



**Institute of Meteorology and Water Management**  
National Research Institute

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**Adaptation measures catalogue  
as a decision support tool for the water governance  
within transboundary basin**

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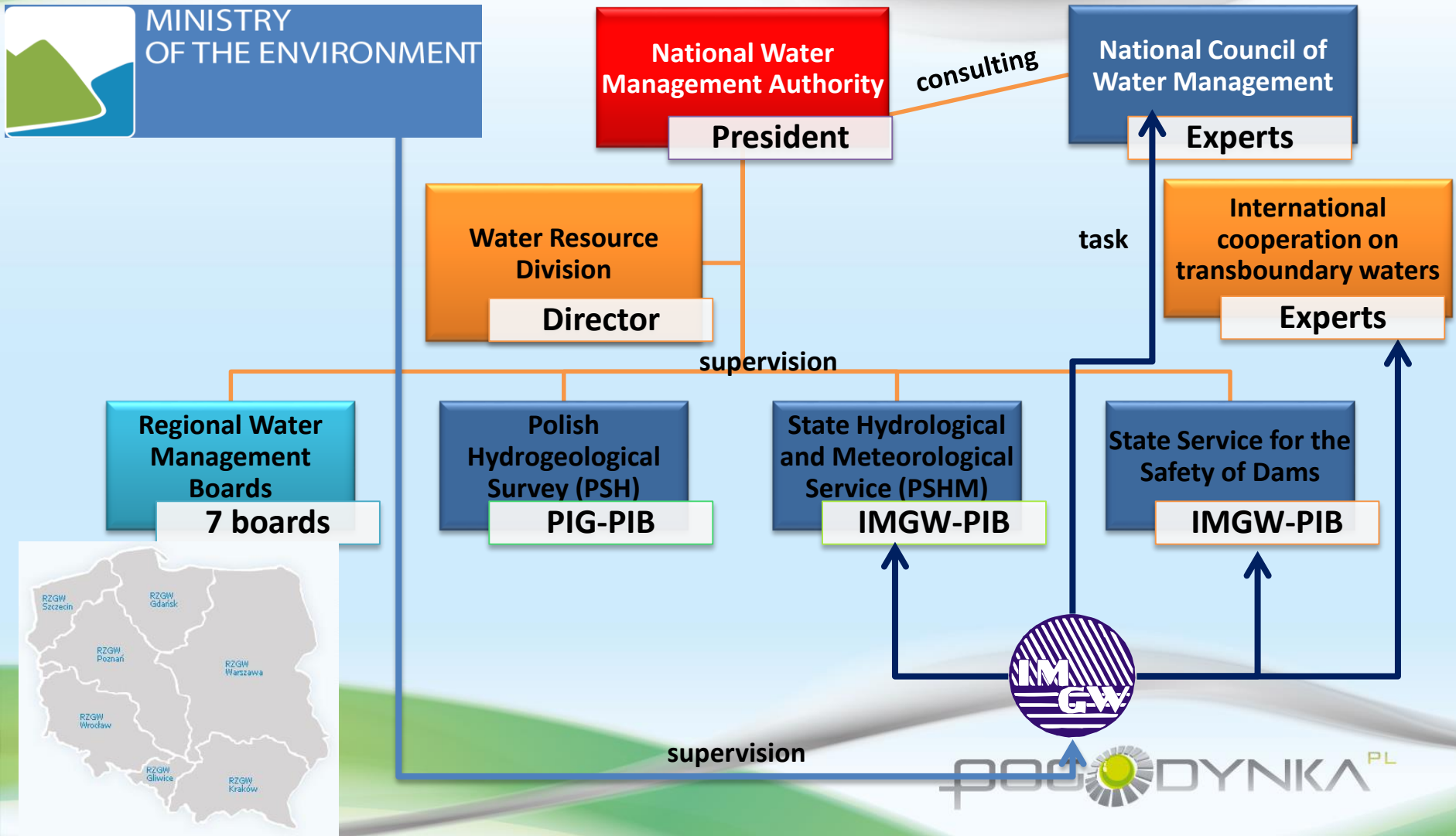
**Dr Iwona Zdralewicz**





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## Water governance in Poland





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## Water governance within Polish-German transboundary region

National Water Management Authority

Polish-German Border Water Committee

**W1**  
Hydrology and hydrogeology

**W2**  
Water protection

**W3**  
Emergency pollution

**W4**  
Maintenance

**W5**  
Water management planning

**NEYMO Project**

**KLAPS Project**

**Experts subgroup on climate changes**

**Measure catalogue**

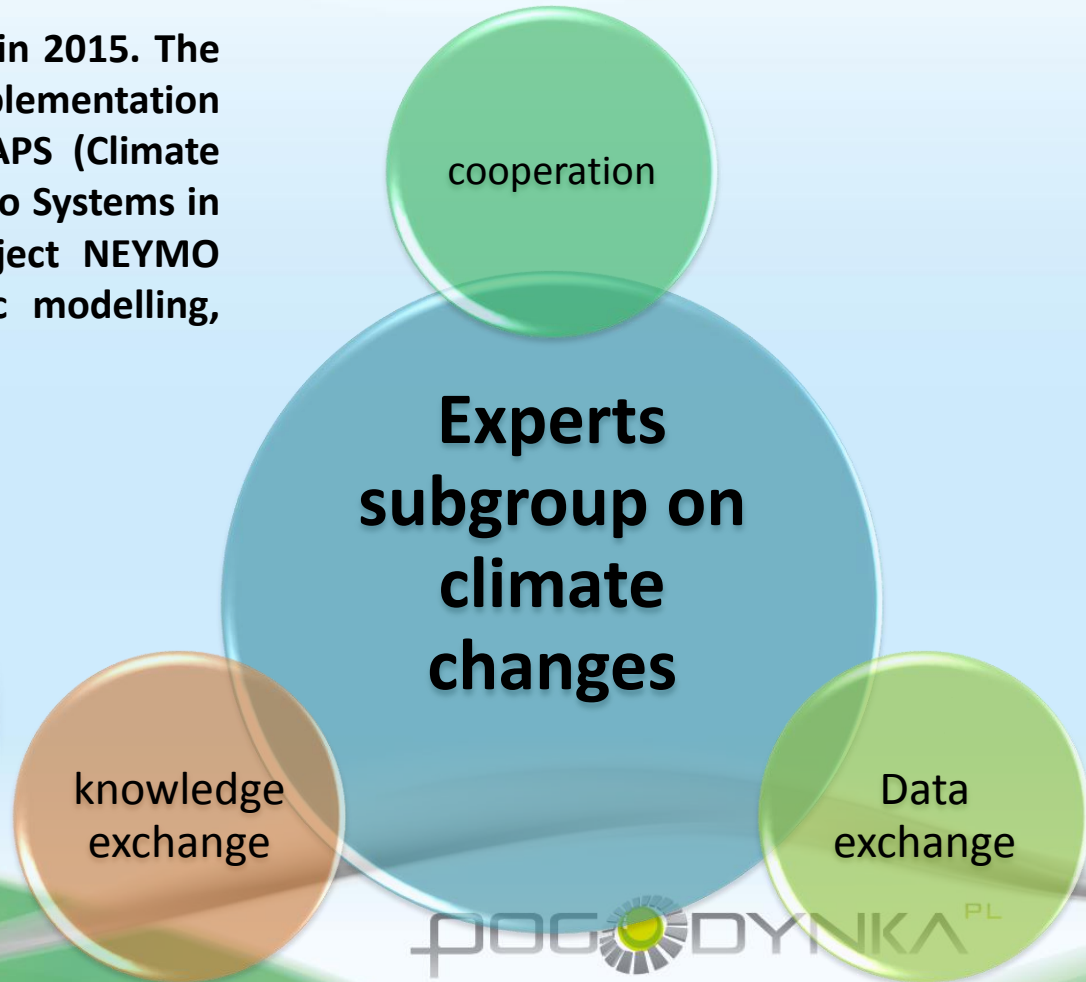
**Consequences of climate changes assessment**





**Water governance within Polish-German transboundary region**

The climate experts group was established in 2015. The need for its creation arose from the implementation of 2 cross-border EU projects: Project KLAPS (Climate Change, Air Pollution and Critical Load of Eco Systems in the Polish-Saxon Border Region) and project NEYMO (Lusatian Neisse - climate and hydrologic modelling, analysis and prognosis).





**Climate changes in transboundary basin**



1-3°C



extreme events

Q<40%





## Adaptation measure catalogue in transboundary basin

Measure catalogue contains 14 possible measures as a decision support tools for water governance in the catchment area of the Lusatian Neisse.

- **The continuation and intensification of cooperation between countries**
- Knowledge of the current state of the use of water resources
- Raising awareness of water users about the effects of climate change
- Promotional-informativ activities
- Analysis of the legal aspects and their corresponding adjustment
- **Improving the monitoring and documentation of actual water use**
- Assurance of groundwater and surface water resources in the future.
- **Determination of ecological discharge**
- **Ensuring of river continuity**
- Ensuring safety during the flood
- Increasing the retention with the possibility of use of the water collected during dry periods (the creation of multifunctional water reservoirs)
- **The development of water-saving strategies**
- Coordination of post mining reservoirs flooding
- Protection of the quality of water resources





## Decision support tools related to climate change in transboundary basins

**The continuation and intensification of cooperation between countries**



**The need for transnational cooperation on transboundary waters results from the differences between the defined administrative borders and the natural water courses.**

### Examples

- **Boundary Water Committee**
- **The International Commission on the Protection of the Oder against Pollution (ICPO)**
- **Common Projects**



## Decision support tools related to climate change in transboundary basins

Improving the monitoring  
and documentation  
of actual water use

A water permits are issued for a maximum withdrawal amount. Therefore a more detailed documentation and monitoring of real withdrawal amount are necessary.

### Examples

- Recommendations for water users - verification of water permits
- Water register book







## Decision support tools related to climate change in transboundary basins

### Determination of ecological discharge



It is necessary to maintain a minimum flow ( $Q_{min}$ ) to guarantee good ecological status.

In order to determine the minimum ecological flow, it is essential to take legal actions and monitoring.

#### Examples

- Consideration of ecological minimum water flows in already existing water rights
- Future water right only with assumption  
minimum water flow  $\geq$  ecological minimum water flow

## Decision support tools related to climate change in transboundary basins

### Ensuring of river continuity



The condition necessary for achieving good status of water in accordance with the WFD is maintenance of river continuity.

### Examples

- fish passes are suitable way to achieve ecological continuity of the Lusatian Neisse River. The installation of fish passes are necessary especially on power plants.



## Decision support tools related to climate change in transboundary basins

### The development of water-saving strategies



Development of handbook contains guidelines / examples of solutions / best practices aimed at water conservation and water retention in the basin is crucial.

#### Examples

- The use of rainwater in houses for the sanitary purposes
- The use of modern technologies of closed water cycle
- The use of innovative technologies of water retention
- Recommendations for the financing system of activities aimed at water management



## Summary

Currently in Poland water government pays attention to the adaptation to climate changes.

Adaptation to climate change are considered on two levels:

- national;
- transboundary.

At the local level activities should be stimulated by raising awareness of citizens in municipalities.

Now there are many local enterprises, which in the future will contribute to the creation of the best practices to adapt to climate change. A good example of cross-border Polish-Germany cooperation could support local actions in the other areas.

The special group of Polish and German climate experts pays attention to the problems with climate change

Climate experts group and catalog of adaptation measures are good examples of tools to support decisions by water government .



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**Thank you for the attention**

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