A conceptual framework for air quality services: Application for China

KAI WAN[1], SIMON SHACKLEY[1], RUTH DOHERTY[1], ZONGBO SHI[2]

[2] School of GeoSciences, the University of Edinburgh, UK (ruth.doherty@ed.ac.uk)
[2] School of Geography Earth and Environmental Sciences, the University of Birmingham (z.shi@bham.ac.uk)

There is a rapidly increasing number of air pollution studies, as well as policy-relevant studies being conducted in China since 2013. A variety of air quality information is currently provided in China, including public air quality information and air quality information in support of policy-making. However, the air pollution science-policy-public interface is rarely discussed theoretically in China. Previous theoretical and empirical studies in the literature on the environmental science-policy interface achieved a consensus that a close and interactive interface can increase the effectiveness of environment governance. However, the current term used to describe the activity: provision of air quality information or air quality forecasting only describes a linear relationship between information providers and users which cannot represent the dynamic and interactive processes entailed. Therefore, we propose a new framing – air quality services - to capture and strengthen the two-way relationship between providers and users. In this study, a conceptual framework is created to visualise the process of air quality services. Participants of air quality services can be grouped into three categories based on their roles: producers, users and boundary actors. Producers are usually scientists and professionals. Users are those who make use of air quality information to make decisions, policies, and planning. We categorised users into four types gave speculative suitable engagement methods. Boundary actors are those who mediate the relationship between producers and users and provide dedicated translational services that facilitate communication. Finally, this conceptual framework of air quality services is applied to analyse the "Air Quality Climate Service (AQCS)" for China scoping study project as a case study.