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Waterlogging in Upper Tisza and the driving forces behind

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Agricultural and environmental policies can have positive, mutually reinforcing effects. The recent reform to the EU Common Agricultural Policy, for example, introduced compliance mechanisms and incentives from which both, environment and rural communities, can benefit. In some cases however, the policies respond to different, incompatible concerns, producing situations in which positive attainments are reciprocally obstructed.

This paper analyses the synergies and barriers encountered when tackling the waterlogging issue in Upper Tisza River Basin, North East Hungary. The frequent floods and ensuing waterlogging of large areas, former floodplains turned into crop fields, are serious issues and their importance increases with the gloom prospects of climate change. The floods in 2001, 2005 and 2006 affected several hundred thousands hectares and caused damages costing billions. In the past, the Tisza river had been streamlined to prevent floods and to gain new agriculture land in landscapes where wetlands and marshes dominated before. This has further amplified the vulnerability to flood and draughts, the latter being the consequence of low water retention to bridge the meagre summer periods.

We analysed existing legislation, recent policies and subsidy schemes with potential effects on farmers decisions, eventually affecting the damages from waterlogging and floods. Similar to other studies employing qualitative, conceptual models to examine the behaviour of the systems before getting hold of quantitative data, this paper analyses obligations and incentives encouraging farmers to employ management practices which ultimately reduce their vulnerability to flood and waterlogging damages.

The policies we look into include compulsory rules and financial or material incentives realized in the context of the European Agricultural and Rural Development Operational Programmes; national programmes for rural development, environmental protection and spatial development; diverse compensation and insurance schemes, and legislations referring to land use and water management in general. Particular attention is paid to single area payments (SAP) and the cross-compliance obligations the farmers have to meet, and the agri-environmental schemes reducing the vulnerability to floods and waterlogging (e.g. afforestation, planting of autochthonous plants more resistant to high water tables, flood plain restoration and establishments of environmental set-aside areas). We consider policies currently in practice, as well as measures realised in the past and newly planned interventions. When possible, the policies are analysed quantitatively in terms of financial resources allocated, number of actors who adhered to the policy schemes, and the tangible impacts. When such information is not accessible, the policies are delved into qualitatively, in terms of compliance criteria and revealed preferences of the intended beneficiaries. For this scope a series of semi-structured interviews had been conducted, involving farmers, representatives of agricultural water boards, water authority, nature protection agencies and others relevant actors.