

## **Rising carbon inequality and its driving factors from 2005 to 2015**

Topic: How the rising of emerging economies can reshape the world? II (Chair: Jing Meng, University College London)

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Around 80% of the volume of international trade is carried by sea. Port is the key infrastructure for the international trade and is also under the threat of climate change. Climate disaster may disrupt the port operations, and consequently lead to the economic or labour loss. It is particularly for China's ports, given the status of world factory. However, the impacts of climate disasters on global supply chains due to the disruption of China's ports are still less understood. Here, we link micro-level customs data with global MRIO model to allocate China's international trade into China's 50 main ports. We illustrate the scale of global GDP related with each China's port. Then, we simulate the scale of GDP loss in different climate scenarios (probability of climate disaster) due to the disruption of China's ports. The study aims to gaining insight into how climate disasters on transportation-hotspots in the future affects the global supply chain.