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Mapping cropland parameters – Results from the Central Asian Water (CAWa) project

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The CAWa (Central Asian Water) project aims at providing a sound scientific basis for trans-national water resources management in Central Asia (see www.cawa-project.net). The planned activities involve a network of scientific institutions all over Central Asia. They produce joint scientific results as well as pass down up-to-date scientific methods and approaches. The German Research Centre for Geosciences in Potsdam (GFZ) has taken over the project coordination. The Department of Remote Sensing, Würzburg University, associated with the German Aerospace Centre (DLR) is one of the project partners. Its major research activities focus on analysing information on land use and agricultural production and their changes in space and time from remote sensing data, focusing on the irrigated land in Central Asia. Some of the research topics include cropland mapping (e.g. crop classification and creation of agricultural field cadastre), crop production monitoring (yield), drought monitoring, and mapping and monitoring of spatial cropland extent. Detection of marginal land or agricultural land abandonment, a widespread phenomenon in this region that has strong socio-economic and ecological consequences, is another research focus. The methods and results demonstrate the value of remote sensing technologies to supporting regional decision makers and planners for an improved and sustainable land and water resource management.