PROJECT KICK-OFF CONFERENCE
Polish-Norwegian Research Programme
Warsaw - 23 April 2014

Title: **Sustainable water strategy by means of tight-knit approach to water cycle in river catchment**

Acronym: **CRIS**

Consortium:

Institute for Ecology of Industrial Areas, Katowice - Project Promoter *(Instytut Ekologii Terenów Uprzemysłowionych w Katowicach)*

Institute of Environmental Protection – National Research Institute *(Instytut Ochrony Środowiska – Państwowy Instytut Badawczy)*

Norwegian Institute for Water Research *(Norsk institutt for vannforskning)*

Project duration: **September 2013 – April 2016**

Project budget: **3 949 717 PLN**

POLISH-NORWEGIAN RESEARCH PROGRAMME

norway grants

Narodowe Centrum Badań i Rozwoju

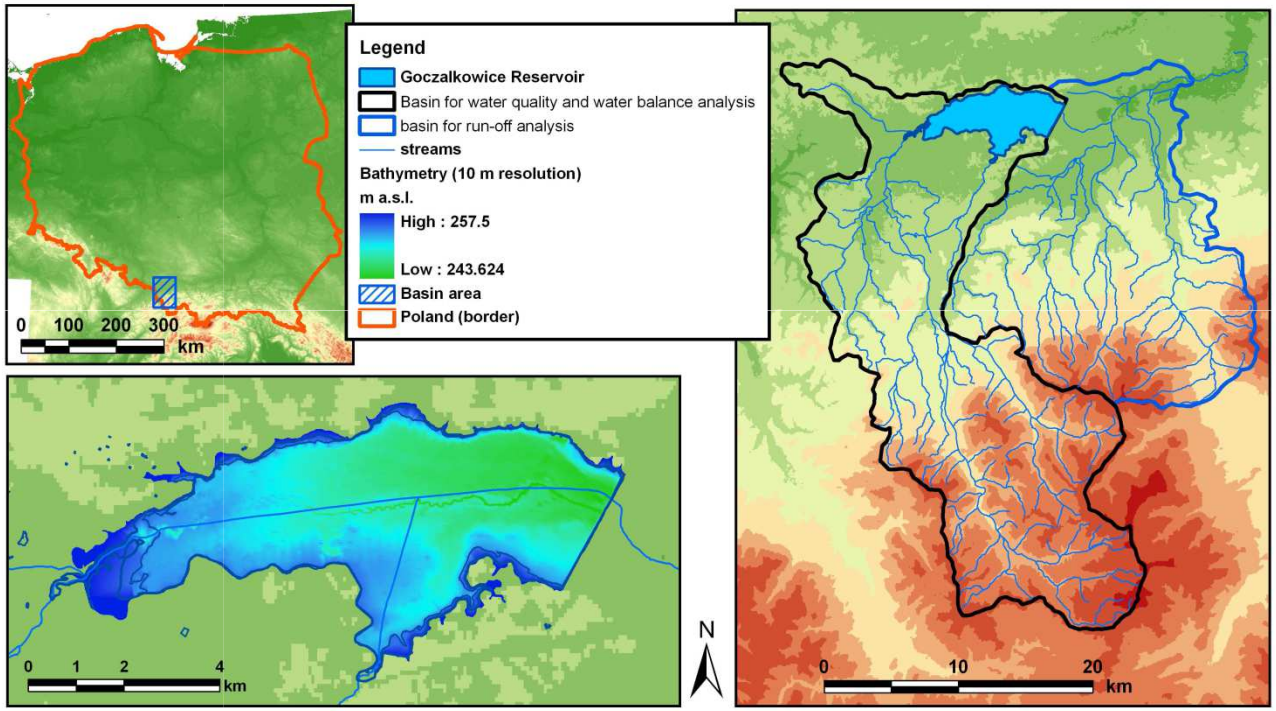
Rafał Ulańczyk
Institute of Environmental Protection – National Research Institute

CRIS - Objectives

The main objective is to develop the information service supporting the river basin management in a context of the Water Framework Directive implementation.

CRIS is aimed at identification of data and services needed by end users (units responsible for: water resources management, water supplies and public safety). These Users shall be finally provided by the information on:

- detailed real-time distribution of the precipitation (with short-term forecasts),
- real-time and forecasted flow rate and water level in streams,
- water quality status (with short forecasts),
- threats to the water resources,
- how different river basin scenarios can affect the water balance and water quality.



CRIS – (expected) Results

Short-term results:

- Needs for data and for information services identified in the case study river basin.
- Operational information system adjusted to needs of end-users.

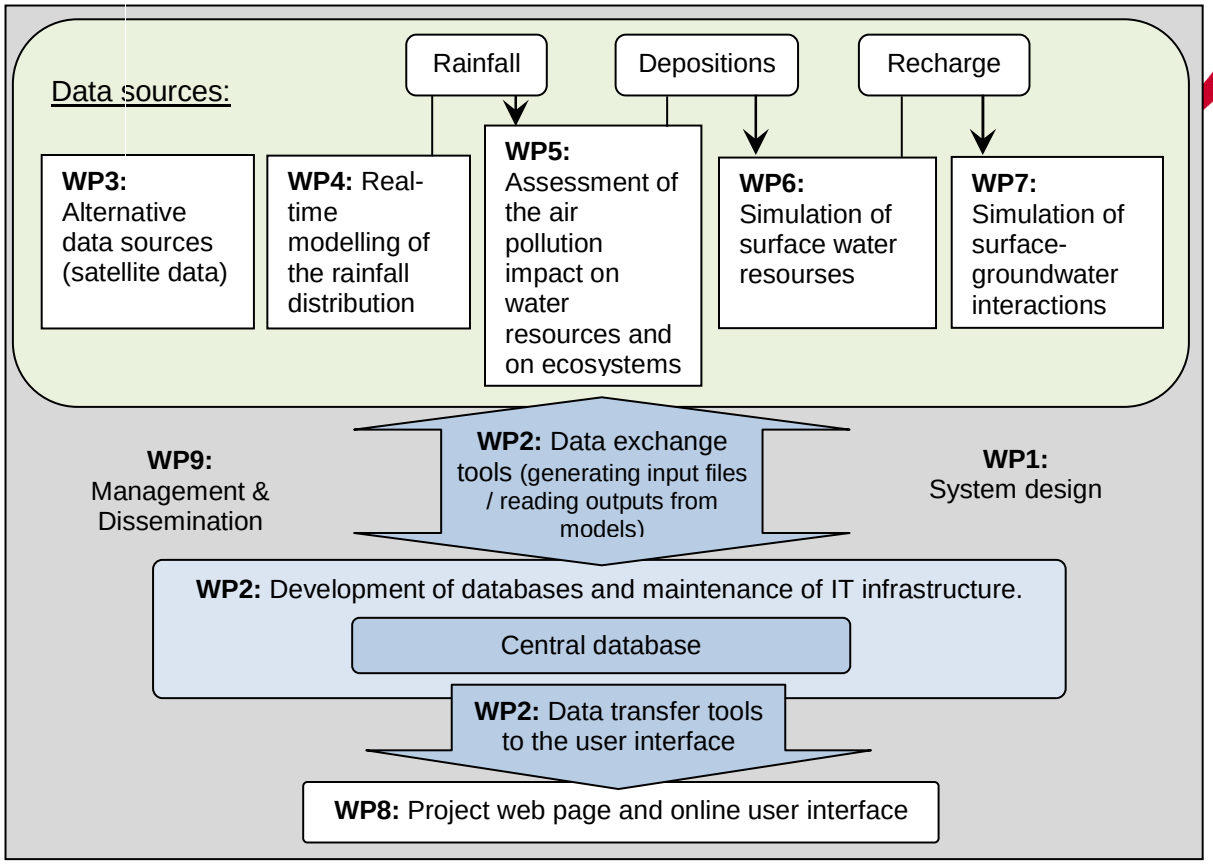
Long-term results:
(indirect outcomes resulting from the use of information system)

- More effective use of surface water intakes (choosing these not affected by intensive run-off or algal bloom).
- More effective use of groundwater intakes (e.g. as a consequence of the identification of areas affected by polluted recharge).
- Identification of relations between the water quality and basin management practices / land use types / meteorological conditions.
- Increased effectiveness of the flood protection systems (thanks to the flow rate forecasts).

CRIS - Methods

The information system will be composed of:

- **central database** (storing all possible to collect static and real-time monitoring data including meteorological radar data and satellite based products),
- **set of** advanced **modeling tools** simulating the real time the status of the whole water cycle (WRF, CALMET-CALPUFF, SWAT, GEMSS, HEC-RAS, MODFLOW)
- **online user interface** accessible using a web browser and providing all project's outcomes in a form of reports or visualisations.



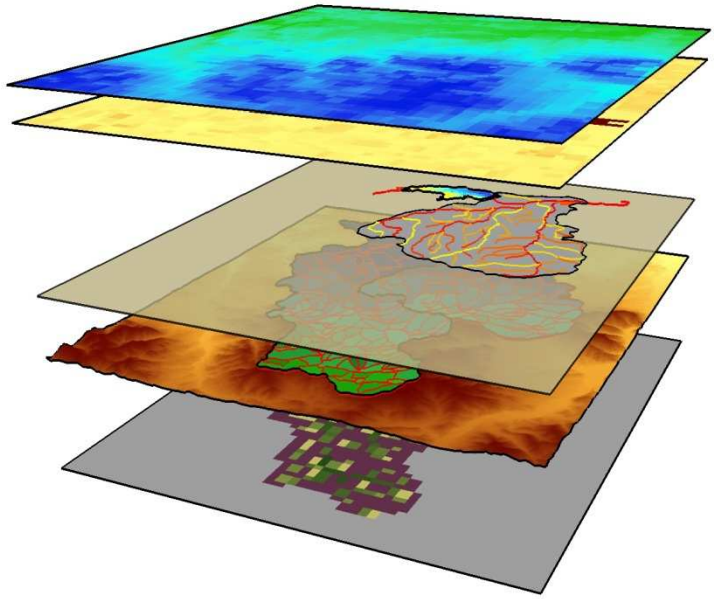
WP4: Rainfall forecasts (WRF model)

WP5: Depositions (CALPUFF model)

WP6: Surface runoff (HEC models)

WP6: Surface water quality and dynamics (SWAT + GEMSS models)

WP7: Groundater quality and dynamics (MODFLOW model)



CRIS – More information

cris.ietu.katowice.pl

- More information about the project
- CRIS information system coming soon