

POLAND

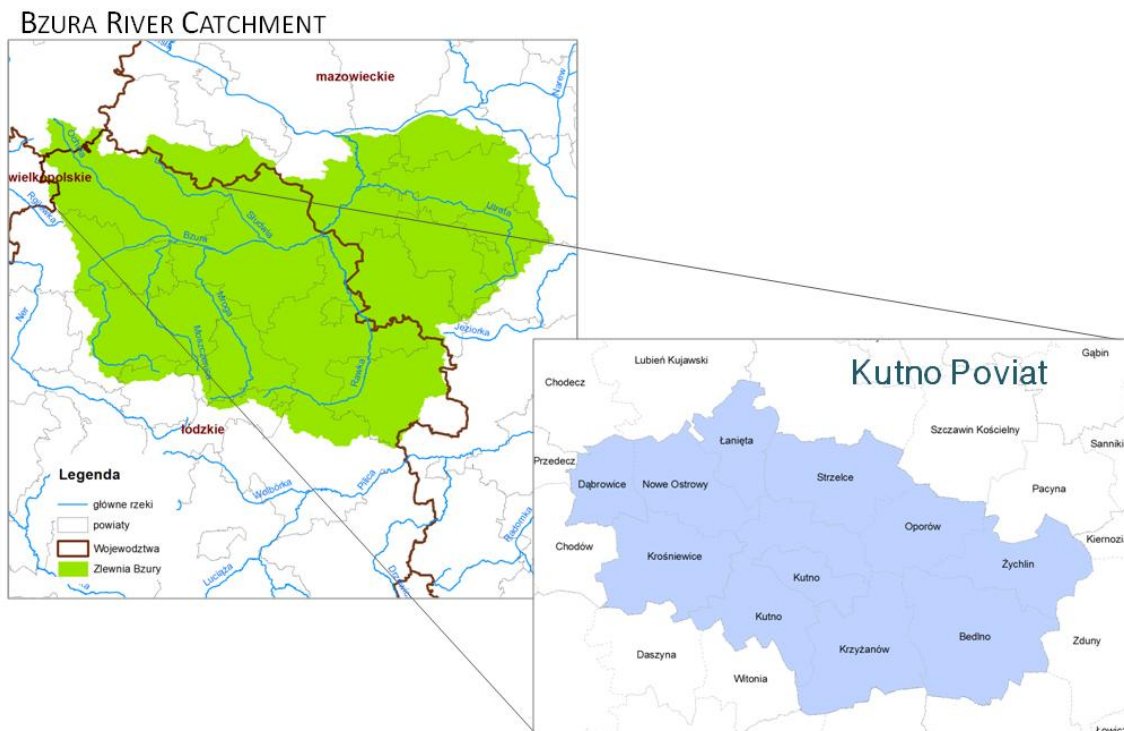
Report from case area: Kutno County

Summary (short description)

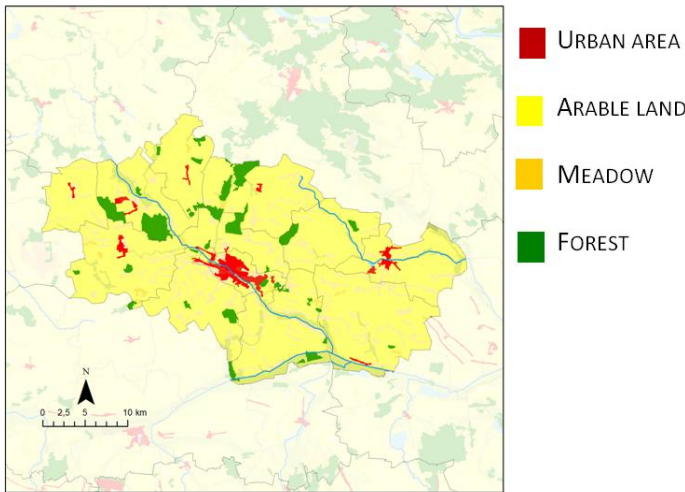
The area of the Kutno County is an important agricultural production area in the Lodzkie province in central Poland. The high quality of soil had contributed to the development of intense agriculture and thus to the conversion of the natural hydrogenic landscape (peatbogs and marshes). Only 5% of the county's area reminded covered by forest. Land acquisition was based on the drainage of the area and regulation of rivers, followed but changes in the dynamics of water flow in the landscape. Intensive plant production resulted in water pollution, especially with nitrogen compounds. Nowadays the situation gets worse due to superimposed impact of climate change, namely frequencies and duration of both hydraulic and agricultural drought. Yield loss results in increased interest of farmers in water retention and improvement of its quality.

Introduction to the case area

The Kutno County is NUTS 4 administrative units of the Lodzkie province, and includes 10 communes.



LAND USE



The county area is 88 629 ha, where 86% is covered by agricultural land with 77% of arable one. About 80% of arable land is classified to wheat, wheat-rye and cereal-pastive complexes, suitable for cultivation of plants with high soil requirements. The other land uses comprise: orchards (1.72%), meadows (5.79%), pastures (2.6%), forests (4.98%), and the others (9.36%).

The region is one of the most important suppliers of agricultural products in the province, although farm structure-wise it shows high level of fragmentation. According to the National Census of 2010 over 55% of all farms in the case area belonged to group of acreage up to 15 hectares.

Considering hydrology, the Kutno County is located in the Bzura river catchment. It has a total area of 7986.78 km² and administratively belongs to the Kujawsko-Pomorskie, Łódzkie, Mazowieckie and Wielkopolskie Provinces.

The catchment area is a subject to the Vistula River Basin Management Plan as 99 surface water bodies. Among them, 32 have been defined as sensitive waters covered in 2012-2016 by the Bzura Nitrate Vulnerable Zones . Since 2018, the vulnerable zone has been extended to the whole case study area because the whole territory of Poland has been considered sensitive and became a subject to the Program of measures implementing the Nitrates Directive guidelines.

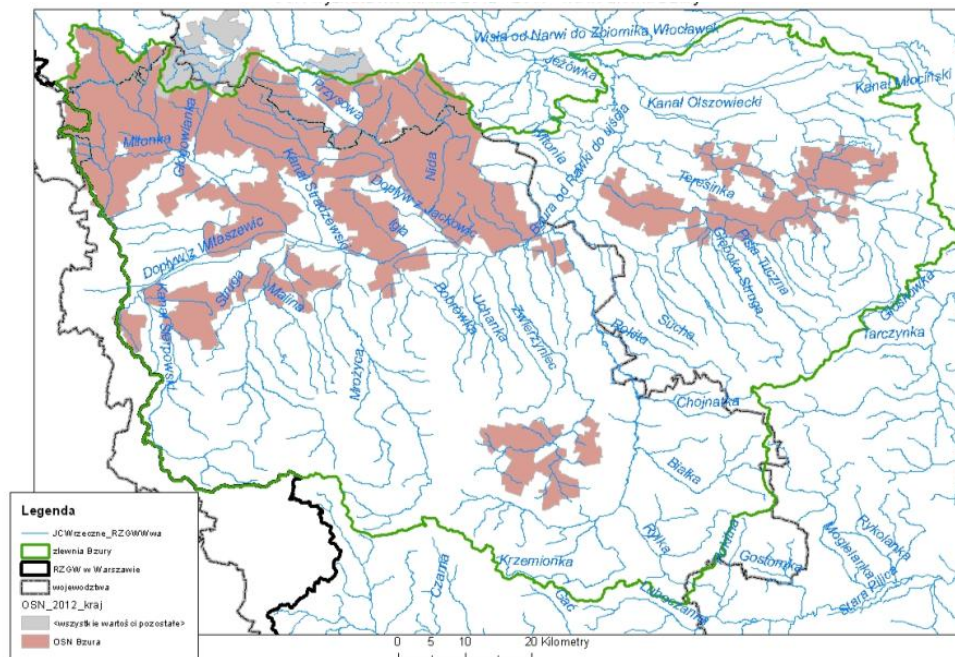


Fig. Nitrate Vulnerable Zones (NVZ) for nitrates of agricultural origin designated for the years 2012 to 2016

However, poor water quality is only one side of water problems. Recently the farmers of the county have to struggle with an agricultural drought. Those are the climatic and environmental conditions that makes drought more and more severe in central Poland. The problem is superimposed by low availability of surface water resources, in the area primarily rich in hydrogenic landscapes.

Issued by the National Water Management Authority in Warsaw (2017) "Plan for preventing the effects of drought in the water region of Central Vistula" indicates Kutno county as being particularly exposed to the risk of agricultural drought.

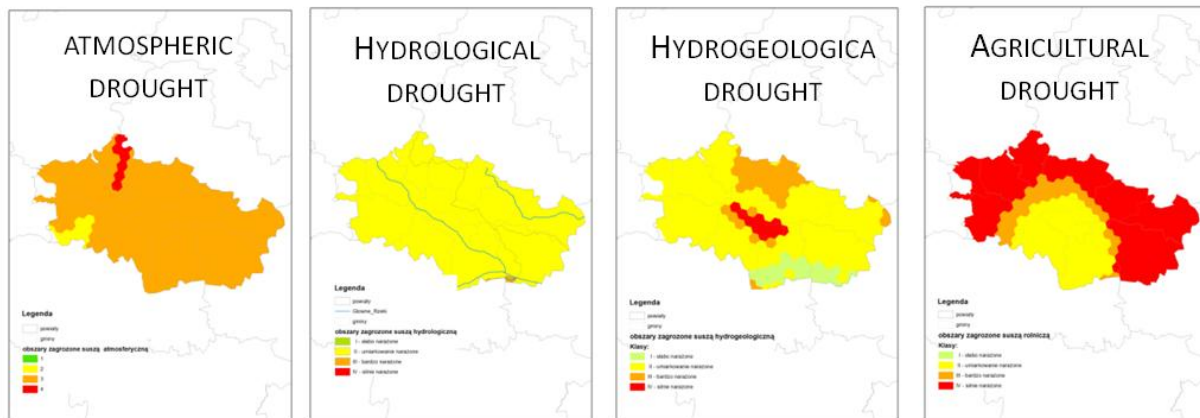


Fig. Risk of atmospheric, hydrological, hydrogeological and agricultural drought on the basis of the "Plan for preventing the effects of drought in the water region of Central Vistula" of the National Water Management Authority in Warsaw 2017

Strategic tasks/goals in the catchment

Defined by WD Project Partners:

Adaptation of agricultural production to climate change through optimization of production structures and measures to increase water retention. Increased water retention is possible through (1) cooperative renovation and management of the drainage system to slow down water outflow, (2) using good agricultural practices to increase soil water retention, and (3) optimization of the landscape structure for regulation of water cycle.

Defined by Focus groups:

Results of preliminary stakeholders' feedback collected by December 2019, emphasised the following main challenges in the case area:

- Growing concern of drought and its impact on agriculture and its profitability;
- Fragmentation and inefficiency of local and regional water management systems, with unclear competencies and responsibilities;
- Growing economic disparities among the farmers which increase farm vulnerability and amplify water related risk;
- Lack of systemic approach and well established work-flows supporting cooperation among actors from different sectors (public, private, NGOs).

Focus Groups - local actions and implementation

Within the framework of Waterdrive project, it is planned to work with stakeholders of different administrative and operational levels : local, regional and national.

In the case area, cooperation will be carried in a selected, small-area sub-basin located in a single municipality. Working with a small, strongly site-linked, multi-actor group will enable following the decision-making path focused on the management and renovation of the drainage system. Solving a defined problem step-by-step will allow to indicate the role of particular actors / institutions, to recognize barriers/deficiencies in problem solving, necessary adaptation of procedures, and recognition of funding options.

The experience/knowledge gained during the local cooperation will be verified at the level of the county and region in order to upscaling/transfer it to other areas of the province/country.

Main actors:

- Water companies (*in Polish: Spółki wodne*), - voluntary association of farmers, who are owners of land through which a drainage system passes. Voluntary contributions paid by farmers set up their budget. A municipality may also be a member (a public-private structure). They can raise funds for investment.
- Catchment and Regional Water Management Authorities (*in Polish. Zarząd Zlewni, Regionalny Zarząd Gospodarki Wodnej*) – parts of National Water Holding 'Polish Waters'. Responsible for water resources management (surface and underground), e.g.: flood and drought protection, coordination of the implementation of investments in water regions,
- Local authorities in case area (communes and county)
- Regional authorities (Lodzkie province)
- Network of agricultural advisors
- Farmers and landowners not associated with water companies
- Planner offices
- NGOs
- Financing agencies
- Experts

Challenges

- Building up trust in joint local actions.
- Establishing of relevant and accessible information system (or at least minimum information requirements) enabling evaluation, forecasting and planning of water management practices from farm to catchment level;
- Increasing efficiency of risk management through identification of key players, competencies, responsibilities and workflows as well as means for busting multi-stakeholder collaboration.
- Moderation of the capacity building process in the area of indispensable knowledge, problem definition and analysis, clarification of drivers and competencies to provide systemic solutions.
- Broad cooperation at local and regional level.

Conclusions for December 2019

The main topics for the Waterdrive projects intervention identified as of December 2019 are as follows:

- a) To carry out in-depth analysis of conditions that would allow more efficient water management both at a level of single farm, commune and a catchment. That includes: best practices, availability of information, dedicated system of assistance, access to funding under the range of schemes,
- b) To stimulate launching local /regional alliances for mutual learning and problem solving, to be subsequently promoted at national level as part of the Waterdrive dissemination activities,
- c) To test/validate new type of agricultural advisory service.