



Germany wide seasonal flood risk analysis for agricultural crops

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In recent years, large-scale flood risk analysis and mapping has gained attention. Regional to national risk assessments are needed, for example, for national risk policy developments, for large-scale disaster management planning and in the (re-)insurance industry. Despite increasing requests for comprehensive risk assessments some sectors have not received much scientific attention, one of these is the agricultural sector. In contrast to other sectors, agricultural crop losses depend strongly on the season. Also flood probability shows seasonal variation. Thus, the temporal superposition of high flood susceptibility of crops and high flood probability plays an important role for agricultural flood risk. To investigate this interrelation and provide a large-scale overview of agricultural flood risk in Germany, an agricultural crop loss model is used for crop susceptibility analyses and Germany wide seasonal flood-frequency analyses are undertaken to derive seasonal flood patterns. As a result, a Germany wide map of agricultural flood risk is shown as well as the crop type most at risk in a specific region. The risk maps may provide guidance for federal state-wide coordinated designation of retention areas.