



TAKING
COOPERATION
FORWARD

 EU Pavilion in COP24, Katowice, 8 December 2018

 **Interreg contribution to climate change adaptation
– project CIRCUSE and LUMAT**

 LUMAT, CIRCUSE | IETU Institute for Ecology of Industrial Areas, Poland | Anna Starzewska-Sikorska

CIRCUSE: Circular flow land use management (2010 - 2013)

LUMAT: Implementation of Sustainable Land Use in Integrated Environmental Management of Functional Urban Areas (2016-2019)



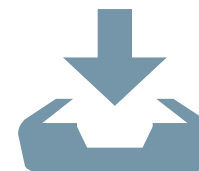
- excessive land consumption,
- urban sprawl,
- soil sealing,
- brownfields,
- increase of urbanized areas not proportionally to population growth

Among negative consequences the **diminishing of soil environmental services capacity resulting in global climate problems** was indicated.

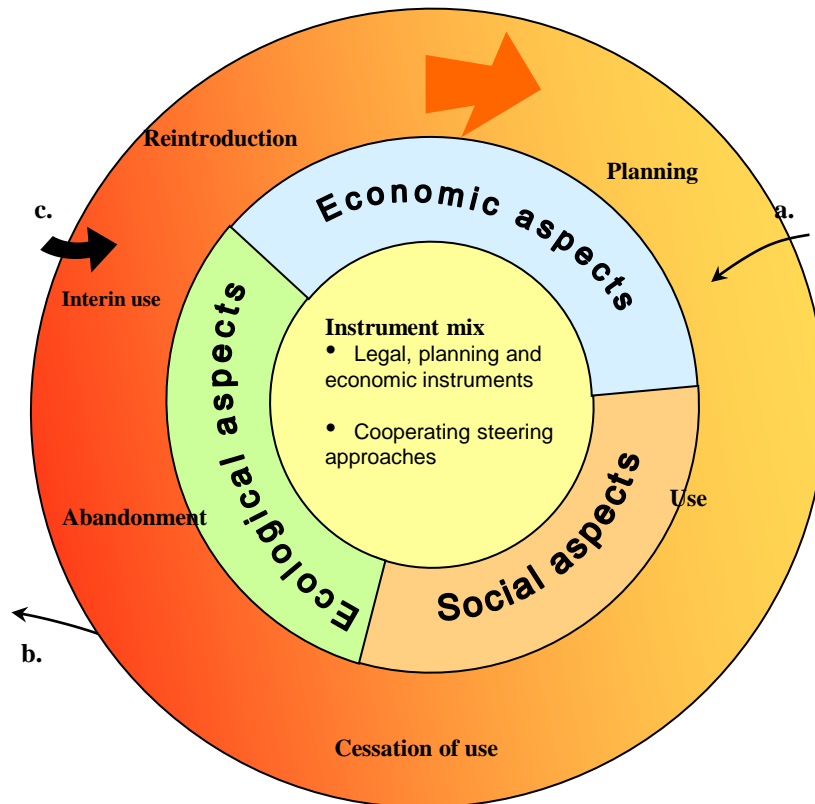


ENVIRONMENTAL MANAGEMENT METHODS USED IN LUMAT & CIRCUSE

- **Ecosystem services assessment** for supporting decisions in integrated land use management
- **Integrated site compensation** in relation to brownfields and degraded areas
- **Industrial symbiosis** with environmental criteria in business co-operation
- **Circular land use management**



Life cycle of land (source: Research group „Flache im Kreis”, 2005)



The CircUse process is visualized in this figure, showing land use as a cycle with three major phases:

- a. Zoning new “Greenfields”
- b. Rejection of land not suitable for subsequent use
- c. Activating land potentials brownfields, empty buildings gaps between buildings and vacant land urban renewal and redevelopment sites sites undergoing planning

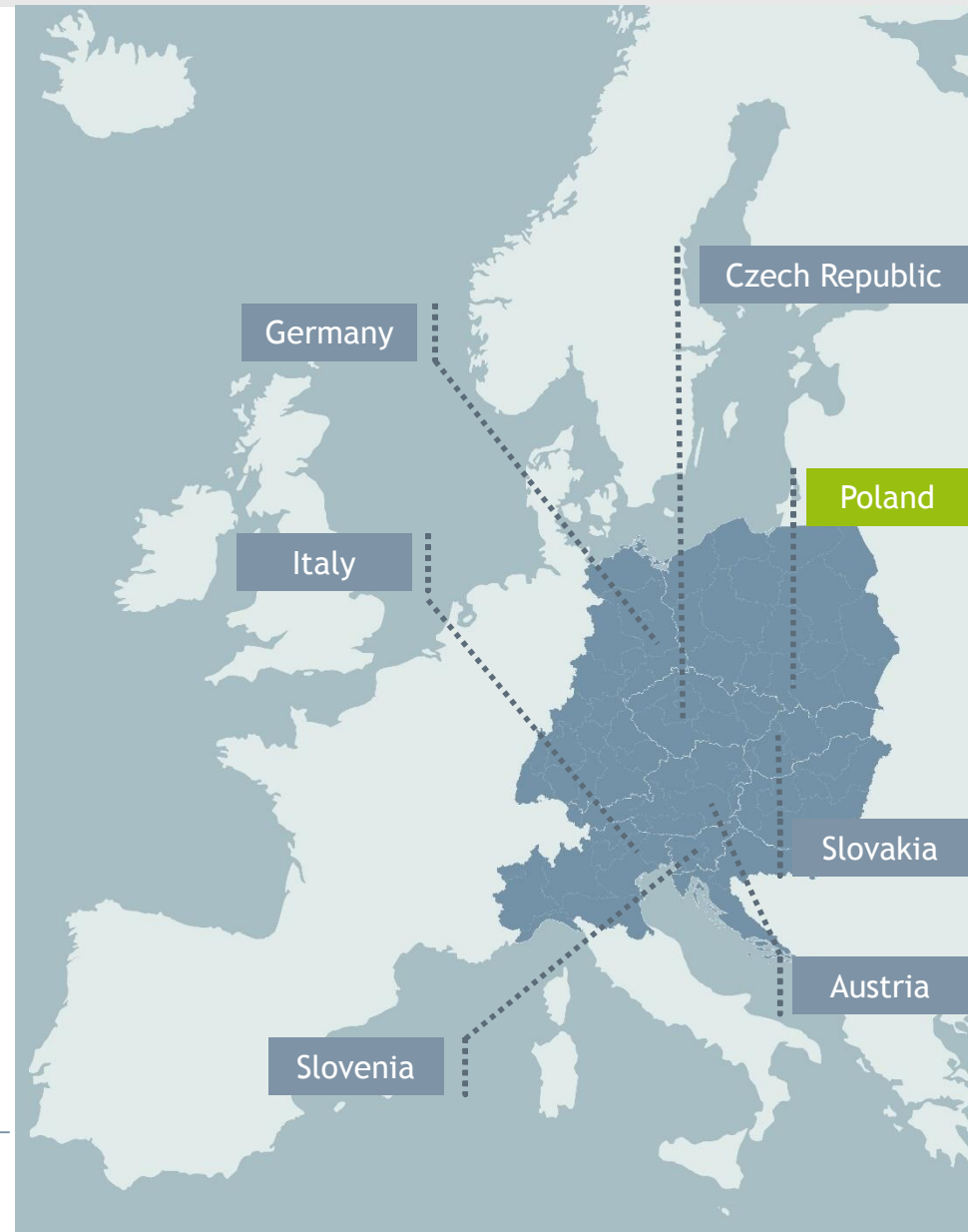
The end and the beginning of each phase are crucial decision points.

PIEKARY ŚLĄSKIE INVESTMENT IN CIRCUSE



LUMAT

Implementation of Sustainable
Land Use in Integrated
Environmental Management of
Functional Urban Areas



TECHNICAL ACTIONS IN ACTION PLANS

- Program of re-using post-mining sites (Austria),
- Program of brownfields revitalization (Czech Republic),
- Program of integrated site compensation (Germany),
- FUAs' environmental and territorial issues management model as contribution to metropolitan strategic planning and metropolitan general spatial planning (Italy),
- Concept of green and blue infrastructure strengthening and development (Poland),
- Integrated, sustainable management concept of functional city area in the process of spatial planning with an emphasis on integrated management of environmental protection and integrated land use (Slovakia),
- Program of business development on degraded areas as inner city development (Slovenia).



PILOT ACTIONS

- „Garden show” (Austria),
- „Priority map” (Czech Republic),
- „Pilot program of site compensation” (Germany),
- „Intermunicipal management model with implementation of SDSS” (Italy),
- Investment of brownfield regeneration in city centre (Poland),
- Investment of „green brownfield” regeneration (Slovakia),
- Industrial symbiosis model application (Slovenia).



POLAND: investment including regeneration of the post-zinc wastes dumping site in the middle of Ruda Śląska city with application of the phytostabilization technology. The site will be transformed into an area of a sports and recreation function.



PILOT ACTION IN RUDA ŚLĄSKA



PILOT ACTION IN RUDA ŚLĄSKA



SERVICES PROVIDED BY ECOSYSTEMS

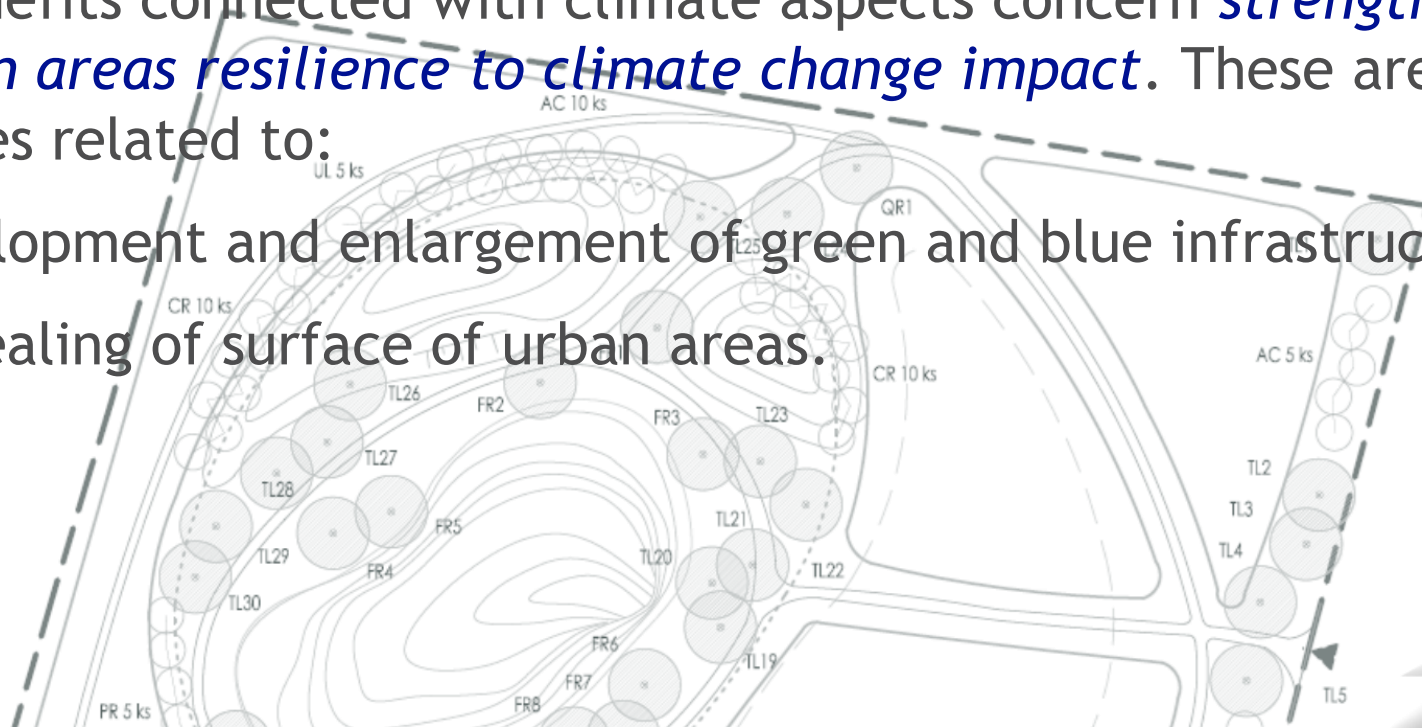
- Provisioning** - food, clean air, fuel, timber,
- Regulating** - climate, flooding
- Cultural** - aesthetic and cognitive inputs, health, recreation and tourism
- Supporting** - water cycling, soil formation,



Methodology of ecosystem services assessment applied in LUMAT is concentrated on descriptive way of defining benefits gained from the environment as a result of action plans implementation.

The benefits connected with climate aspects concern *strengthening of urban areas resilience to climate change impact*. These are activities related to:

- development and enlargement of green and blue infrastructure
- de-sealing of surface of urban areas.



Source: Trnava City





ANNA STARZEWSKA-SIKORSKA
Institute for Ecology of Industrial Areas



+48 32 25 46 031 ext. 258



www.ietu.pl



a.starzewska-sikorska@ietu.pl



facebook.com/lumatproject/



linkedin.com/groups/12019206



twitter.com/Lumat_project



www.interreg-central.eu/acronym



LUMAT Project

