

Realization of tasks related to groundwater and resulting from the Water Framework Directive requirements, covers:

1. Elaboration of methodology on groundwater bodies (GWBs) delineation;
2. Delineation of groundwater bodies (GWBs);
3. Preparation of preliminary description of groundwater bodies (GWBs);
4. Identification of polluted and at risk of failing to meet the WFD objectives groundwater bodies (GWBs) and their further characteristic;
5. Selection of groundwater bodies (GWBs), for which regulations should be undertaken, in order to achieve the WFD environmental objectives;
6. Determination of ecosystems dependent on groundwater.

Criteria and procedures have to strictly meet the requirements of the Water Framework Directive. Current version of 161 groundwater bodies is valid till the end of 2014. It is planned that the proposed new version of the groundwater bodies division – 172 parts and 3 subparts, is going to be valid since 2015.

CRITERIA AND PROCEDURES FOR GROUNDWATER BODIES DELINEATION

UNTIL 2015

Division into 161 GWBs from 2004 relies on the hydrostructural-catchment criteria:

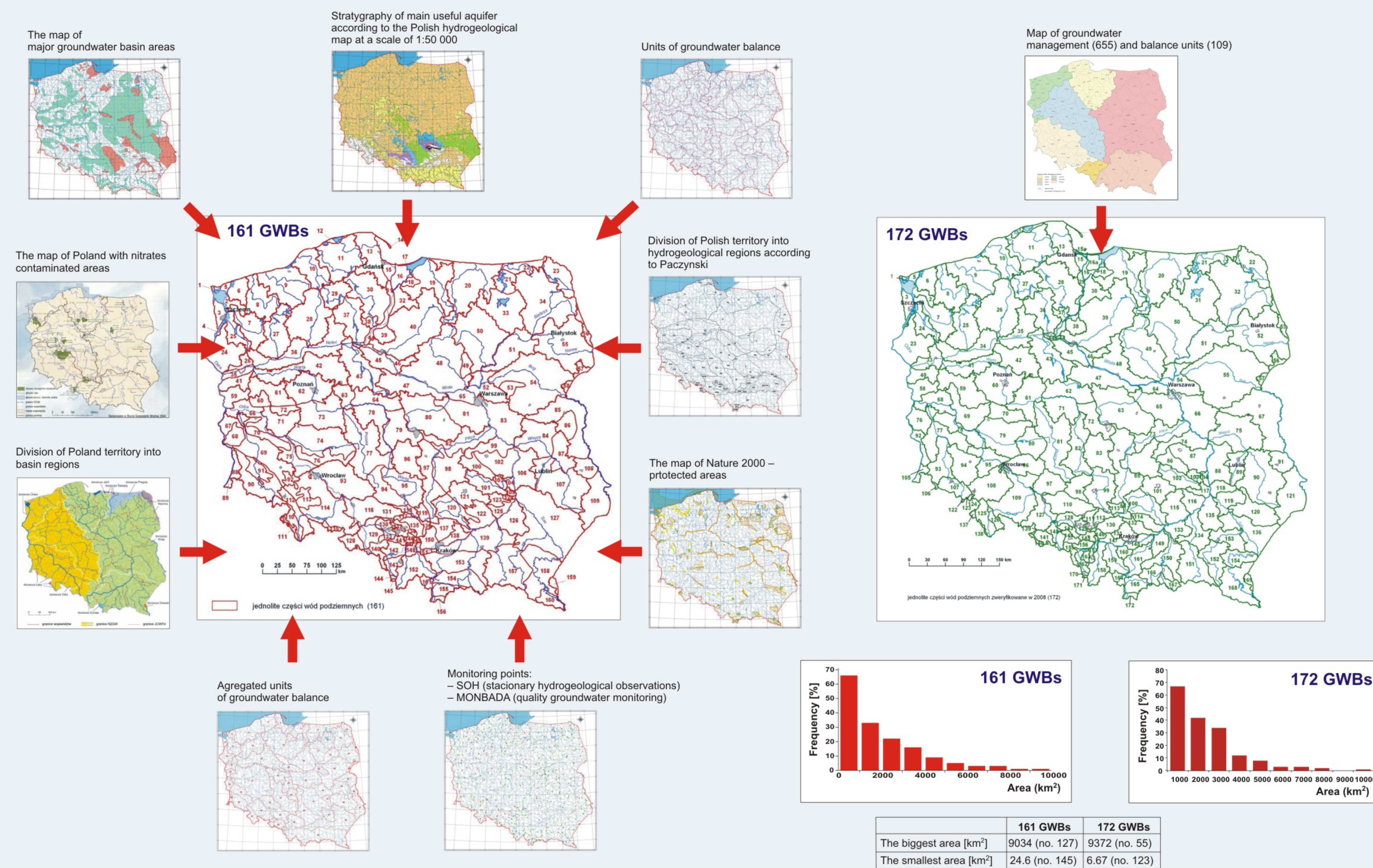
- 1. Hydrostructural conditions**
- geometry
 - hydrogeological parameters
 - multi-level aquifer systems

- 2. Hydrodynamic zoning**
- water circulation
 - recharge and discharge zones
 - hydraulic connections of groundwater on different levels of aquifer systems

- 3. Hydro-economic zoning**
- basin approach to water resources, division into units of groundwater balance

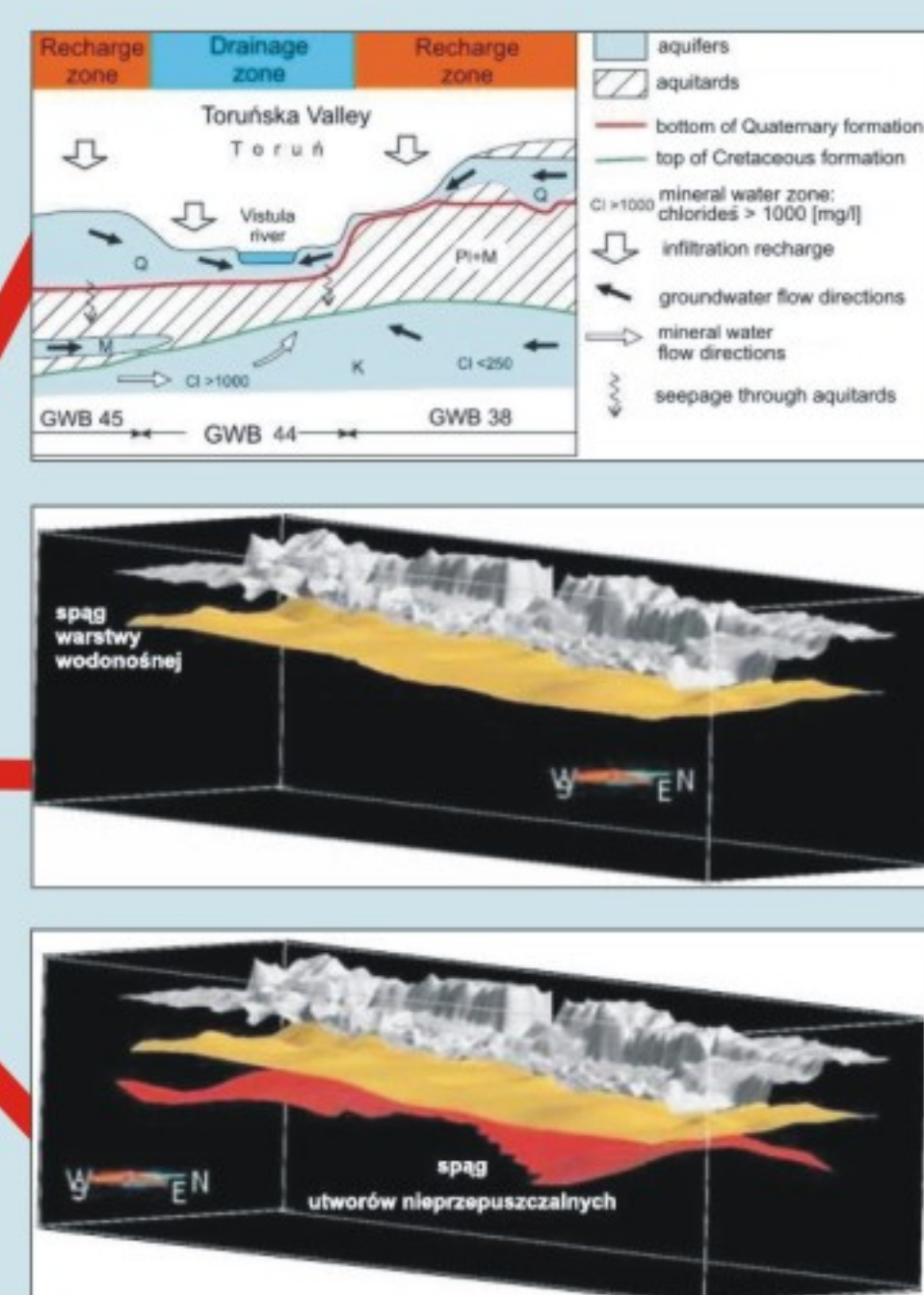
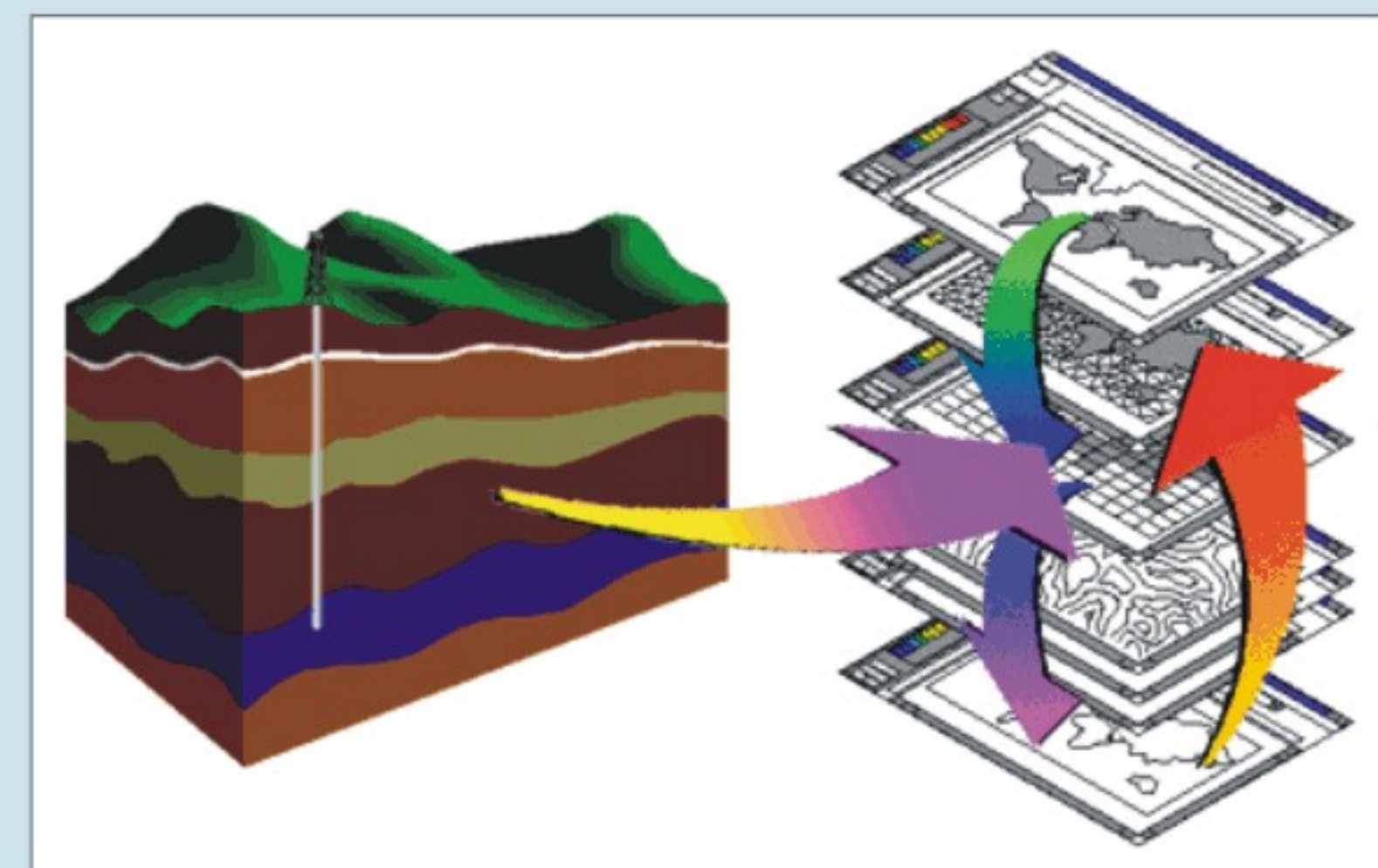
SINCE 2015

In 2008 verification of GWBs borders, which were delineated in 2005, was carried out. As a result of aforementioned work new division into: 172 GWBs and 3 subparts in Poland was accepted. New division was elaborated on the basis of catchment area conditions, as well as balance units criterion.



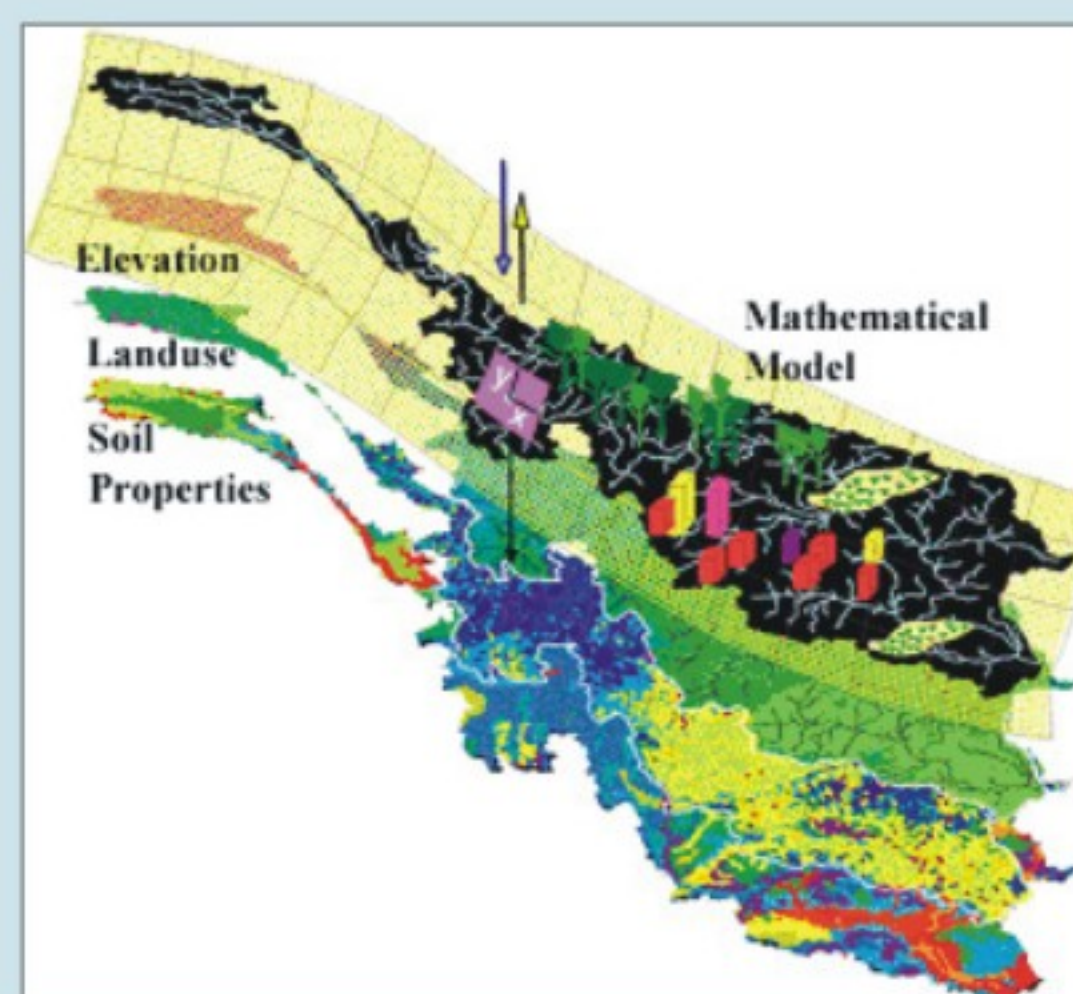
GWBs' MODELS

Conceptual model



2D

Mathematical model



3D

3D

Conceptual models were elaborated for all: 161 GWBs, as well as for the new GWBs division into 172. Mathematical models were carried out for state-border GWBs and GWBs at poor status. Elaborations of GWBs conceptual models are published on website www.psh.gov.pl.