

Connected Rivers Mid-Term Event - 01-10-24

Workshop Connecting and Reflecting Group

Case 1: The Seine

The overarching challenge the city of Paris seems to be facing when it comes to the Seine is to have its citizens connect to the river in a meaningful way rather than turn their backs to it. Achieving this involves overcoming significant hurdles, such as poor water quality and complex concurrent use, to name a few. When it comes to water quality, we identified a few practices that hinder the cleanliness of the Seine, like the discharge of untreated wastewater from houseboats that are not connected to an adequate sewage facility, or the overflowing of greywater and rainwater into the river when heavy rainfalls exceed the capacity of drainage pipes.

Drainage strategies have been quintessential to the planning of Paris: reservoirs were built upstream to retain excess rainwater (to later be released into the Seine in periods of droughts) and reservoir-lakes were implemented further downstream. During the workshop we questioned what challenges and opportunities the two reservoirs proposed; concrete structures allow for more control and maintain the river navigable all year long, with its complex network of locks; while lakes allow for ecosystems to thrive, albeit sporadically. With predictions for heavier rainfalls in the future, these structures urgently need to be addressed to adapt to challenges to come.

We also had interesting conversations about stakeholders in and around the Seine, the diversity of which showcased the complexity of ownership and stewardship of the rivers and its banks. While the canals are owned by the “City of Paris” (despite crossing numerous towns and cities), the Seine is under the governance of HAROPA and VNF. Other stakeholders like infrastructure managers, port authorities, cruise companies, shipowners, runners, visitors, movie directors, developers etc cannot be overlooked, but one stakeholder that really struck us was an insurance broker that participated in funding the cleaning of the river. In light of the conversations we had on Monday, questioning whether funding should solely be expected from governments and state representatives, we found it interesting that some stakeholder could be involved in budgeting, as safer, cleaner and healthier rivers would be more profitable for their corporations.

When spatializing the challenges, we often realized that the Seine was difficult to access by recreational users, who prefer to sail or to row in the Marne or a few kilometers west of Paris. The multiplicity of users, from freight ships, to cruise ships, and other large boats, make it virtually impossible for recreational users to claim their space in the Seine. We looked at Paris-plages (urban beaches) as a catalyst for such uses, we also saw the Spiegelwaal as an interesting spatial configuration that separates users with its morphology.

Case 2: The Rhine

The river Rhine is an international river whose main function continues to be shipping. The regulation and responsibilities over the river are set up in a multi-scalar fashion. The Central Commission for the Navigation of the Rhine (CCNR) is the international body responsible for issuing navigation rules and collaborating in the maintenance works on the river. For the Dutch case, other important governance stakeholders are Rijkswaterstaat and the German DWA who are the responsible authorities for safe and navigable waterways. Then, provinces and municipalities also play a role in the Rhine's stakeholder ecosystem, mostly by being responsible for the use of land along the river banks. In fact, there are several factories operating next to the river.

During the workshop the discussion focused on the transboundary section of the Rhine and its division, right after the border, in the river Waal, Nederrijn and IJssel. This is a section of the Rhine in which many different water uses come together. While shipping is the main activity, with the Waal connecting Germany (and Europe) to Rotterdam and the North Sea, the Nederrijn reaching cities such as Utrecht and Arnhem and the IJssel stretching towards Amsterdam, recreational vessels such as private boats and river cruises sail through the Waal towards Germany or up north to the IJssel making this river "crossway" particularly busy.

At the same time, several issues of water management come together in this "crossway." The constant currents and water flows make the different riverbeds variable in terms of depth due to erosion and the movement of sediments, overall lowering the water level along the three different rivers. In the past, some areas of the riverbed were paved to allow a consistent water level. However, this action could not take place along the entirety of the rivers and we now witness sharp changes of depth next to these man-made riverbeds. To maintain the rivers navigable, the different responsible actors are constantly dredging or adding sand where needed, or pumping more water to one (or some of) the tributaries during dry season. This issue affects the important fresh water supply function of the river IJssel: if more water is needed in the Waal to secure shipping activities there will be less water available to replenish the Dutch drinking water supplies. In provision of less amount of water flows due to glacier melting, the combination of these two functions might become a conundrum difficult to deal with. Lastly, but not less important, with heavy rainfall oftentimes industrial and black waters overflow from the reservoirs into the Rhine, posing important threats for both wildlife and recreational users.

The conversation continued on the needs of ships, such as safe mooring spaces, which are available in the Netherlands but not in Germany, although there are plans to allocate portions of the river for this particular function. Another important issue for shipping activities is the possibility to release or dispose of hazardous and polluting gasses. These regulations are decided by each government with some differences, which meant that German ships crossed the Netherlands border to discharge polluting gasses, highlighting the need for improved cross-boundary cooperation on this theme. Finally, we looked at the future and in particular on the shipping and energy transition from fossil fuels to hydrogen and electricity. Such a transition

will need the creation of energy supply stations every 40/50 km, new developments that will probably be private-led but will need a comprehensive and cross-boundary planning.

Commonalities among the cases

Both the river Seine and the Rhine present a complex ecosystem made of multiple networks of actors operating at different governance scales. Oftentimes these networks are disconnected since the purpose of each stakeholder can be very different (i.e. commercial shipping and tourism or leisure).

Both cases will need to address water run-offs caused by heavy rainfall, which will probably increase in the future due to climate change.

Both cases could benefit from multifunctional solutions, such as energy supply stations that are also equipped for safe mooring and hazardous gasses discharge in the case of the Rhine or drainage and water retention strategies for the Seine. As well as from “hidden investors” who have an (indirect) interest in maintaining the river, such as insurance companies in Paris and perhaps the private energy suppliers that will appear along the Rhine.