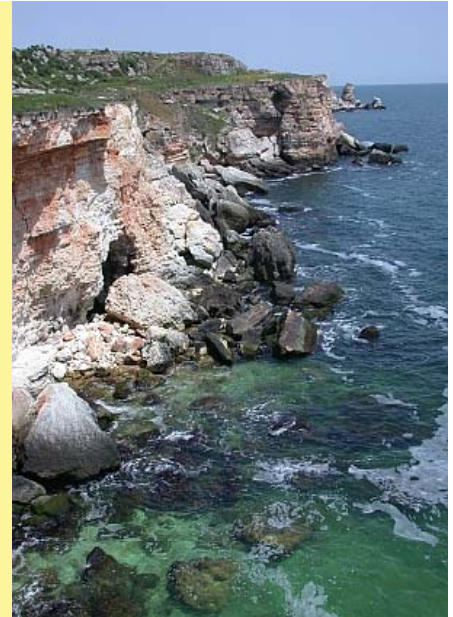
Polish activities in FP6

- **Biodiversity and ecosystems**
- Integrated assessment of drivers affecting ecosystems functioning and biodiversity and mitigation options
- Relationships between society, economy, biodiversity and habitats
- Assessing and forecasting changes in biodiversity, structure, function and dynamics of ecosystems and their services, **with emphasis on marine ecosystems functioning**



Polish activities in FP7 until now...

- Integrated resource management based on **land and land-use management**
- Non-destructive diagnosis technologies for the **safe conservation of movable cultural assets**
- Technologies and systems for **urban water cycle services**





The objective of the Environment Theme

To promote **sustainable management of the natural and human environment and its resources** by advancing our knowledge on the interactions between the biosphere, ecosystems and human activities, and **developing new technologies, tools and services**, in order to **address in an integrated way global environmental issues.**





The objective of the Environment Theme

Emphasis will be put on prediction of **climate, ecological, earth and marine** systems changes, on **tools and on technologies** for **monitoring, prevention and mitigation** of **environmental pressures and risks** including on health and for the sustainability of the **natural and man-made environment.**

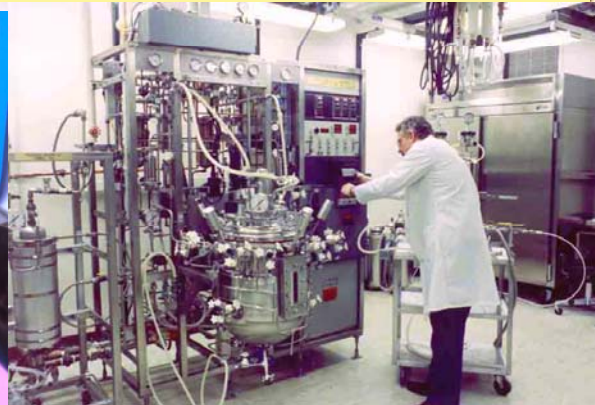




Priorities for Polish Environment

In order to preserve the environment at the stage of natural processes appearing and regenerating, the priorities are:

- evaluation of the level of environment degradation and natural resources usage
- environmental threats estimation
- finding possibilities of effective usage of natural resources and biodiversity preservation in the country.





Priorities for Polish Environment

In case of not-renewable resources priorities are: waste-free technologies introduction and the most effective exploitation methods.

GMO is also an important issue in a wide range of biotechnologies, so the research in this field will be also a priority.





Production of
biofarmaceuticals,
biodegradable polymers
and biomaterials

Farmaceuticals and
their impact to the
environment and
human health –
multidisciplinary
studies

Bioprocesses
useful
in energy
production

**Priorities in the
environmental
studies**

Biocatalysts
and metabolites

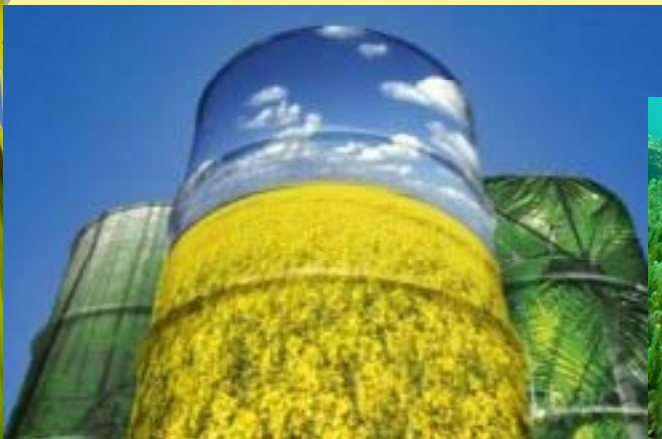
Environmental
biomonitoring using the
newest techniques

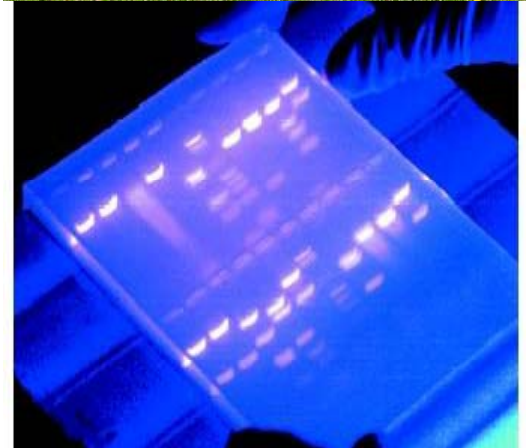
The newest techniques in
wastes and wastewater
treatment

Biofilms –
positive and
negative
influence



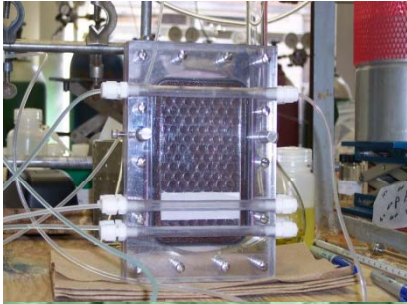
- Unique and improved biocatalysts and metabolites production.
- Production of biofarmaceuticals, biodegradable polymers and biomaterials.
- Bioprocesses useful in energy production based on the natural products (plants or algae biomass, wastes or by-products).





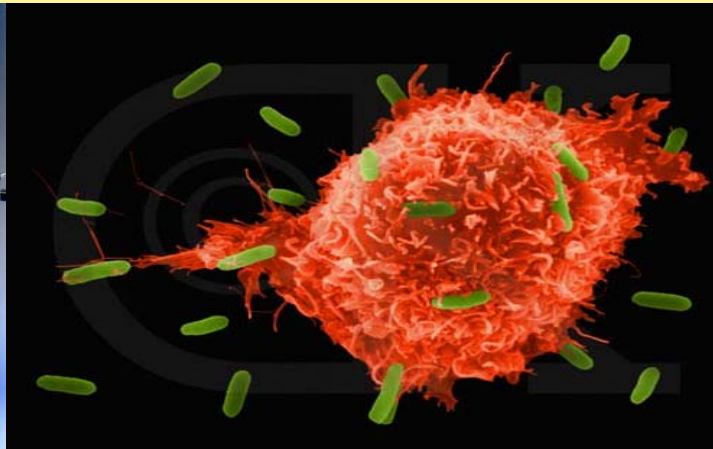
➤ Methods and techniques of environmental biomonitoring, based on the newest technologies, together with the limitation and elimination of negative effects of antropopression.

➤ Biofilms and their positive and negative influence on the environment and health.



➤ Multidisciplinary research on interactions, fate and effects of environmental risk factors (such as pharmaceuticals) on the environment and human health.

➤ The newest techniques and processes in wastes and wastewater treatment (membrane reactors, Anammox process, PAO, GAO organisms).



Conclusions:

- 1. The research regarding the environment in Poland is oriented towards different problems,
- 2. The scientific equipment of the Polish institutions is on the satisfactory level,
- 3. For finding a Polish partner for cooperation the Polish National Contact Point is the best place but still the personal contacts are irreplaceable,
- 4. The specialists in Poland are not especially active in preparing their own proposals for the European Commission (Programme Committee) but they observe the proposals prepared in Bruxelles and they are convinced that they find interesting topics allowing them to participate in the Programme,
- 5. The conclusion from point 4 - the environmental priorities in Poland are similar to the European priorities



*Thank you
for your
attention*

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