Water Networks between Ecology and Economy: The intraregional and interregional interlinking of the city of Hangzhou via waterways from the Song to the Ming dynasties from microhistorical and macrohistorical perspectives

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Based on the results of the present DFG project with a microhistorical focus on the ecology and economy of the water supply of the city of Hangzhou 杭州 / Lin'an 臨安 from the West Lake (Xihu 西湖) in the Northern and Southern Song (960–1127, 1127–1279), Yuan 元 (1279–1368), and Ming 明 (1368–1644) dynasties, the continuation of the project will expand its guiding question. It will inquire into Hangzhou as the center of an intraregional and interregional network of waterways for the transportation of staple goods in order to comprehend water management as dependent on ecological and economic conditions in the wider context of macrohistorical changes.

Situated at the intersection of the Grand Canal with the Zhe \Im River, the city of Hangzhou emerged as a trading hub during the Northern Song. Due to the progressive siltation of the estuary of the Zhe River, an alternative connection of the city to the sea was needed. Therefore, the northeastern branch canal of the Grand Canal was used as a link to the seaports of Ganpu \mathring{a} and Zhapu \mathring{r} and the Zhedong $\oiint{\pi}$ Transport Canal served as an extension of the Grand Canal to the seaport of Dinghai \hat{z} . From these ports, waterways led to other coastal ports and overseas. Transports from the interior reached Hangzhou via the Zhe River.

The project will analyse how a metropolis and temporary capital was only viable in terms of economy by way of interlinkage of water networks where staple goods from the surrounding region and other regions were imported. Yet, the city's economic power was based on the transshipment of commodities from surplus deficit regions, resulting in economic and ecological feedback effects in these regions and promoting specializations and structural change from food crops to cash crops there.

Furthermore, the project will reveal how climate change, especially climatic cooling, and the shift of geopolitical priorities with follow-up relocation of dynastic capitals required the adaption of the structure of Hangzhou's water networks and their hydrological facilities. When after the Jurchen conquest of North China the Grand Canal was disrupted, transports from the region south of the lower Yangzi 樣子 travelled the other direction to the south and Hangzhou's imports from regions on the southeast coast increased. During the Yuan, due to war damages on the Grand Canal, transports to the north were temporarily redirected on the sea route. When coastal transports were restricted during the Ming, vice versa, canal transports were promoted again

The research on these questions is mainly based on the local gazetteers of Lin'an / Hangzhou and the regions linked with it, informal descriptions of the city, private notes, and archival compilations inclusive of Qing dynastic source material, supplemented by maps, paintings, and archeologic findings.