

PP6 Bavarian Environment Agency - WP 5 - Monitoring stations

External Expert: Catholic University of Eichstaett-Ingolstadt - Chair of Physical Geography

Monitoring Station II – Arzbach/Isar (Arzbachmündung)

a) General Catchment Characteristics

- Geology: Limestone Alps with different lithology, Pleistocene deposits
- Land-use: meadows and alluvial forest

b) Hydrology

Hydrology is strongly controlled by operation of the Sylvenstein reservoir, especially in case of high flood events.

c) General Description

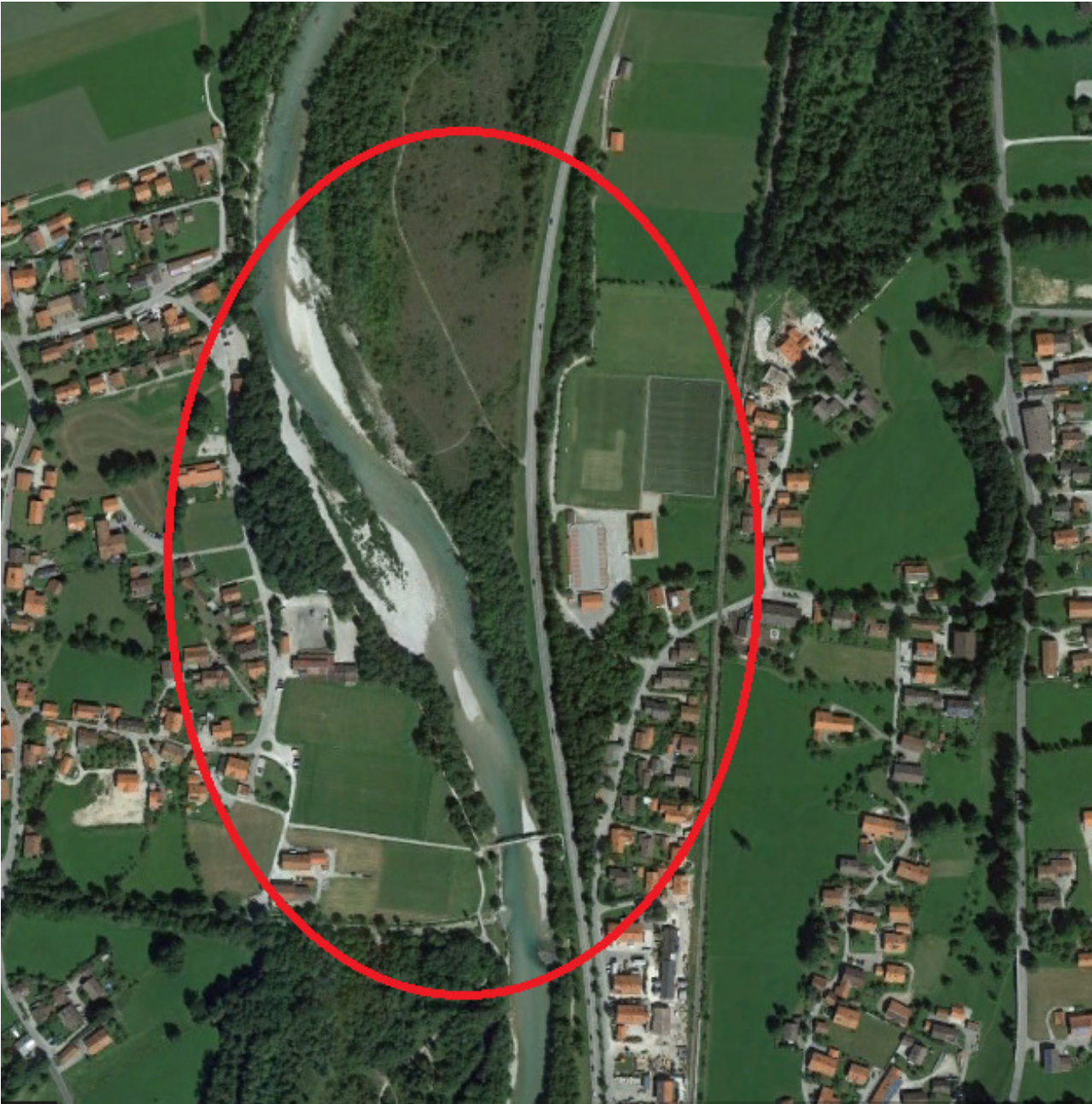


Figure 1: Overview "Arzbachmündung" and area of investigation (map based on Google Earth)



Figure 2: Erosion at the bank of the Isar near Arzbach mouth

The "Arzbachmündung" site is located at the mouth of the Arzbach torrent into the Isar. It is located next to Arzbach. Coordinates of the embouchure are: N 47°42'32.50" – E 11°33'41.21"

The investigations should focus on the delivery of bed load material, the gravel bank development, changes at the gravel banks of the river Isar (Figure 2) and the influence of different discharge situations on river morphology.

d) Listing of applied Measurement Methods

- Transverse profiles (existing data from the LfU/WWA and own mappings via tachymeter and/or differential GPS)
- Discharge/deposit measurement (data from governmental climate stations)
- Terrestrial laser scanning (Riegl)
- Aerial photos (UAV Falcon 8)
- Multitemporal analysis of aerial photos

e) Listing of measured Parameters

- Transverse profiles (changes in sediment storage and water depth)
- Digital terrain models to quantify the changes in larger areas of the river bed
- Aerial photos for multitemporal information

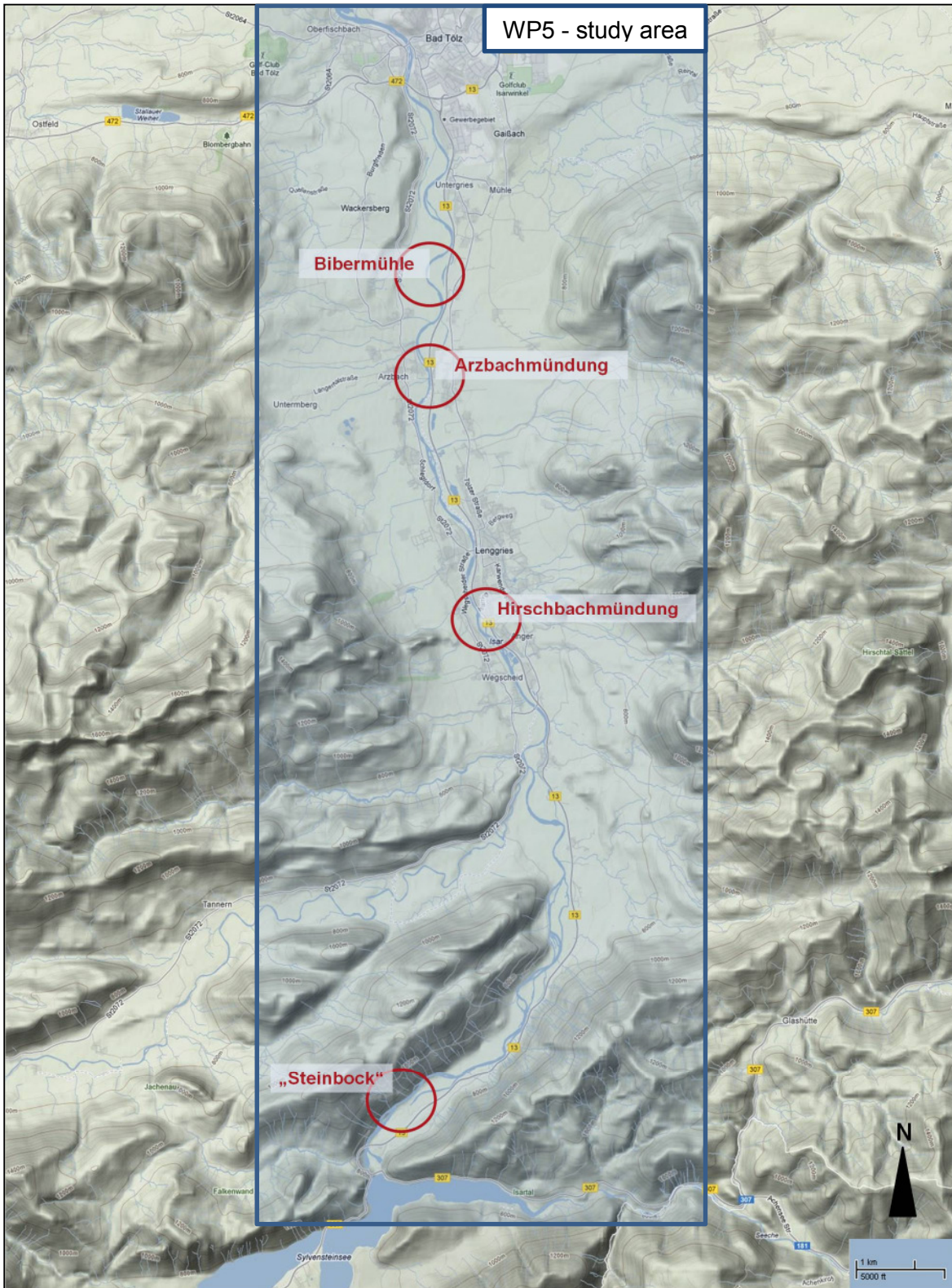


Figure 3: WP5-study area and monitoring stations along the river Isar (map based on Google Maps)