

## **Research project objectives/Research hypothesis**

The aim of the research project is to develop a method that would allow to assess the possibility of preserving the so-called Olęder villages on lands under the risk of flood. The studies planned are to result in a method that would allow to clearly assess the chance for areas sharing features of Olęder countryside to function and develop despite repeated flood episodes.

**It is assumed that preserving the countryside of Olęder settlements on lands under flood risk requires taking the functional and spatial structure, landscape and aesthetic factors, as well as hydraulics, into account. The possibility of preserving the countryside can be estimated by means of the adequate multi-criteria hierarchical assessment system.**

## **Research project methodology**

The studies will be conducted on Olęder settlements located in Puszcza Pyzdrska (the Pyzdry Forest, located in the Pyzdry – Kalisz – Konin region). Settlements which obtained the foundation act under Olęder law, in the period from 1746 to 1864, will be subject to investigation. Studies on flood threat and risk will be conducted in the Zagórów – Pyzdry part of the Warta river valley.

There are five subsequent stages of the research planned: introductory works, Olęder settlements' survey in Puszcza Pyzdrska, spatial arrangements survey in Olęder settlements, flood threat identification in the Zagórów – Pyzdry region, assessment system development and validation.

Model-based studies will be conducted by means of the multi-criteria analysis. They will allow for selecting the most crucial assessment criteria which can be used by the decision maker, i.e. local authorities. The method developed will allow to determine whether particular villages can keep their original functional organization or whether buildings should be gradually removed from a given area in accordance with the antiflood rules. This will also depend on one's planning approach (i.e. on whether one makes decisions based on the existing state or official planning strategy).

## **Expected impact of the research project on the development of science**

The aim of the studies conducted within the project is to develop a method of assessing the possibility of preserving the settlements on lands under flood risk.

Their outcome will enrich the current methodological state within the domain of land planning and management.

The results of the studies will also deepen the knowledge about Olęder settlements, including their building, spatial arrangements and management structure characteristics, in the area of Puszcza Pyzdrska, as well as the way such settlements change under the flow of water bodies. The system developed will allow for the rational assessment of spatial planning and management of culturally valuable lands under flood risk.