

### **Alkoven - Austria**

Data from Alkoven in Upper Austria describe erosion experiments with different management variants. This includes variants of different wheeltrack compaction, tillage (rough furrow/catch crop or conventional/mulching) and crop rotation. Measured data include soil erosion (sediment charge), surface runoff, weather data, management data, and soil parameters.



Figures: Experimental site in Alkoven, Austria

### Mistelbach, Pyhra, Pixendorf - Austria

Data from erosion sites in Lower Austria (Mistelbach, Pyhra, Pixendorf) describe long-term erosion experiments with different tillage systems. Tillage variants comprise conventional tillage, reduced tillage, and no-tillage with crop rotation of annual crops. Provided data include soil erosion (sediment charge), surface runoff, sediment and runoff composition (N, P, SOC), weather data, management data, and soil parameters.



Figures: Experimental site in Pyhra, Austria

### **Groß-Enzersdorf - Austria**

Data from crop water use studies in Lower Austria were assessed within the SHui project. Data from Groß-Enzersdorf include data from lysimeter and field measurements under different soil water availability and irrigation management. Data from both scales (6 m<sup>2</sup> and 6 ha) include weather data, evapotranspiration data, management data, soil characteristics, soil water status data, crop yield, and crop development data. The figures show the lysimeter station and the experimental field in Groß-Enzersdorf, Austria.



Figures: Experimental sites in Groß-Enzersdorf, Austria

### Raasdorf - Austria

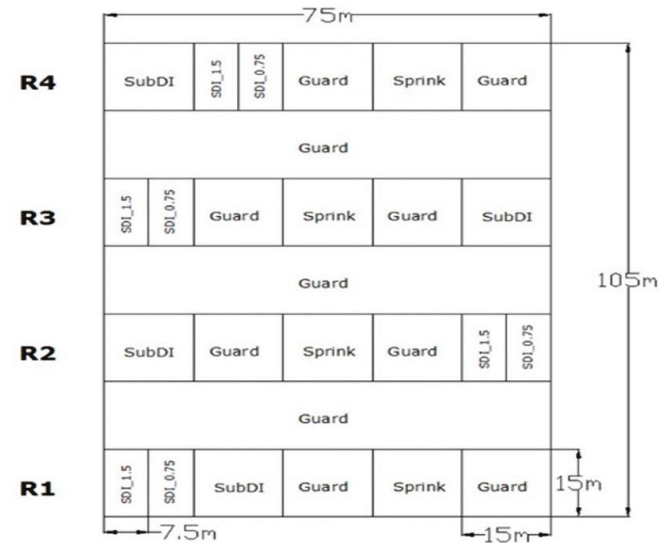
Data from of crop water use investigations in Raasdorf, Austria contain weather data, evapotranspiration data, management data, soil characteristics, soil water status data, crop yield, and crop development data under different tillage. The tillage system variants comprise similar to the erosion experiments conventional tillage, reduced tillage, and no-tillage. The figures show the long-term no-tillage and conventional tillage fields in Raasdorf, Austria.



Figures: Experimental site with experimental plots in Raasdorf, Austria

## Albacete - Spain

Data sets from CEBAS-CSIC in Spain were gathered from irrigation experiments investigating effect of different water qualities and salinity. This included datasets from Albacete, investigating maize growth under irrigation with low and high salinity ( $SO_4$ ). Datasets from a grapevine salinity trial in Fuente-Alamo with low-salinity irrigation, high-salinity (NaCl) irrigation and rainfed conditions comprised weather data, soil characteristics, management, and crop data. The data files from Torre-Pachecho provide all measured data (weather, soil characteristics, crop, management) of an irrigation experiment (up to no-stress conditions) with lettuce.



Figures: ITAP research facility with design of irrigation experiment in Albacete, Spain

### **Sancho Martin - Spain**

Data sets from IAS-CSIC in Spain contain experimental data from commercial olive orchards. This includes datasets from the a rainfed olive orchard Sancho Martin in Cordoba. The data sets contain soil water, tree root development, and yield data of different soil management strategies. The figures show the effect of selected soil management strategies in Sancho Martin in Cordoba, Spain.



Figures: Experimental site in Sancho Martin, Cordoba, Spain

### **Benacazón - Spain**

Another data set is from the experiments in a commercial olive orchard under deficit irrigation in Benacazon (Spain). The Benacazon data sets include data from runoff plots measuring runoff and soil losses under different soil management (bare soil/cover crops). The datasets also include sediment and runoff composition (P, SOC).



Figures: Experimental site in Benacazón, Spain

### **Loddington, Crake Trees Manor, Whinton Hill, Newton Rigg – United Kingdom**

Data from erosion experiments in the United Kingdom comprises management, soil characteristics, and erosion data for several years in Loddington, Crake Trees Manor, Whinton Hill, and Newton Rigg. Runoff, water quality and hydrological variables are from measurements at the catchment outlets to determine the impact of diffuse pollution control for various crops (mainly cereals and potatoes). Figure 12 shows the effect of selected soil management strategies in Sancho Martin in Cordoba, United Kingdom.

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### **Ansai County - China**

Data sets from split-plot experiments in Ansai County (Shaanxi Province, China) investigated soil water use efficiency and crop yields under different fertilization regimes in the Loess Plateau. The measured data comprises data from two cultivation seasons on soil nutrient data, hydrological data, water use, and crop yield data. Figure 13 shows the split-plot experimental setup in Ansai County, Shaanxi Province.

See also: Liu, Q., Xu, H., Mu, X., Zhao, G., Gao, P., & Sun, W. (2020). Effects of different fertilization regimes on crop yield and soil water use efficiency of millet and soybean. *Sustainability*, 12(10), 4125. doi:10.3390/su12104125



Figures: Site with split-plot experiments in Ansai County, Shaanxi Province, China

### **Conchuela - Spain**

Data from the Conchuela experimental micro-catchment (Cordoba, Spain) provides erosion data of an olive orchard under deficit irrigation. The data sets include event sediment yields, event runoff, soil moisture data, weather data, and soil parameters. The catchment and the research results were described in detail by Prof. Gómez at the SHui Online General Assembly in July 2020 hosted by the Beijing Normal University.



Figures: micro-catchment and a measuring station in Conchuela, Spain

### **Nučice – Czech Republic**

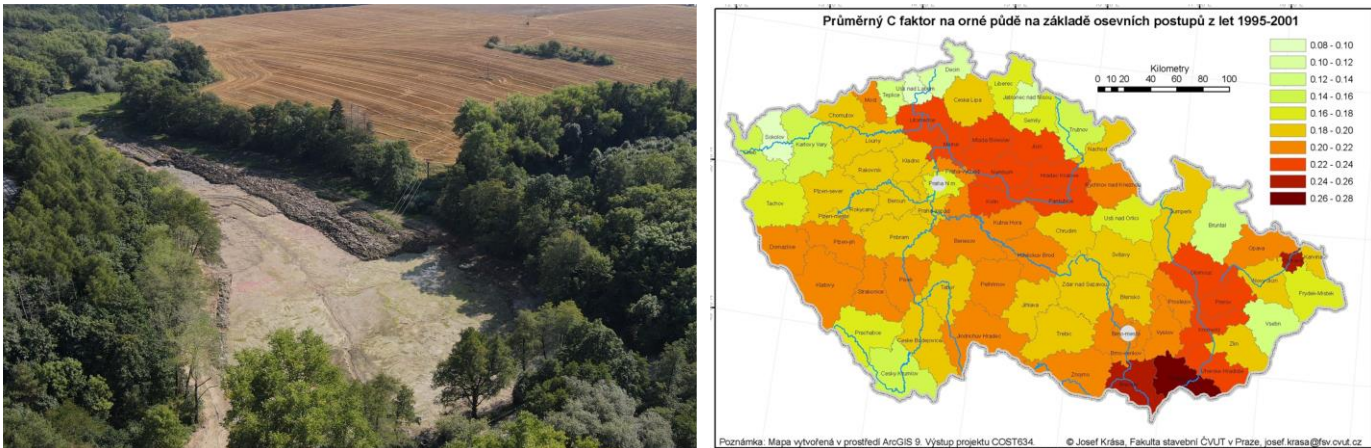
The Czech SHui partners provided hydrological data for two well-investigated catchments. The first data sets from Czech Republic comprises hydrological, erosion (runoff and sediment losses) data, and yield data from the small catchment in Nučice.



Figures: catchment and outlet discharge measuring station in Nučice, Czech Republic

## Vrchlice – Czech Republic

Catchment data from the Vrchlice catchment in Bohemia in the Czech Republic provides all data needed for soil erosion and sediment delivery models, including topography, hydrological, and land use data. This data set was also used for the Watem/Sedem tutorial at the SHui General Assembly in Prague with the topic “GIS assisted estimation of soil loss and sediment transport – WATEM/SEDEM”. Additional information and the tutorial itself are available at the project website ([www.shui-eu.org](http://www.shui-eu.org)).

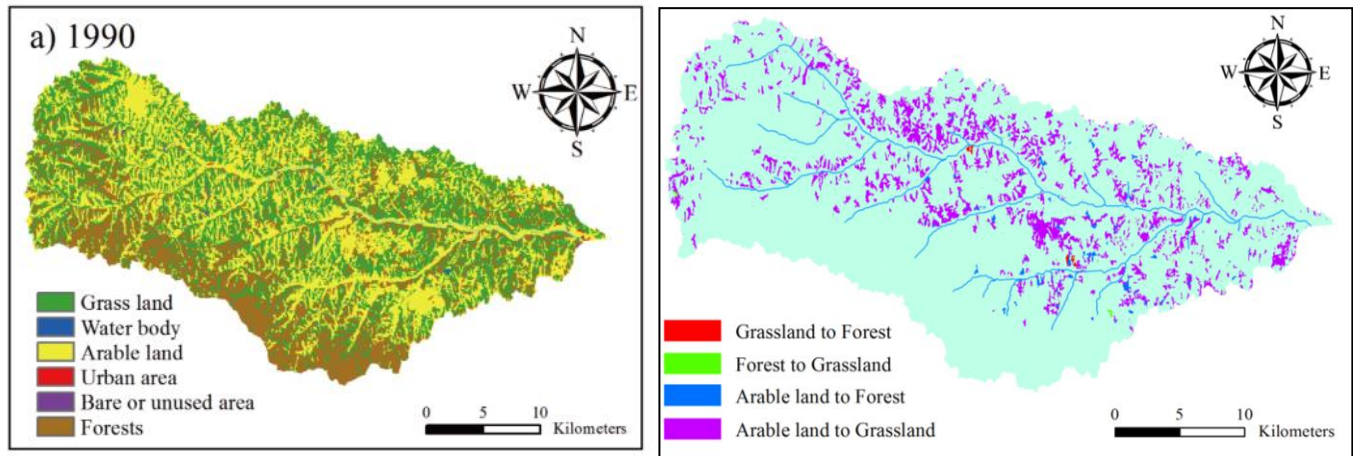


Figures: catchment and a map with crop data in Vrchlice, Czech Republic

### Xichuan River catchment - China

Data from the Chinese Xichuan River catchment (Ansai, China) on the Loess Plateau describes hydrological patterns in the 800 km<sup>2</sup> catchment. The data comprises 23 years of hydrological data, which were investigated towards runoff-sediment dynamics under different flood patterns. The data sets contain weather data with daily precipitation time series from four stations and daily runoff and sediment load at the outlet.

See also: Hu, J., Gao, P., Mu, X., Zhao, G., Sun, W., Li, P., & Zhang, L. (2019). Runoff-sediment dynamics under different flood patterns in a Loess Plateau catchment, China. *catena*, 173, 234-245. <https://doi.org/10.1016/j.catena.2018.10.023>



Figures: (historical) land use maps from the Xichuan River catchment, China