


FACTSHEET RISK REDUCTION MEASURES	
Implementation of risk reduction measures through land consolidation in Sora	
Where was it implemented?	
Municipality of Klipphausen (district Sora, Lotzen, Lampersdorf), Saxony, Germany	
Fields of action	
<ul style="list-style-type: none"> • Farmland • Watercourses • Settlement area 	
Related to measure from the catalogue of measures	<p>Local inspection of a rain water detention hollow during an educational trip about flood protection by land consolidation in Sora. Source: Sabine Scharfe, LfULG</p>
<ul style="list-style-type: none"> • Land consolidation processes • Catchment based concepts and plans; inter-communal cooperation • Stabilisation of runoff pathways • Promoting and enforcing property protection measures • Linear protection measures • Increasing the retention capacity of existing channels and floodplains by restoration • No- or low tillage incl. mulching and direct seeding and strip till • Small elevation oriented dikes 	
Area characterisation	
Area type: rural	Landscape type: hilly, farmland
Problem	
<p>In the predominantly agriculturally used head catchment area of the watercourse "Bach aus Sora" in the district of Meissen, the villages Lampersdorf and Sora are located along the watercourse as well as agricultural lands of the village Lotzen. The watercourses in the area were partly piped, straightened or canalised in the past. Even with moderate rainfall, individual outlets of the village streams cannot drain off the rain water. This leads to damming and uncontrolled surface water runoff. On agricultural lands, increased surface runoff leads to deposit of fertile arable land. The ownership structure in the watercourse area is partly unresolved. Rural pathways are no longer designed for use with modern agricultural technology. Functional land use is partly hampered by fragmented land ownership or inappropriate plot layouts. Loess soil is typical for the region. This soil type is particularly susceptible to erosion. In the past, flooding as well as problems caused by silt deposits have occurred several times in the local areas and on agricultural land.</p>	
Description and aim	
<p>Within the framework of a land consolidation process, the affected owners form a community of participants under the direction of the responsible authorities of the district of Meissen and with the participation of the municipality. In the course of initiating the land consolidation process, procedural objectives were developed and defined. One of these objectives is the reduction of erosion and flood risk. The joint identification, determination and implementation of measures is an essential part of the current procedure. The area to be reorganised covers approximately 860 ha and consists of 475 land parcels, which are divided into 240 properties. Experienced engineering offices were commissioned with various plannings and studies. In order to analyse the actual state in the planning area and to be able to assess the effectiveness of potential measures, problems and</p>	

their causes were identified in a catchment area-related study and numerous measures were proposed to the community of participants. These measures aim, among others, at:

- Improvement of flood protection (e.g. → **linear protection measures**, → **increasing the retention capacity of existing channels and floodplains by restoration**, → **property protection measures**)
- Mitigate erosion (e.g. → **stabilisation of runoff pathways**, → **conserving tillage**) as well as
- Delay runoff and improve water retention (e.g. → **small elevation oriented dikes**)

With secured financing, the planning of the constructional execution of the measures is carried out. At the same time, the reorganisation of the property areas is taking place, which is being realised primarily by means of land exchange and land acquisition.

The Saxon State Ministry for Environment and Agriculture (SMUL) and the Saxon State Office for Environment, Agriculture and Geology (LfULG) pointed out in training courses for decision-makers the use of the instrument of rural → **land readjustment (land consolidation) for the implementation of risk prevention objectives.**

Effect of measure

A hydrological study provided information on relevant rainfall, percolation potential in the area, flow paths, expected water volumes at neuralgic water points and the runoff events in the case of specific design events, the extent of potential soil erosion on various areas and possible damage areas. The communication of the study results, the need to agree on measures and the involvement of many responsible stakeholders in the procedure create an incentive for an exchange and solution-oriented discussion of the complex cause-and-effect relationships between natural events, land management and current rural way of life. The communication between citizens (e.g. in the context of participants' meetings and on-site visits) and the joint implementation of measures to achieve defined goals is to be seen as a contribution to create the conditions for comprehensive rural development.

Description of implementation

Implementation: 26.11.2015 - pending

Effect horizon: long-term

Involved stakeholders:
joint initiative „Teilnehmergeinschaft Sora“, lower water authority, nature conservation agency, engineering offices, engineering companies

Initiator / responsible:
joint initiative „Teilnehmergeinschaft Sora“ at the district administration of the City of Meissen, local land surveying office - land consolidation

Lessons-learned

Main success factor:

- Immediate participation and say of affected farmers and citizens - less potential for conflicts.
- Acquisition or exchange of necessary areas is part of the proceeding.

Main challenge:

- Long duration of proceedings - requires a lot of persistence.
- Large number of participants with different interests, opinions and expectations - requires much communication and persuasive efforts.
- Lack of available compensation areas for exchange (formerly nationally-owned areas, public properties, properties of church) - requires property purchase.

Synergies / beneficial aspects:

- Model and multiplier effect (training courses).
- Implementation of different measures that have several aims (flood protection, economy, recreation, ...), e.g. detention ponds and sedimentation hollows can be further used as arable land.

Conflicts / constraints:
For an optimal prevention and protection of soil erosion, farmers have to adapt their farming methods. Stakeholders should therefore accept that change requires effort, time, and strategic management (is not always achieved).

Key message to others starting with a similar task	Contact
<p>The method of land consolidation should also be used at other locations to tackle existing problems caused by heavy rain. Affected citizens, experts and public administration should work together to solve their problems bottom-up.</p> <p>Public authorities should try to have enough land available for land exchange agreements with land owners.</p>	<p>District Administration of Meissen, District Land Surveying Office, Land Consolidation, TNG Flurbereinigung Sora E-Mail: KVmA.Flurneuordnung@kreis-meissen.de</p>
<p>Further information (in German)</p>	<p>https://www.vlnsachsen.de/landkreise/meissen/sora, 05.11.2019.</p>