

*Norwegian Institute for Air Research*

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**Ph.D. Damian Panasiuk**

***Socio-economic analysis  
of environmental policies***



*Seminar „10 years of NILU Polska” – Katowice, 20 October 2011*

## **NILU Polska – socio-economic analysis**

- Cost-benefit analysis for scenarios of heavy metals emission reduction to air, water and soil;
- Monitoring of economic strategies implementation;
- Scenarios of water reservoir management;
- Economic valuation of environment.



*Katowice, 20.10.2011*

## Cost-benefit analysis

### MERCYMS

*„An integrated approach to assess the mercury cycling in the Mediterranean basin” (2002-2005),  
EU 5th Framework Programme*



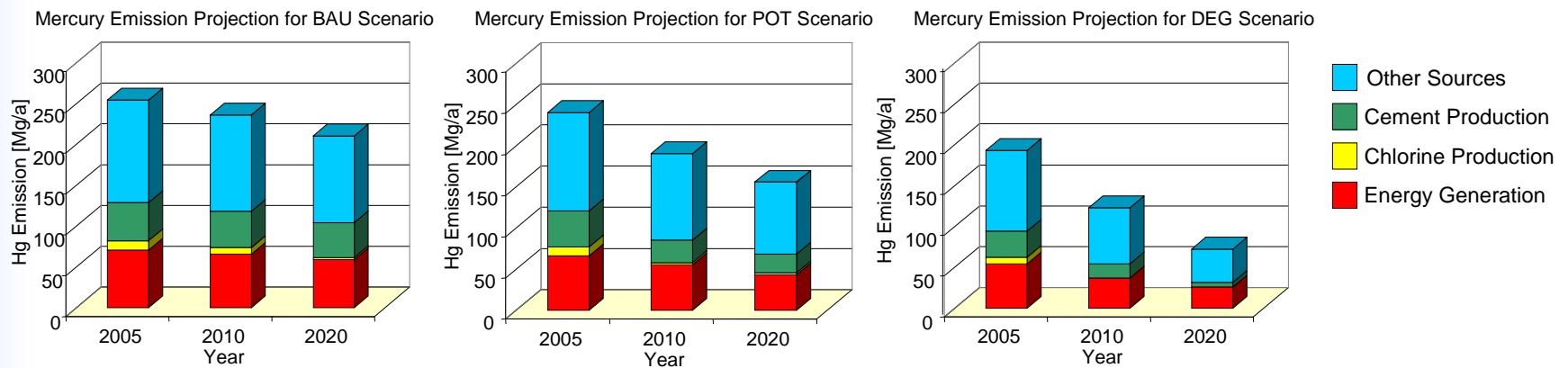
- coordinator N.Pirrone (IIA-CNR),  
NILU/ NILU Polska, IVL, Jozef Stefan Institute, IETU etc.

→ Preparation of integrated model for mercury cycling in the  
Mediterranean basin



## Participation of NILU/ NILU Polska:

- preparation of database on socio-economic parameters (activity data for base year and their projections),
- preparation of assumptions for scenarios of mercury emission in Europe and Mediterranean countries to year 2020,
- assessment of costs for scenarios implementation in European countries in years 2000-2010.



*Katowice, 20.10.2011*

# Cost-benefit analysis

## **DROPS**

*„Development of macro and sectoral economic models aiming to evaluate the role of public health externalities on society” (2005-2008),  
EU 6th Framework Programme*

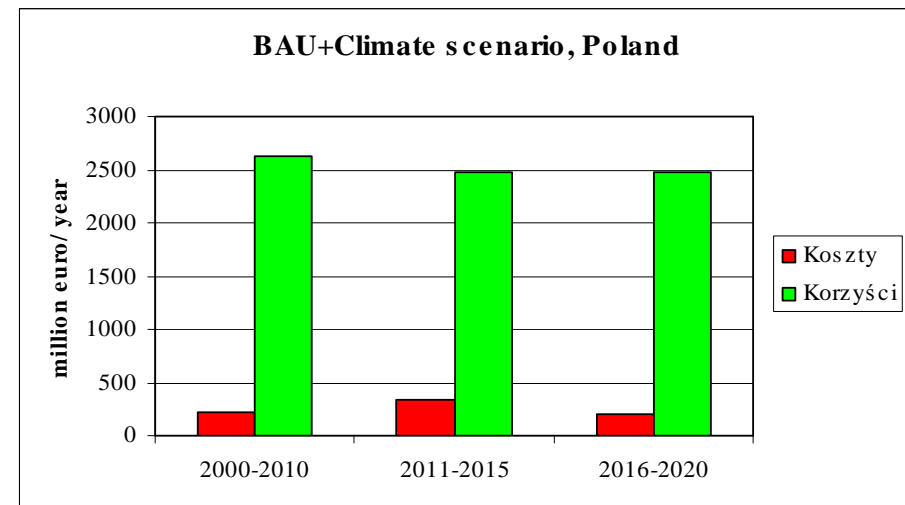


- coordinator prof. Jozef Pacyna (NILU), University of Stuttgart, Charles University of Prague, Medical University of Silesia, IETU, NILU Polska, Cambridge Econometrics

→ Analysis of health measures efficiency concerning heavy metals and POPs

## Participation of NILU Polska:

- Preparation of assumptions for scenarios of heavy metals, dioxins and PCBs emissions to air in Europe for years 2010 and 2020,
- preparation of database on costs of emission reduction methods,
- calculation of costs for one scenario implementation, participation in cost-benefit analysis for case studies,
- Calculation of non-health benefits associated with increase of yield for crops sensitive to ozone in Europe.



# Cost-benefit analysis

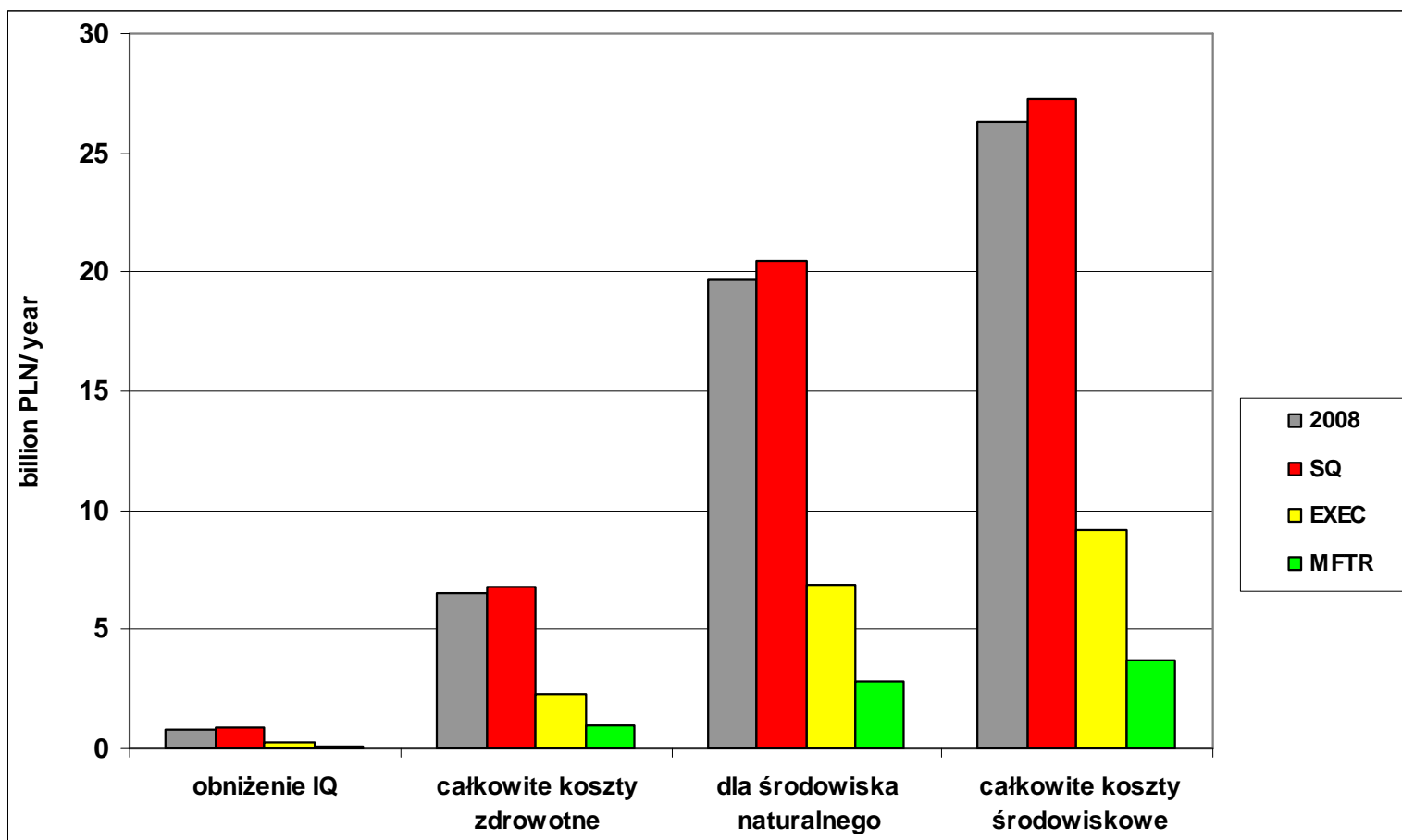
## MERCPOL

*„Cost-benefit analysis for human health and environment related to mercury emission reduction in Poland” (2009-2010), GIOŚ/ NFOŚiGW*



- cost-benefit analysis for Status Quo, EXEC and MFTR scenarios,
- recommendations for decision makers – choice of cost-effective strategies of mercury emission.

## Environmental costs of mercury emission in Poland



# Monitoring for strategies implementation

## ASPEN



Association ASPEN

*„A Study to Assess Methodologies for Monitoring of Aspects of a Post-2010 EU Strategy of Growth and Jobs that Includes the Goal of a Transition to a Low-carbon Economy” (2009-2010), EC order*

- coordinator M.Woodfield (AEA Technology),  
Ecologic, NILU/ NILU Polska, VITO

→ Assessment of methodology for EU Post-Lisbon strategy implementation

*Katowice, 20.10.2011*

Preparation of case study for Poland for testing of monitoring parameters for transition to a low-carbon economy:

- analysis of subsidies for renewable energy sources,
- analysis of subsidies for fossil fuels,
- assesment of input and output parameters of Energy Policy of Poland until 2030,
- preparation of recommendations for the Polish authorities for transition to a low-carbon economy (not based on carbon combustion).



# Scenarios, valuation of environment

## ZIZOZAP



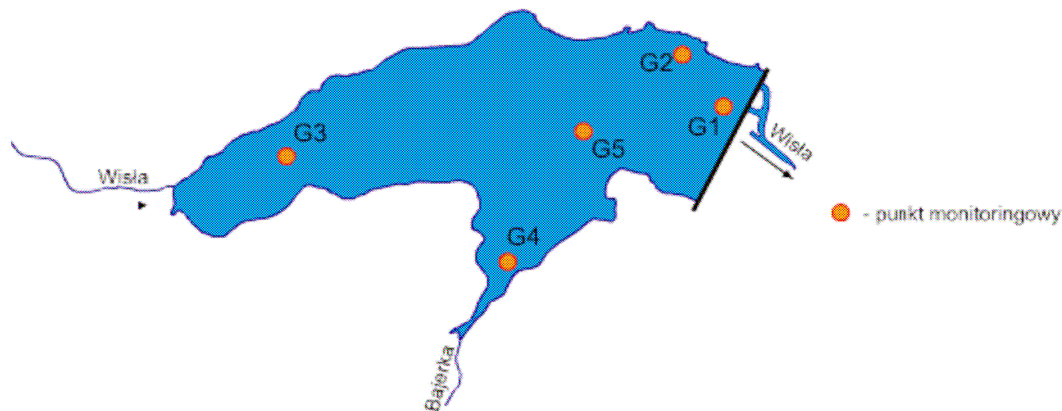
*„Integrated system supporting management and protection of water reservoir” (2010-2014),  
Operating Programme Innovative Economy*

- coordinator prof. P.Migula (University of Silesia),  
IETU, IPIŚ PAN, Cracow University of Technology,  
NILU Polska

→ Management in reservoir catchment and socio-economic effects as elements of model and integrated system supporting management of water reservoir

## Participation of NILU Polska:

- analysis of management and socio-economical effects in reservoir catchment,
- preparation of water reservoir scenarios,
- analysis of costs for reservoir water treatment and WTP Goczałkowice modernization effects,
- valuation of Goczałkowice reservoir ecological services.



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*Thank you for attention*



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