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Of maps and eating bitterness: The politics of scaling in China's South-North Water Transfer Project

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ABSTRACT

Based on extensive fieldwork as well as a discourse and content analysis of relevant government documents, we identify two important rescalings around China's South-North Water Transfer Project (SNWTP), the world's largest water project to date. These rescalings work in tandem with a discourse around the long-held Chinese ethic of "eating bitterness" (enduring hardship or *chiku*) and serve to include and exclude stakeholders and manufacture public acceptance of the project in the face of significant social, economic, and ecological trade-offs. We focus on two rescalings—one a more orthodox upscaling to the central government and one that relies on a fragmented, geographically disembodied, subnational scalar construction. Both rescalings operate in representational spaces, but also have important material dimensions. The case of the SNWTP demonstrates how rescaling is not only about power struggles between administrative political units, but can also be used as a political tool to exert power over particular groups of people.

Introduction

In December 2014, two of the three planned lines of China's South-North Water Transfer Project (SNWTP), the largest water control project ever undertaken, became operational. The massive interbasin transfer will move up to 38 billion m^3 of water each year from the Yangtze River and its tributaries in central China to the severely water stressed North China Plain (NCP) (NSBD 2012a; 2012b) (see Fig. 1). Water demand on the NCP greatly exceeds local precipitation and imports from river transport. Annual per capita availability of water in the Yellow, Huai and Hai River basins that comprise much of the NCP ranges between 314 m^3 and 672 m^3, well below the threshold at which water shortages can threaten food production and economic development (Jiang, 2009; Wang & Jin, 2006). In recent years the shortfall has been met by mining groundwater resources (Varley, 2005; Jiang, 2009), the overextraction of which affects more than 70 per cent of the region (MWR, 2007). While irrigation demand from agriculture is high and exacerbated by the continued use of aging, leaky infrastructure (Webber, Barnett, Finlayson, & Wang, 2008), energy production is also an increasingly critical consumer of water on the coal-centric NCP (Tan, Hu, Thierot, & McGregor, 2015). It is in support of this latter use, specifically as it serves urban and industrial growth in and around the megacities of Beijing and Tianjin, that the transferred water is being mobilized.

The water is being carried north by a pair of principal canals—the Middle Route (MR) and Eastern Route (ER)— stretching more than 1,100 km each, together with additional branches off to roughly two dozen individual cities and sub-regions within the NCP. Plans are being made to construct a third route to divert water from the western Himalaya, though it is unclear if they will be carried out in the face of growing political and popular resistance both in China and in neighboring countries that depend on Himalayan headwaters for their water supply (Ramachandran, 2008; Tan et al., 2015).

As a key ingredient for socio-economic development water has the power to make or break places with its scarcity or abundance. As the SNWTP remakes the geography of water availability across much of central and eastern China, it also remakes the country's geography of opportunity by creating an unequal distribution of benefits and costs among residents living in the water donor and recipient basins. While Beijing, Tianjin and, to a lesser extent, the second- and third-tier industrial cities of the NCP, reap the benefits of their newly bolstered water supply (Yan, 2015), people in the

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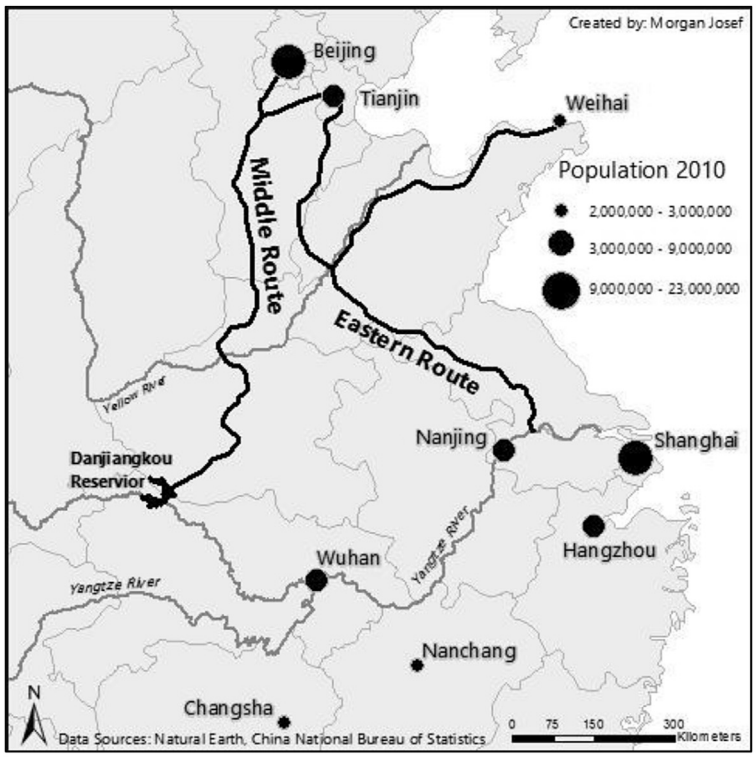

Note: The Danjiangkou Reservoir is sourced from the Han River, a tributary of the Yangtze. Downstream of the Han – Yangtze confluence in the lower Yangtze Basin are several major cities, including Wuhan, Nanjing, Shanghai and Hangzhou.

Fig. 1. The SNWTP in context. Note: The Danjiangkou Reservoir is sourced from the Han River, a tributary of the Yangtze. Downstream of the Han – Yangtze confluence in the lower Yangtze Basin are several major cities, including Wuhan, Nanjing, Shanghai and Hangzhou. Source: Map courtesy of Morgan Josef, Portland State University.

project's water donor basin are bearing most of its costs. [1] For example, construction of the MR and ER involved the forced migration of more than 445,000 people, mandated changes in agricultural practices and caused corresponding impacts on livelihoods (Zhu & Chao, 2012). Others have had to change their agricultural practices in order to protect water intakes (Magee, 2011; Zhang, 2009). The very real sacrifices these communities have had little choice but to make have been justified by the Chinese state [2] through the strategic use of discourse and its interplay with scale.

Our argument is that the official discourses surrounding the SNWTP and the material practices that are embedded within it work to reconstruct the scale of water management in this project and across China as a whole. These scalar reconstructions, two of which we focus on in this paper, work to foster public buy-in of the project, to frame the conversation around it, and to include and exclude stakeholders. In other words, scalar narratives operate as discourses of deflection, strategic storylines used by those in power to "… present a potentially controversial issue or project in such a way that alternative pathways are effectively pushed outside of the bounds of consideration" (Crow-Miller, 2015, p. 174). There is also an important dynamic at play between the representational dimension of these discourses and the material reality of the project and its impacts, both short- and long-term. In this case, discursive rescalings around the South-North Water Transfer Project are used to justify the material sacrifices made by individuals and communities in the project's donor region and to exclude communities downstream from the point of transfer from the stakeholder table. The case of the SNWTP demonstrates how rescaling is not only about power struggles between administrative political units (for example, a national government and a regional or sub-regional administrative unit), but can also be used as a political tool to exert power over particular groups of people.

The first scalar narrative we discuss emphasizes the SNWTP as a national project and draws upon the long-held Chinese concept of *chiku*, or "eating bitterness." This ethic, common across China for at least the last several centuries, means to endure hardship, persevere in the face of difficulty and press on (Loyalka, 2012, p. 16). By discursively rescaling the SNWTP from a regional project to a national one, residents in the project's water donor region are transformed—in representational but, importantly, not material terms—from victims of a regional water management scheme, forced to "eat bitterness" for the good of Beijing, into beneficiaries of a national project whose sacrifices can be justified for the good of their country. That is to say, the transferred water is presented as flowing north for the good of all of China, not only to benefit residents of Beijing and Tianjin. In line with this discursive scaling up are important material rescalings evident in land use planning,

[1] It should be noted that not all communities have accepted the social and environmental costs of the project without attempting to resist (see Buckley, 2009; see, also, Crow-Miller, 2015, p. 184–185 for discussion of why we have not seen larger, better organized opposition to the SNWTP). Other important examples of dissent come from the case of a diversion dam on the Juma River south of Beijing in 2004 (see Brown, 2006, p. 55), and the Three Gorges Dam (Webber, 2012, pp. 83–85, p. 119–124).

[2] For the purposes of this article, China refers to the contemporary Chinese state, although we recognize "China" as a multifarious signifier reflecting vast territorial realms that are negotiated and contested in historical and contemporary contexts.