Green infrastructure planning for reduction of flood risks and improvement of ecosystem viability within lowland river landscapes in Latvia and Lithuania

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Success in implementation of the nature-based solutions (or Working with Natural Process projects) for reduction of flood risks in lowland river landscapes depends on comprehensive assessment and planning of green infrastructure, stakeholder engagement in development of solutions as well as integration of the results into local or regional spatial planning documents. Such approach is tested within the Latvian-Lithuanian cross-border cooperation project ENGRAVE, with aim to enhance river-based green infrastructure by integrating ecosystem and landscape concepts in to the planning and management of the lowland rivers at local and regional scale. The project involves collaboration between researchers, planning authorities and local municipalities in development of methodology for integrated landscape and green infrastructure planning and testing it within four planning cases (regional, river catchment and urban). The applied research study includes mapping and assessment of existing green infrastructure, based on ecological value and ecosystem service supply potential; ‘hot spot’ and ‘cold spot’ analysis to identify risk areas as well as elaboration and assessment of green infrastructure improvement scenarios. The solutions for reduction of flood risks are targeted to revitalisation of rivers and floodplains to improve the natural water retention capacity at the same time providing co-benefits for biodiversity protection and recreational possibilities. The implementation of measures is related to spatial planning instruments for changing the land cover and use and habitat restoration activities.