

Waterdrive case area seen in relation to the policy recommendations

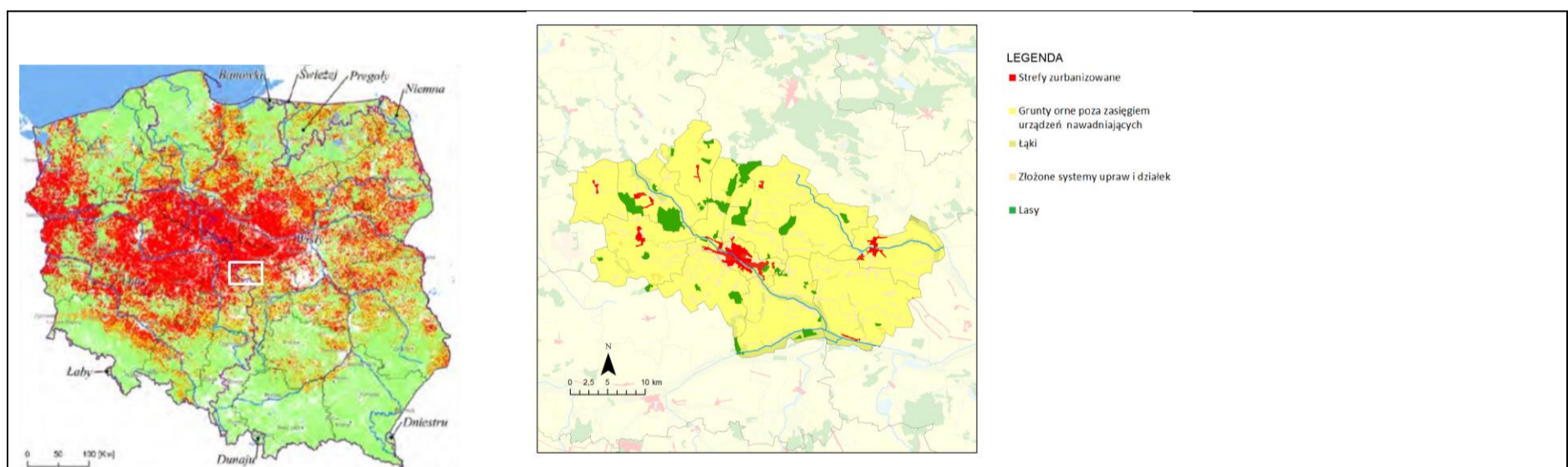
Policy recommendations:

- Secure win-win solutions for rural communities and the environment.** Measures that support the maintaining of high quality water, climate adaptation and biodiversity conservation must go hand-in-hand with farmers' motivation and desire to strengthen the long-term viability of their farms. Waterdrive encourages BSR countries to identify and stimulate win-win solutions and include them in their support programmes.
- Strengthen incentives for flexible local approaches and solutions.** Water management is highly dependent on local contexts and opportunities. No one size fits all across regions. Waterdrive encourages BSR countries to increase the level of flexibility and adaptivity of their present and future support programmes to benefit more from local needs, knowledge and experience.
- Strengthen joint and cross-sector actions on a catchment level.** Since multiple actors share watercourses and catchments, strengthened cooperation platforms and cross-sector networks are important for success. National-level support has an essential role in enabling local engagement. Waterdrive encourages BSR countries to further expand the number of pilot projects for testing catchment level water management solutions, including the new service of catchment officers.
- Motivate land managers to produce multiple ecosystem benefits.** Rather than supporting specific single target actions or the adoption of isolated measures, Waterdrive encourages BSR countries to identify and include measures providing multiple ecosystem benefits, including piloting result-based benefit systems.
- Strengthen agricultural advisory systems.** By increasing the number of highly skilled advisors and making their services available to all farmers, large and small, including new services for smart water management at catchment level, Waterdrive encourages BSR countries to strengthen their advisory services at catchment level with sufficient funding and expertise.
- Strengthen strategic water governance.** Having sufficient and regular monitoring services of water quality is a key element of water governance. Waterdrive encourages BSR countries to enhance governance, research, education, monitoring and planning to ensure effective strategic water planning at different scales and to enhance sustainability, including managing risks with too little water, too much water or water of poor quality.

Drought and water retention in the Kutno County in Poland

by Katarzyna Izydorczyk and Kinga Krauze ERCE

“Reconstruction of drainage systems and the whole agricultural area towards increased water retention in the landscape”



Map 1: Areas threatened with the drought. – meadows, dark green – forests)

Map 2: Land use in the Bedlno commune (red – urban areas, yellow – arable land, light green

Strategic water governance	<p>Intensive plant production resulted in water pollution of nitrate and the situation gets worse due to superimposed impact of climate change, namely frequencies and duration of both hydro-geological and agricultural droughts. Yield loss results in increased interest of farmers in water retention.</p> <p>The main target is increased water retention through: cooperative renovation and management of the drainage system to slow down water outflow, using good agricultural practices to increase soil water retention, and optimization of the landscape structure for regulation of the water cycle.</p> <p>To meet the aim Waterdrive develops and tests procedures for effective cooperation in agricultural basin. The task can only be solved by effective strategic water planning at different scales. Water don't know the boundaries.</p>
Cross-sector actions at catchment level	<p>Waterdrive launches and builds the potential for multi-actor activities in focus group with the main stakeholders to secure the cooperation in water sector in the rural areas. Those are:</p> <ul style="list-style-type: none"> • Farmers, landowners; • Water companies - voluntary association of land owners managing parts of a drainage system; • National Water Holding Polish Waters - water resources management at national and regional levels; • Regional and local authorities of the Kutno county, Bedlno commune and neighboring communes • Planer offices, spatial planners • Financing agencies • Agricultural advisors • NGO's

Promilleafgiftsfonden for landbrug

	<p>The effective implementation of water retention measures requires multi-actor cooperation at local level. For example in case of the river channel retention it is required to couple land owners (farmers) management of the drainage network on their land with the top down actions by water manager/owner (Polish Waters). Support of local and regional authorities is a key element mobilizing local initiatives.</p>
Win-win solutions for rural communities and the environment	<p>Proper operation of ditches and canals in combination with soil and landscape retention can prevent drought and is a win-win situation for all in the Bedlno Commune.</p>
Strengthen the agricultural advisory service	<p>Focus on education and employment of a new type of regional and local water advisors.</p>
Motivate land managers to produce multiple ecosystem benefits	<p>Education and awareness of the tools for the land managers are important, as well as establishing financial instruments that support land and water owners cooperation within the catchment area. There are some opportunities to recreate the landscapes and to take into account the agricultural production, retention in the landscape and the nature. Counterbalancing direct CAP payments with agri-environmental subsidies could be a way. Focus on a wide palette of different soil- and landscape water retention measures: reconstruction of drainage systems towards amelioration of soils, direct sowing, cultivation of catch crops and soil embedding crops, buffer zones, afforestation of selected, unproductive lands, establishing shelterbelts, midfields bushes and trees, establishing and protection of ecotone meadows, and protection and establishing of ponds and wetlands.</p>
Flexible local approaches and solutions	<p>The focus group meetings underlined necessity to develop mechanisms of cooperative drainage system management. There is a need for demonstration of water retention increase through controlling the outflow from drainage system, a so-called river channel retention. The pilot activities are to cover both watercourses owned by the Polish Waters and by the Bedlno water company. Additionally stakeholders suggested to develop guidelines for joint activities including retention at a catchment scale, an inventory and assessment of the condition of existing water reclamation facilities, and defining the location of new water damping sites.</p> <p>The important condition of success is not only cooperation and coordination of activities, but above all understanding and acceptance of temporal flooding by the owners of adjacent land.</p> <p>This aim will be supported by the Marshal Office of the Lodzkie province's programme "Integrated water management in a small agricultural catchment to increase water retention and counteract the effects of drought" with an aim of rebuilding water resources based on: river channel retention, soil retention and landscape retention. The river basins selected for the pilot area: Stradzewski Channel, Iгла, Słudwia, and Moszczenica located within the communes of Bedlno and Zduny</p>
<p>Stage of implementation?</p> <p>Strategy, information, education, engagement, implementation? (Kingas model in a more simple way)</p>	<p>Empowering stakeholders to integrate water retention actions across all the water management levels corresponding with land ownership and national policies.</p> <p>The strategy requires a good and accessible data base on existing water infrastructures, blue and green infrastructure supporting landscape retention and soil protection, water distribution among sectors and local users, complemented with information of farm operation costs and impact of climate. Additionally the strategy requires availability of experts and expert knowledge on water resources in catchments and basins as well as best examples of climate adaptation of rural areas.</p> <p>The foundation of strategy should be built upon education of farmers, agricultural advisors and decision makers of all levels of the role of nature-based solutions in increasing resilience of farms and farmlands to climate variability.</p> <p>The stakeholders should be given roles that enable win-win approach to local water problems. Namely farmers should be engaged in defining hot-spots in the catchments (both in terms of water deficits and water retention opportunities), indicating the most adequate and achievable measures among the variety of options as well as their applicability in the area; local authorities play critical role in supporting actors collaboration e.g. in acquiring funding for farmers and actions, promotion and education of best practices, and securing the space for NBS under local spatial and development plans; regional and national decision makers are involved in adapting policies to real-life challenges, enabling funding of best practices and secure proper implementation and obedience to water policies.</p> <p>Considering the general goal of engaging the stakeholders in problem solving and making them problem owners the implementation of measures should consider multi-disciplinary and cross-sectoral funding options or diversification of funding sources with clear focus on field operation; dissemination of knowledge; education; environmental and water monitoring; agricultural practices and infrastructure and policy building.</p>
Innovations in Kutno County	<p>A new type of water advisors will be important in the implementation of measures, like amelioration officers in the past.</p> <p>Reconstruction of drainage system towards increased water retention in the landscape.</p> <p>Combining nature-based solution (NBS, green infrastructure) with grey measures.</p> <p>Development of a pilot, whole - catchment - water management program linking landscape planning, societal engagement, policy recommendations and implementation as demonstration of the best practice.</p> <p>Introduction of a hybrid financing tool for water projects: international funds, government funds, local government funds and private funds (water companies - land users).</p>