

Rivers, reservoirs and riparians: the multiple dimensions of flood control on the Kemi River

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This paper considers flood risk management as a situated practice. It indicates how the attempt to manipulate the rhythms of river discharge is far more than an exercise in hydroengineering. Rather, it is a deeply political and indeed socio-cultural experiment that includes negotiating the fears, hopes and lifestyles of the riparian population with the uncertainties of climate change scenarios, the intricacies of river flows and flood projections, and national and EU legislation.

In pointing to these multiple dimensions involved in flood control discourse and practice, this paper adopts the concept of “heterogeneous engineering” (Law 1987), which draws attention to the fact that engineering projects require organising not only the material technology involved, but also a whole lot of other participants. In a study of a bridge-construction project, Lucy Suchman has insightfully combined this concept with the idea of “persuasive storytelling” (Throgmorton 1996), which implies that executing a plan requires continually convincing the people involved that it is feasible and must be done in a particular way. She writes that the construction project was “as much a form of persuasive storytelling as of analysis, calculation, inscription, and work with concrete and steel” (Suchman 2001, 168).

In approaching flood risk management as heterogeneous engineering that requires persuasive storytelling, this paper draws out how not only the means of flood control, but also its very purpose is a contested parameter. In order to realise a particular vision of flood control, reservoir proponents are challenged with engineering, and persuading, not just concrete and steel, but also wider social and hydrological dynamics.

The stark seasonal variations of the discharge of the Kemi, largest river in the Finnish province of Lapland, have long formed an integral part of the rhythmic dynamics of social and ecological life along its banks. With the spread of permanent infrastructure and activities, however, the annual spring-flood is increasingly conceived as a hazard. Traditional livelihoods on the river have been based on various sources of income that shifted, both spatially and in terms of activities, with the seasons and the respective extent of the river among other things. Since the second half of the twentieth century, however, livelihoods

increasingly depend on activities that change little around the year, such as office-work. Furthermore, alongside these forms of livelihood an attitude has developed that considers it necessary for other activities and places to be continually possible as well, such as using roads and building close to the river bank.

Whereas technological developments have allowed for a considerable advancement of this attitude and lifestyle – elaborate, but widespread technology enables, for instance, the operation of motor vehicles throughout the extremely cold winter – the river continues to defy this monotony. In spite of extensive damming in the catchment, recurring floods, in particular during snow-melt in spring, keep disturbing the dream of a landscape that conforms solely to the plans of human society. An especially large flood occurred in spring 2005, when a number of buildings were flooded, and many more were threatened.

The ensuing discussions broadly produced two opposing positions about how to deal with this issue. On the one side were those who proposed building further reservoirs to increase the storage capacity in the catchment. On the other side were those who held that some places are simply not suitable for construction and that more damming would merely shift the problem, but not solve it. The two sides were neither new groups nor unknown to each other, as previous struggles about hydropower developments had run along roughly similar lines.

The debate incorporated climate change scenarios (that predict an increase in rainfall, and thereby in river discharge), a number of EU directives (particularly the one on flood risk management), and revived discussions about the environmental benignity of hydroelectricity (which was presented as a positive side-effect of further damming by the reservoirproponents). The opposing sides not only disagreed about the implications of these issues for the value of flood control reservoirs, but also about the needs and subjectivities of the affected river dwellers.

One side seemed mainly concerned with their economic opportunities, arguing that reservoir construction with boost economic activity upstream and secure economic assets downstream. The other side emphasised the attachments of river dwellers to their homes, fishing places and berry-picking sites that would disappear under the reservoir. The former side implied that traditional ways of life need to be replaced by more professional or modern lifestyles, the latter appealed to the benefits of knowing the land and the river in traditional ways, for which they saw a promising future rather than a bleak decline. Furthermore, the discussion was sometimes held in terms of urban population (whose new riverside

buildings were threatened) against rural population (who lived in or around the areas to be inundated), creating oppositions simply because of the layout of the catchment.

A final divergence between reservoir proponents and critics was their ideas of what the Kemi River is and what role it is to play in the lives of the people living and working close to it. The former often depicted the river as a series of maximum flows, represented by straight lines of variable thickness that needed management by similarly abstract damming capacities represented by squares or triangles. The latter conversely talked about the importance of the peculiar rhythms of the river for fish and fishing, for birds and other ecological processes, and supported their claims by much more detailed maps and images.

Flood management is a serious issue along the Kemi River today. It bestows momentum on a discourse of damming and control that had lost its appeal in many other contexts. It reveals uncertainties about current and future hydrological dynamics. It illustrates how a river can define allies and adversaries in conflicts. And it shows how dealing with environmental phenomena necessarily implies dealing with social issues as well, as human and non-human rhythms everywhere interweave. In the words of Law (1987) and Suchman (2001), engineering is necessarily heterogeneous. Regulating the rhythms of the river also implicates managing places, biological processes and river dwellers – all of which often resist attempts to control them.

References

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