

**Workshop Report:**  
**The Hydrosphere and Socioeconomics in Modern Asia**  
**Exploring a New Regional History Using a Database and Spatial Analysis**

On the 3rd and 4th of February, scholars working on different aspects of Asian economic history came together at the Graduate School of Economics, The University of Tokyo for a two-day workshop on the Hydrosphere in Modern Asia. The conference marks the start of a five-year project led by Prof. Tomoko **Shiroyama** (University of Tokyo) and sponsored by the Japan Society for the Promotion of Science will explore the Hydrosphere and Socioeconomics in Modern Asia and use new database creation tools and spatial analysis to create a new regional history of Modern Asia.

On 3rd February, Prof. Tomoko **Shiroyama** opened the conference. In her introductory remarks, she especially emphasised the need of seeking a new history of Asia that tries to mine sources for data and then uses new digital tools, such as GIS (Geographic Information System), to visualise and analyse this data in new ways. She also emphasised the importance of incorporating the impact of environmental factors in this regional history and the necessity of highlighting the role of the environment in modern Asia. Prof. Shiroyama closed her remarks by suggesting possible results and research outputs of the research project.

Prof. Shiroyama's remarks were followed by the presentations of the first research group of the new project, which focuses on China. In the first presentation, Prof. Takeshi **Hamashita** (Oriental Library) introduced the records of the Chinese Maritime Customs Service as a group of sources that can be used to explore China's hydrosphere. He discussed his efforts in reorganising the records of the Customs Service so that it can be used to explore China's hydrosphere and used the example of Hankou to explain the usefulness of these records for the project. In the next paper, Prof. Yoshinori **Kigoshi** (Nagoya University) gave an introduction to a project at Nagoya University that uses shipping data from the *North China Herald* as a basis for GIS analysis. Prof. Kigoshi explained that visualising this data can help us reconstruct the shipping traffic between ports and the shape of trading networks in modern Asia. Finally, Prof. Ei **Murakami** (Kyoto University) discussed the problem of piracy on the West River in the late Qing Period. He shed light on an important by-product of the expansion

of trade and explained that with the growth in trade on the West River, the problem of piracy also rose and became a significant problem.

The first research group was followed by the first keynote lecture delivered by Prof. Ka-chai **Tam** (Hongkong Baptist University). Prof. Tam's lecture discussed the use of GIS for the large-scale analysis of judicial cases in the coastal regions of China from the mid-16th to the mid-19th century. Prof. Tam explained that this analysis showed the potential of using GIS analysis to turn qualitative data extracted from individual historical sources into quantitative data.

After a short break, the conference turned to the next research group, whose work focuses on India. Prof. Sayaki **Kanda** (Keio University) explained how sources collected at the British Library can be used to extract, analyse and correlate data on rainfall rates and rice exports in colonial Eastern India. Prof. Kanda then showed how changes in rainfall and rice exports not only had an impact not only on India but also on other parts of South East Asia. In many ways complementing Prof. Kanda's presentation, Prof. Michihiro **Ogawa** (Kanazawa University) then discussed the relationship between rainfall and famine in 19th century India and different ways of analysing the existent related data.

These two presentations of the India Group were followed by the second keynote lecture given by Prof. Sunil **Amrith** (Harvard University). Prof. Amrith first discussed different possible avenues of bringing social history together with data science. He then explained that compared to historians of China, historians of India have paid relatively little attention to the study and role of water in Indian history. Prof. Amrith then proceeded to discuss the theme of the monsoon and its centrality in Indian history and considered how research about water in modern India could be linked to other fields of Indian history.

The second day of the workshop was started with presentations by the members of the Spatial Analysis Unit. In a joint presentation, Prof. Akiyuki **Kawasaki** (University of Tokyo) and Chang **Liu** (University of Tokyo) explored how methods from civil-engineering can contribute to the solving of historical research questions. Prof. Kawasaki explained how GIS can be used to overlay and analyse climate, hydrological and socio-economic data and discussed the historical sources from which such data can be extracted. Liu then discussed in detail a case-study already mentioned by Prof. Kawasaki, the 1931 China Flood, focusing especially on precipitation during the flood, the flood's causes and the regional extent of the flood.

This presentation was followed by the next key-note address delivered by Prof. Shi **Xie** (Sun Yat-sen University). Prof. Xie's lecture discussed the relationship between humans and water in the lower Yangzi delta between the 15th and 17th centuries. He particularly emphasised the relationship between environmental factors and economic life. In his presentation, Prof. Xie also compared the lower Yangzi delta with the European Rhine–Meuse and provided an outline for a comparative study between the two deltas. After a lunch break, Prof. David **Pietz** (University of Arizona) delivered his keynote address on China's Yellow River and the North China Plain. Prof. Pietz's lecture focused particularly on the problem of shortages of water in North China. He looked at China's current water challenges from a historical perspective and discussed different historical continuities in Chinese management of water from imperial China to the Maoist era.

The two keynote addresses were followed by presentations by the South-East Asia Group. First, Prof. Toshiyuki **Miyata** (Tokyo University of Foreign Studies) introduced the different members of the South-East Asia group and his own research on climate changes, rainfall and rice cultivation in 20th century Thailand. Prof. Atsushi **Ota** (Keio University) shifted the focus to the Netherland East Indies and explained how Dutch primary sources can be mined for data on trade, agriculture and climate and how GIS can be used to overlay, combine and analyse these different data layers together. Prof. Atsushi **Kobayashi's** (Osaka Sangyo University) presentation focused on Malaysia's Sarawak region during the early 20th century. Prof. Kobayashi introduced and outlined his efforts to start collecting, organising and connecting data on trade and weather conditions in the region.

After the conclusion of the South-East Asia Group's presentation, Prof. Punnee **Bualek** (Chandrasem Rajabhat) delivered the last keynote address of the workshop. Prof. Bualek's presentation focused on the Bangkok's Bang Khen Field. Based on both historical research and a large number of interviews conducted by Prof. Bualek, the lecture followed the development of the farmer community on the Bank Khen Field between the 1860s and the 1960s and particularly focused on the connection between rice production and trade.

The workshop concluded with comments by Professors R. Bin Wong (UCLA) and Kohei Wakimura (Osaka City University) and a general discussion amongst workshop participants that summarised the results of the workshop and considered the future development of the research project.

All in all, the two-day workshop held at the University of Tokyo marked a very interesting and stimulating start of the five-year research project on the Hydrosphere in Modern Asia. It brought together scholars from a variety of fields and showed the great potential for a new regional history of Modern Asia that uses the theme of the Hydrosphere to connect the scholarship on the history of the different regions of modern Asia. Another very interesting takeaway from the workshop was how different new methodologies, such as GIS analysis, can be used to analyse and bring together different types of historical sources and make the results of this analysis visible through visualisation. As the different presentations showed, mining historical sources for data instead of only conducting qualitative analysis can make it possible to connect, correlate and compare different data sets, for example from different parts of economic life, such as trade and agricultural production. Moreover, once sufficiently large datasets have been built by each of the regional research group, it should also be possible to connect these datasets and discover new parallels or connections between the different regions of modern Asia.