

SHORT SUMMARY (IN ENGLISH)

The basic infrastructure of the research project is the developed Archaeological Information System (AIS) as a subject-specific extension of an Open Source Geographic Information System (GIS), in which the data collection, i.e. the construction of the data corpus, the data aggregation, evaluation and archiving took place. The methodological focus of the AIS-based study included Delaunay triangulation for calculating next-neighbour relationships of the settlement sites to each other in settlement clusters and network connection graphs, which have been analytically visualised in numerous mappings. By means of least-cost path analyses based on the highly detailed Digital Terrain Model - DTM1, probable path connections over land or river were calculated, checked for plausibility and compared with the real archaeological features in the field in the course of systematic field walking. A reference corpus shows regionally typical features, including those of the migration-period hilltop settlements, in the context of the surrounding (cultural) landscape in the DTM1 terrain models, in order to carry out further visibility, network-oriented cost connectivity and node analyses. In addition to the core study region on the central Main, the settlement patterns and conditions of other regions, such as those on the river Oder, were also comparatively examined if they were of particular relevance to the research question, e.g. questions about the reasons for migrations. Through the comparative use of the selected methods of archaeoinformatics and digital archaeology as well as landscape archaeology, new results on the spatial order in antiquity up to the Early Middle Ages could be pointed out in a targeted manner:

In a supra-regional context, comparative statistics revealed an astonishingly uniform development in the number of sites from the early Roman Period to the beginning of the early Migration Period in both regions in the inner Barbaricum on river Oder and in the Roman border region on river Main. The early Migration Period was a pronounced dry phase of the palaeoclimate. However, in the Barbaricum there was a climatically induced dissolution of the settlement clusters, which was accompanied by a drastic exodus of the population and which in the course of the 6th century up to the 7th century led to an almost complete desettlement in the late Migration Period of the Oder region. In contrast, the settlement clusters along the Main region did not dissolve, but the densely populated settlement clusters continued to exist there. However, a hypothetically assumed immigration from the Oder region could not be proven on the river Main on basis of the available, often quite unspecific find material. The late Migration Period (Merovingian Period) in the Main region marks clear break with the previously prevailing extensive settlement continuity from the early Roman period to the early Migration Period. The settlement restructuring was now organised by the Frankish lordship within the so-called "frühmittelalterlicher Landesausbau" of extensive processes of which resulted in the emergence of localities that still exist today. All migration-period hilltop settlements in the Main region were abandoned by the middle of the 5th century AD. Some of them were permanently settled in the early Migration Period from the end of the 4th to the middle of the 5th century AD, as the features of Wettenburg hill fort make clear, which had still been intensively developed with ramparts in the early Migration Period. Numerous Roman finds from the hilltop settlements "Höhensiedlungen" with fortification ramparts prove that they were also used as trading and supra-regional communication centres. In the today's region Upper Franconia at river Main, the fortifications were mostly built within sight of each other, whereas in Lower Franconia in the west they were not within sight to each other as viewshed analyses has shown. It is astonishing that the majority of the migration-period sites are also not located in the line of sight or viewshed of the contemporaneous hill forts. Based on the network analyses of the fortifications in the middle Main region, the settlement concept in the eastern study area showed great differences in the temporal course from the Migration Period, through the Carolingian Period, to the Ottonian Early Middle Ages. In the west, on the other hand, there is an astonishing continuity in the settlement concept, which remains largely stable over time, so that the influence of supra-regionally different concepts of settlement models in the west and east are existing. Thus, the middle Main region is clearly identified as a transition zone of these fundamentally different large-scale settlement models.