

## Dams and hydropower

The case of dams and hydropower is an emblematic example of water grabbing, since it often involves the reallocation or overexploitation of water resources for profit-making purposes. In these cases, dams proponents and its funders intentionally ignore that such waters are already used by local communities or feeding aquatic ecosystems, and do not take into account their specific needs.

In the last century in Europe and North America, and especially after World War 2 elsewhere, dams and canals have profoundly shaped and changed landscapes and geographies. They have served large scale agriculture, as well as industries, mining sites, urban development, and the expansion of economic growth. However, their construction has unavoidably favoured some at the expenses of others and concentrated capital and power in the hands of few companies and governmental actors; small farmers, small householders, fisherfolk and boatmen had to bear the direct consequences of forced displacement and depletion of local natural resources and ecologies while big national firms and international corporations have become strong political actors.

In the '90s, the industry of big dams went through hard times, thanks to successful grassroots mobilization and legal opposition to many projects; internationally well known is the case of the Sardar Sarovar project in Central India and the local movement Narmada Bachao Andolan; due to stiff opposition, the World Bank commissioned an ad-hoc field research. The final document, known as Morse report, proved the heavy social and environmental impact of the project, and the World Bank decided for the first time in its history to withdraw. It was manifest how water grabbing was violently or subtly taking place, often hand in hand with land grabbing; massive displacements had forced communities out of their traditional lands and rehabilitation schemes forced them to settle down on sterile lands, while access to the reservoirs and the use of those waters were strictly prohibited. The waters were diverted into canals and taken thousands of miles away to irrigate desert areas in Gujarat. One can find similar patterns in many other big projects, like the Tarbela Dam in Pakistan, the Yacyreta Dam on the Parana river in Paraguay, or the Lesotho Highlands Water Project in Lesotho.

Today, after a hold on big projects during the '90s, and under the full swing of the financialization of natural resources and infrastructures, the World Bank, along with investment funds, is back again to finance huge projects, like the Inga dams on the Congo river or the Gilgel Gibe 3 in Ethiopia, especially for hydropower generation. New forms of water grabbing come along with the current wave of dam building: the privatisation of rivers and establishment of water rights, the increased involvement of private players (both foreign and domestic), the diversion of existing water resources for private profit, and the bowing down of democracies to private interests, with governments redefining policies and laws to legalize these practises. The Inga dams, for instance, are stuck by private funds deciding upon them and responding to stock market fluctuation and financial speculation, often in collusion with corrupted government officials and ministers. While water grabbing takes place on the ground, then, it also fosters a sort of “control grabbing”, where democratic decision are no longer in the hands of the communities but of financial investors and geopolitical strategists. In this sense, one can argue that water grabbing is also threatening democracy.

If the patterns and impacts of water grabbing are easy to detect in big projects, they are less evident in the case of small hydropower plants, which are often portrayed as environmentally sustainable, socially desirable and also a green solution to meet energy demands. Although this can be true in some cases, one needs to remain wakeful as manipulations and cooptations are very likely to occur and as definitions change from country to country. In fact, “small” is defined differently across countries. In Europe, as for instance in Italy, plants up to 5MW of capacity installed fall into the category, but they can reach 25MW in countries like China and India. “How small?” becomes than a fundamental question. “How many?” comes next. In mountain areas, most of the projects recently constructed or under development are known as “run-of-the-river”. They benefit from the natural slope, redirect water flow from a weir (a small headpond) towards the penstock (delivery pipe), which feeds the water downhill to the power station; they thus require tunnels throughout the mountains and other infrastructures whose environmental impact shouldn't be underestimated. In order to exploit the most from every single plant, one can usually find series of dams and tunnels along the rivers. Blasting the mountains and tunnel construction result in the depletion of groundwater and of the riverine ecology. Villages on the top of the hills lose their water sources while too a little amount of water is kept in the river beds to allow a healthy riverine ecosystem to continue. The real extent of the consequences is then to be seen in the long term, although this is rarely taken into account in environmental assessment reports.

Lastly, many communities affected by these kind of hydroprojects clearly say that there is poor space left for other activities, resulting in wiping out local economies based on small scale agriculture, fishing, boat transportation, tourism and pilgrimage related activities. The territory is completely restructured and too often diverted to a one-activity economy.