

Final Report: Senior Research Stay at Peking University

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Sustainable and digital infrastructure in China's regional mega-city integration

September 23, 2019 – October 14, 2019 / 3 weeks

When the leaves of the Ginkgo trees start turning golden and the air becomes clear again after the summer heat, it is probably the best season of the year to visit Beijing for a research stay. I arrived by the end of September to spend three weeks at the Centre for Urban Planning & Transport Studies of the College of Urban and Environmental Sciences at Peking University within the framework of the University Alliance for Sustainability (UAS). As a postdoctoral researcher at the Institute of Chinese Studies at Freie Universität Berlin, where I am working in Professor Dr. Genia Kostka's project on 'Infrastructure Provision in China', I wanted to explore a new research topic, to update information on previous work, and to discuss possible collaborations for future academic exchange.

Topic-wise, the aim was to get a deeper understanding on the implementation of digital infrastructure projects in China's mega-city areas. I had several conversations with academics from institutions that included Tsinghua University and China Normal University, with practitioners working in the area of city planning, and with local population in Beijing and its outskirts. They offered invaluable insights on project implementation, associated challenges and the multiple interests involved. Besides, I undertook trips to two rural counties in the southern part of Beijing, where I visited afforestation projects and digital infrastructure pilot projects, which were designed to turn the area into a sustainable region in the Beijing-Tianjin-Hebei triangle. I also collected Chinese written materials on green city development, print magazines on China's current digital infrastructure deployment, and secondary sources, especially books related to the urban transformation trajectory in the greater Beijing area.

In addition to the work on digital infrastructure, I updated information based on previous research on the nexus between renewable energy infrastructure (offshore wind power and electric vehicles) and China's supply of critical raw materials (mainly the two rare earths neodymium and dysprosium). I presented the results on October 22nd 2019 during a conference on the phase-out of oil and the phase-in of critical metals at Institute for Advanced Sustainability Studies (IASS) in Potsdam, Germany.

I am very grateful for the three wonderful weeks in Beijing and I would like to express my gratitude to the many individuals who made this stay possible. I would like to thank Professor Dr. Pengjun Zhao, Director of the Centre for Urban Planning & Transport Studies at Peking University for inviting me to his institution. From the University Alliance for Sustainability, I would like to thank Mr. Wei Chen at Peking University and Ms. Katrin Schweigel at Freie Universität Berlin. I also thank Professor Dr. Genia Kostka, Dr. Xinhui Jiang and Dr. Haiyan Lu at Freie Universität Berlin for their support. Finally, my thanks goes to the individuals in China who shared both their precious time and knowledge with me. Of course, three weeks pass very fast and I am more than looking forward to coming back; maybe when the spring sun starts shining through light green Ginkgo leaves.