

## **Research**

Our research a) assesses equity considerations related to water quality and access, b) connects this understanding with social-institutional and hydrologic resilience issues important for water governance, and c) provides an evaluation of how governance processes and patterns of inequity impinge on future water resilience in these sites, emphasizing urban form as well as urban-rural linkages (including tradeoffs between different uses, e.g. for irrigation or domestic needs). As such, our framework evaluates linkages between urban and rural sites, as well as linkages between equity, social-institutional and hydrologic resilience. Work across three pilot sites (Cape Town, Bangalore, and Lima) will be developed collaboratively, building on insights based on previous and ongoing research in these sites as well as from our collective interdisciplinary expertise.

We build on the track record of resilience studies, much of it drawing from ecosystem concepts and focused on 'natural' systems. Our aim is to extend work of this type to highlight social, institutional, and infrastructural dynamics—of particular importance to the urban and peri-urban domains where most of the world now lives. More specifically, we learn from recent efforts to better integrate the work of social science and humanities with resilience approaches, including the need to broaden the methods used, and to foster closer engagement with allied approaches, including political ecology, environmental history, and critical development studies.

Water governance provides a pivotal basis for our work— a field that has changed significantly in the past several decades, and where our expertise is particularly well-suited. Among recent shifts, water is increasingly governed at more local scales, citizen participation has often increased with new types of decision-making processes and involvement of community organizations (e.g., watershed committees), and scientific knowledge and uncertainties play into decision making frameworks in new ways.

Our approach critically assesses shifts in water governance, with particular attention to the social, political and institutional negotiations that are central to how decisions related to water use are made, as well as the implications of changing governance regimes for water security, access, and equity. Often these are very complex negotiations and may involve actors across sites and scales. As well, we highlight equity as paramount to any consideration of changing conditions or uses of water. In brief, insecure access or unsafe water often constitutes a burden that falls along lines of inequity and social difference (vis a vis race, poverty, or gender). Those without regular access to safe and affordable water are distributed throughout the globe, often living side by side with others who maintain easy access. Indeed, it is often those who are less able to afford water who are required to pay significantly more per unit than wealthier counterparts living in better served areas. Building on the significant capacity of our Network on these themes, we are particularly interested in the ways that social and political differences and inequalities influence access, participatory governance, variable resilience, or key conflicts among water users.

Water governance challenges are particularly acute in contexts with little infrastructural or institutional capacity, or in contexts facing challenges to effectively engage communities. As such, these challenges are often very acute in lesser-developed contexts of the global South, as well as in cities where increasing urbanization, high population density, and poor planning exacerbate these conditions. Accordingly, urban water access and governance have received growing consideration.