

INTERNATIONAL WORKSHOP

SOIL PROTECTION STRATEGY

Needs and Approaches for Policy Support

Institute of Soil Science and Plant Cultivation (IUNG) Puławy, Poland

09-11 March 2006

**TOWARDS SUSTAINABLE SOIL PROTECTION IN
POLAND:**

National vs. EU frameworks and recommendations

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ACKNOWLEDGEMENT

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- *State Institute of Geology (PIG) -Warsaw*

OUTLINE

□ INTRO

New National Ecological Policy vs. Soil Protection in Poland

□ SOIL PROTECTION

EU framework (directives & actions)

Polish framework (legal acts & actions)

□ NATIONAL PROGRAM FOR POST INDUSTRIAL AREAS

□ CONCLUDING REMARKS & RECOMMENDATION

TOWARDS SUSTAINABLE SOIL/LAND PROTECTION (New National Ecological Policy)

POLISH CONSTITUTION

Poland protects national heritage and assures protection of environment by following the sustainable development principle

STRATEGIC GOALS OF ECOLOGICAL POLICY

- effective management of natural resources - sustainable development principle
- counteraction/prevention of impacts to environment causing its degradation
- restoration of environment

TOWARDS SUSTAINABLE SOIL/LAND PROTECTION (New National Ecological Policy)

•the prevention principle

- prevention of contamination & other arduousness
- recycling (closing materials & resources cycle, reuse of energy, water & resources from wastewater & solid waste, waste utilisation
- integrated neutralisation of contaminants and hazards

•the foresight principle

solving problems already at established reasonable probability of occurrence

•the BAT principle (Best Available Technology)

•the subsidiary principle

decentralised decisions related to environmental protection („closer to citizens")

•the efficiency principle

costs minimisation & maximisation of effects of environmental protection

EU SOIL PROTECTION RELATED DIRECTIVES



EU ACTIONS TOWARDS SOIL/LAND PROTECTION

❑ Communication "Towards a Thematic Strategy for Soil Protection" (2002)
first step to develop EU policy to protect soils against degradation, erosion & pollution

✓ short term (during 2003) initiatives

- 4th daughter Directive under the Air Quality Framework Directive (focus on heavy metals)
- mining waste (excluded from the Waste Framework Directive)
- revision of the Sewage Sludge Directive
- Directive on compost and other bio waste

✓ longer term activities

- Communication on "Planning and the Environment: the territorial dimension", to address rational land-use planning

✓ ensuring full implementation of existing legislation on water & air pollution

EU ACTIONS TOWARDS SOIL/LAND PROTECTION

✓ Communication on Thematic Soil Strategy

- announced as comprehensive approach of soil protection issues:

environmental law & policy

common agricultural policy

structural funds, transport

R&D

❑ VI-th Environmental Action Program, and its provision on soil issues

❑ Directive on environmental liability (draft - in progress)

Article 2(5): "damage" - *measurable adverse change in a natural resource and/or measurable impairment of a natural resource service, which may occur directly or indirectly and which is caused by any of the activities covered by this Directive*

Article 2(8): "natural resource" means biodiversity, water and soil, including subsoil

POLISH SOIL PROTECTION RELATED ACTS



DECREE ON SOIL & LAND QUALITY STANDARDS

- ❑ Defines when soil/land is considered as contaminated
- ❑ Based on soil standards for actual & planned land's functions

A

- (i) land included in areas protected under the *Water Law*,
- (ii) areas protected under the *Law on Nature Protection*
(if actual contamination not considered hazardous for humans & environment)

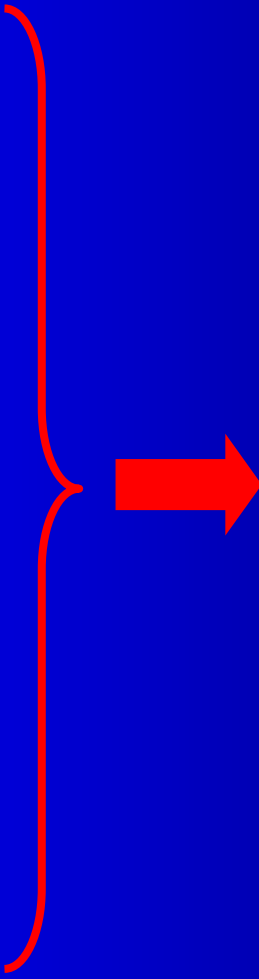
B

crop- & grasslands, forestlands, barren & urban lands

C

industrial, mining & communication areas

PL ACTIONS: MAIN SOIL PROTECTION RELATED HAZARDS

- Erosion
 - Depletion of SOM
 - Soil contamination
 - point
 - diffused
 - Sealing of soil
 - Soil compaction
 - Depletion of biodiversity
 - Soil salinity
 - Flooding (& land slide)
- 

**Towards Thematic Soil
Protection Strategy in Poland:**
(draft document to be approved in 2006)

**task groups related to these
hazards**

PL ACTIONS: 2-nd ECOLOGICAL POLICY OF POLAND

□ Chapter 2.4: Soil Protection (current status & goals until 2010)

- education of soil/land users on soil overuse & of soil degradation irreversibility
- organisation of structures for protection & efficient soil/land use
- agricultural production according to principles of ecological farming
- soil monitoring, incl. physical-chemical-biological changes & negative effects (erosion, urbanisation, industry, emissions, waste, wastewater, etc.)
- introducing principles & procedures to limit soil/land overuse (e.g. through changes of direction of use), to determine minimum action required (e.g. risk analysis procedures)
- risk identification & remediation/reclamation at contaminated areas
- redevelopment of postindustrial areas (towards revitalisation)

PL ACTIONS: NATIONAL PROGRAM FOR POSTINDUSTRIAL AREAS

(approved by the Polish government in 2004)

postindustrial areas ↔ brownfields

„degraded, abandoned or not fully used areas previously designated for industrial/business activities that has been completed”

NATIONAL PROGRAM FOR POSTINDUSTRIAL AREAS

❑ remediation (sanitation)

soil clean-up using physical/chemical/biological methods

❑ reclamation (re-cultivation)

actions directed to return natural earth surface/to reach quality of soil according to standards to create/return useful/natural values for deteriorated land

❑ revitalization (re-development)

land reclamation followed by renewed development (remediation, change & modernisation of earth surface) to return the status of land allowing for fulfilling useful functions

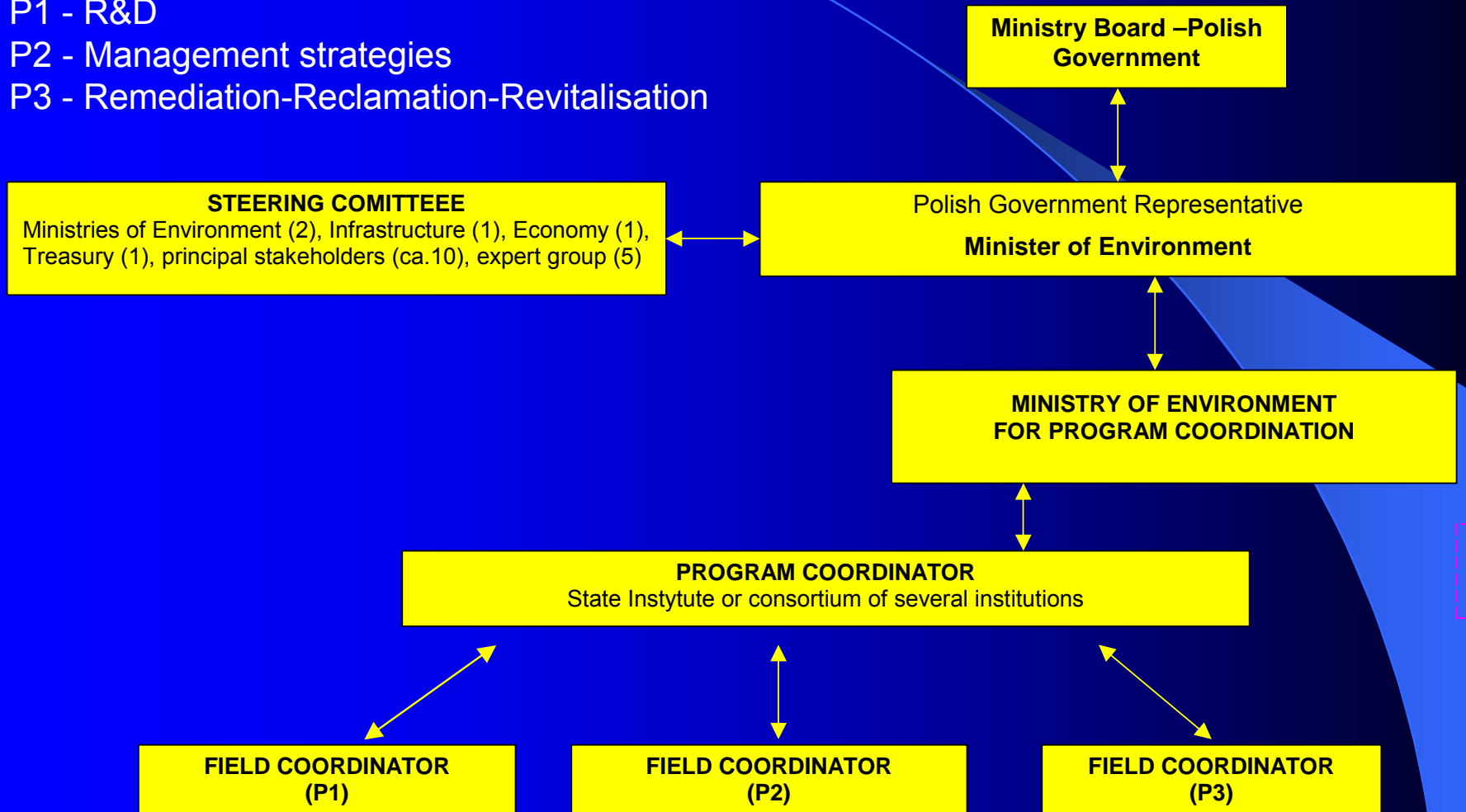
NATIONAL PROGRAM FOR POSTINDUSTRIAL AREAS: ORGANISATION

Fields:

P1 - R&D

P2 - Management strategies

P3 - Remediation-Reclamation-Revitalisation



PK

SYSTEM MANAGEMENT FOR POSTINDUSTRIAL AREAS

INVENTORY OF POSTINDUSTRIAL AREAS

LIST OF POSTINDUSTRIAL AREAS

PRELIMINARY CHARACTERIZATION

LIST OF CHARACTERIZED POSTINDUSTRIAL AREAS

Phase I

EVALUATION (I)
OF POSTINDUSTRIAL AREAS

CRITERION
(K1)

land reclamation required

land reclamation not excluded

land reclamation not necessary

EVALUATION (II)

K1 + K2 + K3

RANKING LIST OF POSTINDUSTRIAL AREAS
RECOMMENDED FOR RECLAMATION

Phase II

branch list

location list

DETERMINING
DIRECTIONS OF
FURTHER USE OF
POSTINDUSTRIAL
AREAS

MANAGEMENT
STRATEGIES OF
POSTINDUSTRIAL
AREAS

TECHNICAL-EKONOMICAL
POSSIBILITIES

FINAL
LIST

NATIONAL POLICY

LEGAL
FRAMEWORK

Phase III

RECLAMATION/REWITALISATION
OF POSTINDUSTRIAL AREAS

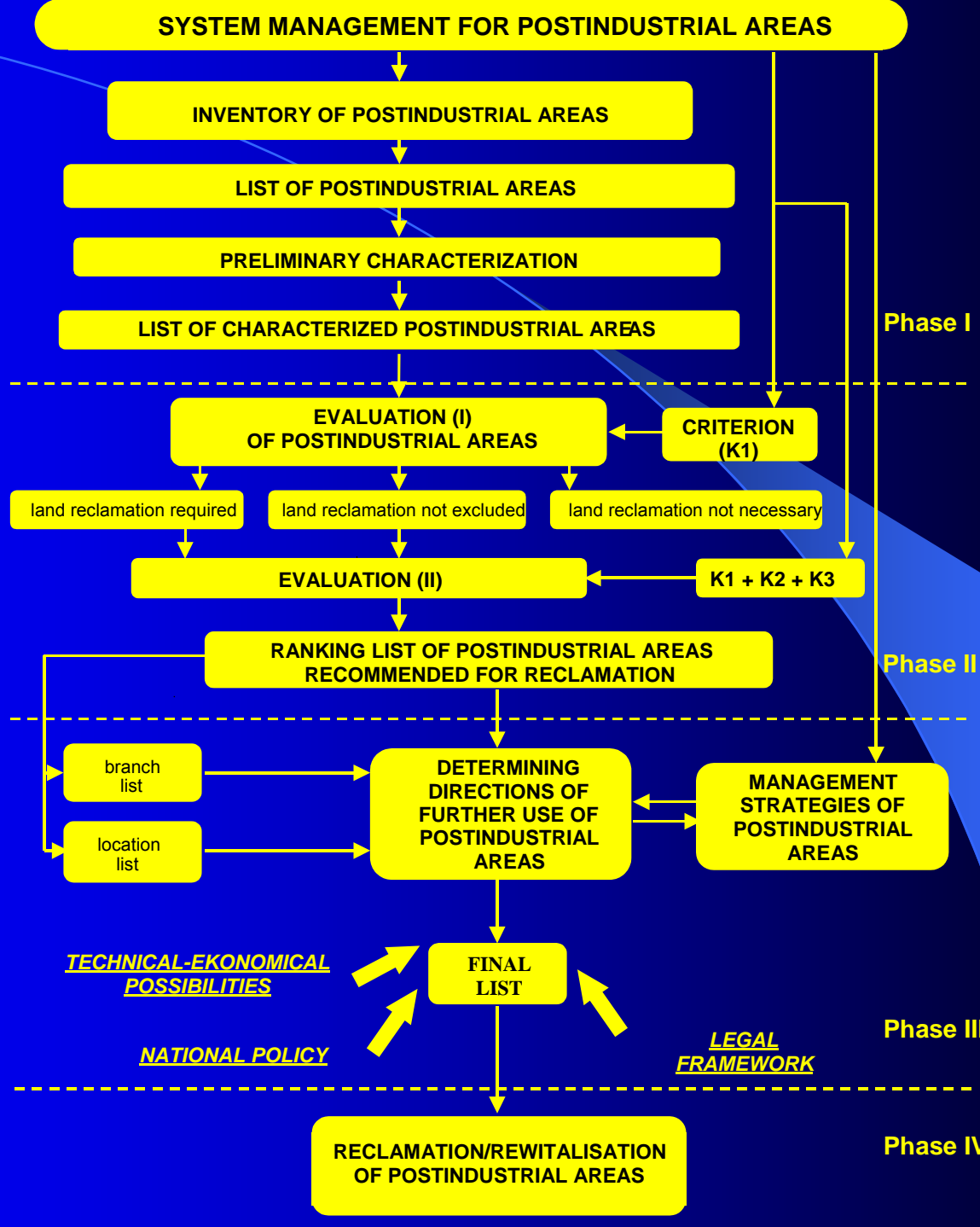
Phase IV

CRITERIA:

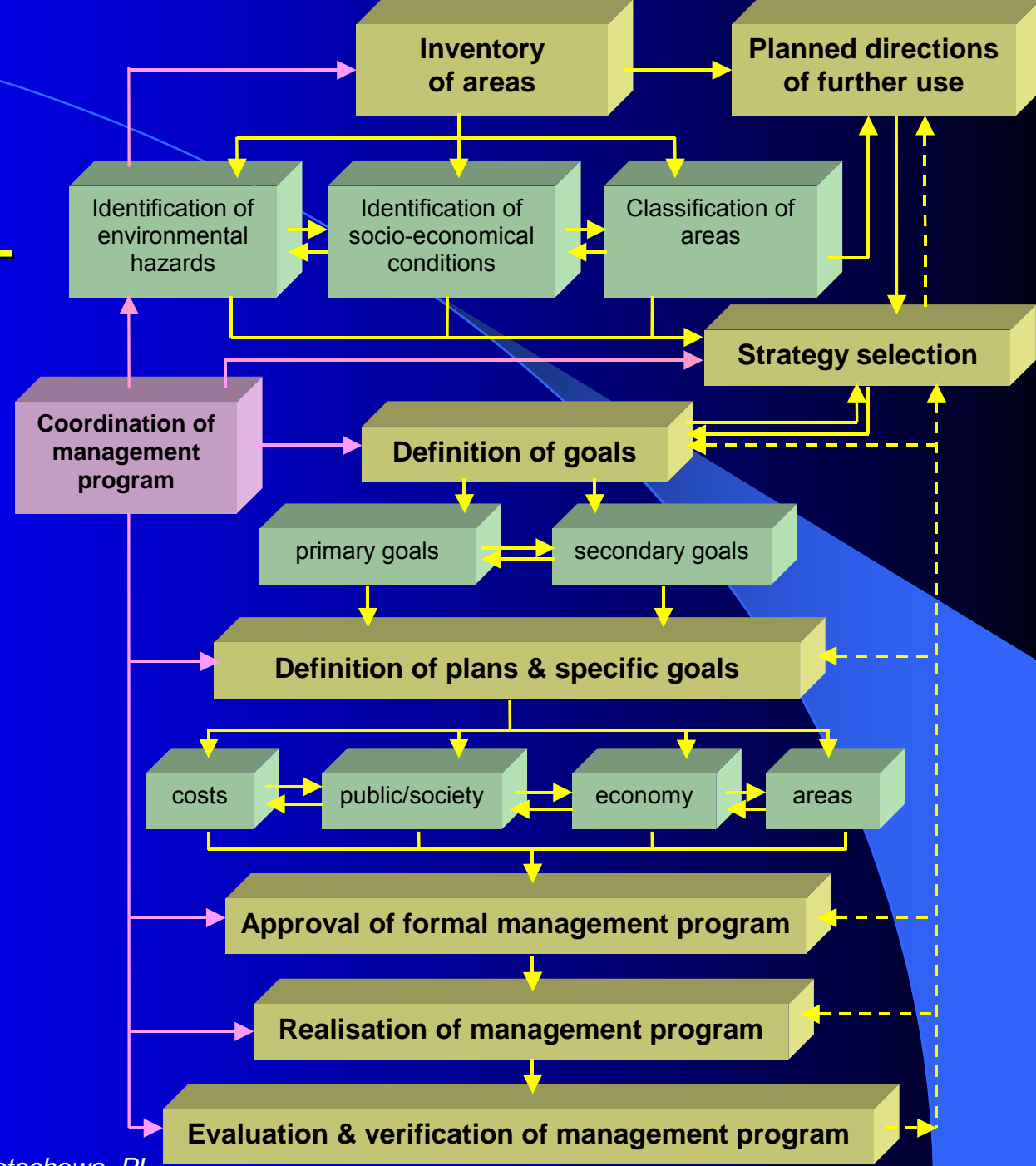
K1 - environmental

K2 - economical

K3 - social



INTEGRATED MANAGEMENT STRATEGY FOR POSTINDUSTRIAL AREAS



CONCLUDING REMARKS – RECOMMENDATION (I)

- ❑ Soil use determined more by time-dependent socio-political issues than by soil quality issues

- ❑ New developments offer possibilities to integrate soil quality management in current economic life, public awareness & appreciation

- ❑ The EU & national policies should lead sustainable soil protection strategy & include
 - identification of risks (ecological & human risk assessments)
 - remediation concepts & risk-based land management

CONCLUDING REMARKS – RECOMMENDATION (II)

- ❑ The sustainable strategy to assure best possible soil quality through
 - effective management
 - protection of natural/cultural values & productivity
 - reduction of changes of natural landscape
 - maintaining soil/land quality standards, or remediate until reached

- ❑ The *National Program for Postindustrial Areas* approved by the Polish government - frame for integrated management strategies to be developed to reclaim/revitalise contaminated/degraded abandoned areas



Thank you for your attention

