



UvA-DARE (Digital Academic Repository)

Conviviality Under Pressure of Market-Modernist Expertocracy: The Case of Water Commons in Rural Switzerland

Hofstetter, M.; Bolding, A.; Boelens, R.

DOI

[10.5334/ijc.1256](https://doi.org/10.5334/ijc.1256)

Publication date

2023

Document Version

Final published version

Published in

International Journal of the Commons

License

CC BY

[Link to publication](#)

Citation for published version (APA):

Hofstetter, M., Bolding, A., & Boelens, R. (2023). Conviviality Under Pressure of Market-Modernist Expertocracy: The Case of Water Commons in Rural Switzerland. *International Journal of the Commons*, 17(1), 375-389. <https://doi.org/10.5334/ijc.1256>

General rights

It is not permitted to download or to forward/distribute the text or part of it without the consent of the author(s) and/or copyright holder(s), other than for strictly personal, individual use, unless the work is under an open content license (like Creative Commons).

Disclaimer/Complaints regulations

If you believe that digital publication of certain material infringes any of your rights or (privacy) interests, please let the Library know, stating your reasons. In case of a legitimate complaint, the Library will make the material inaccessible and/or remove it from the website. Please Ask the Library: <https://uba.uva.nl/en/contact>, or a letter to: Library of the University of Amsterdam, Secretariat, Singel 425, 1012 WP Amsterdam, The Netherlands. You will be contacted as soon as possible.

UvA-DARE is a service provided by the library of the University of Amsterdam (<https://dare.uva.nl>)



Conviviality Under Pressure of Market-Modernist Expertocracy: The Case of Water Commons in Rural Switzerland

MORITZ HOFSTETTER 

ALEX BOLDING

RUTGERD BOELENS 

*Author affiliations can be found in the back matter of this article

CONTESTED
SOCIO-MATERIAL
TRANSFORMATIONS
IN IRRIGATION
COMMUNITIES

]u[ubiquity press

ABSTRACT

Citizens outside of the built-up zone in the Canton of Lucerne, Switzerland are self-responsible to establish and maintain their water services. In response many independent, collective water schemes emerged in rural areas. We describe these schemes as commons, since citizens organize legal, institutional, and infrastructural aspects of water access in a collective manner. Since the late 19th century such commons serving farming households have been subsidized by the State. In this article, we develop a conviviality lens to analyze how water commons are being supported and regulated by public institutions. We show how the introduction of neoliberal policy reforms summarized under the term New Public Management (NPM) put pressure on this public support. By describing a specific project in detail, we demonstrate how the failure of a market-modernist expertocracy to recognize these commons as alternative forms of social organization negatively affects their viability. We argue that for the proliferation of these commons their complexity, networked autonomy, and rooted notions of belonging need to be recognised.

CORRESPONDING AUTHOR:

Moritz Hofstetter

Wageningen University, NL

Moritz.Hofstetter@wur.nl

KEYWORDS:

Conviviality; commons;
Switzerland; water; modernism;
expertocracy

TO CITE THIS ARTICLE:

Hofstetter, M., Bolding, A., & Boelens, R. (2023). Conviviality Under Pressure of Market-Modernist Expertocracy: The Case of Water Commons in Rural Switzerland. *International Journal of the Commons*, 17(1), pp. 375–389. DOI: <https://doi.org/10.5334/ijc.1256>

INTRODUCTION

Collective ownership and management of natural resources, especially water, has a long tradition in Switzerland. From 1250 onwards, a variety of collective organizations emerged on the territory of today's Switzerland, managing forests, pastures and water (Stuber and Wunderli, 2021). These collective forms of organization became deeply rooted within Swiss society and took on more and more state functions during the 17th and the 18th century (Schläppi, 2019). Despite the reorganization of the state and the creation of a central government based on principles of personal freedom during the French occupation at the end of the 18th century (Stuber and Wunderli, 2021), cooperative organizations remained important (Schläppi, 2019). This led to a situation characterized as municipal dualism which still exists today, with local cooperatives playing a key role next to other political structures (Reynard, 2005; Stuber and Wunderli, 2021). While for example the provision of water services within urbanized zones is the responsibility of the municipalities (Schweizer Bundesversammlung, 1979), in the Canton of Luzern this task is in most cases delegated to cooperatives,¹ with the municipality fulfilling an oversight function. Yet, during the course of the 20th century the interest in common property organizations began to fade (Head-König, 2019) and as the Swiss minister of justice noted in a speech in 2011: cooperative forms of organization that rely on collective action are in Switzerland on a retraction (Sommaruga, 2011).

This article contributes to a growing body of literature on Swiss commons (e.g. Aubriot, 2022; Flaminio and Reynard, 2023; Netting, 1974; Reynard, 2005; Stuber and Wunderli, 2021) by analysing collective water governance in a rural area where citizens are responsible for their own water supply. Especially in the mountainous regions, many small water cooperatives exist which, in comparison to the cooperatives within urbanized zones, are characterized by low levels of professionalization and technological complexity and a high level of user involvement. Despite their independence these cooperatives are also under the influence of public institutions due to regulations and their dependence on public subsidies.

Within this context, we analyse the public support during four phases of water projects and a specific project that sought to interconnect three independent water schemes in a rural municipality in the foothills of the Alps in detail. Our analysis, which is informed by a conviviality lens, shows how these phases were shaped by neoliberal governance ideas framed as New Public Management (NPM). Our analysis further shows how a growing expertocracy dominated by modernist ideas of development and progress fails to recognize the value of the commons

and their forms of organization and water governance. This lack of recognition undermines the functioning and sustainability of these organizations.

The fieldwork for this article was conducted by the main author, who was first employed at the department for agriculture and forestry of the Canton (Landwirtschaft und Wald, LAWA) responsible for supporting rural water schemes (Feb. 2021 – June 2022) and then by the private engineering company planning the described project (since July 2022). Both were junior positions in which the author was supporting his superiors. These engagements allowed observations of daily operations and meetings, which was transparently agreed with the Canton department and company. It further created the opportunity for regular interactions with all relevant actors. These insights were enriched by in-depth, semi structured interviews with six government officials (four current and two former), five scheme officials, three engineers, two local politicians and one contractor. In addition, the historical and the newspaper archive of the Canton was consulted.

We first develop a conviviality lens and provide the historical context within which rural water commons in Switzerland emerged. We then apply this conviviality lens to scrutinize the public support during four phases of water projects and analyse one such project in detail before concluding our findings.

CONVIVIALITY AND THE COMMONS

A wealth of commons literature has emerged since the publication of “The tragedy of the commons” (1968) in which Hardin described how rational, self-interested individuals would be incapable of collectively managing common resources without either coercion (imposed by the state) or economic rationality (imposed by the market). Authors as Netting (1974) and Ostrom (1990) countered this view by describing different forms of collective management, among them the collective management of alpine pastures in Swiss villages and identifying principles that support commons' success. They demonstrated that communities can manage commons in a coherent and sustainable way, a third way of governance besides private and public governance (Caffentzis and Federici, 2014; Dolenc and Žitko, 2016). More recent interpretations of the commons reject the idea of the commons as being an alternative form of economy and see the commons as an organizational alternative (De Angelis and Harvie, 2014; Dolenc and Žitko, 2016; Esteva, 2014;). Humans are no longer seen as rational individuals solely interested in their own benefit, but as subjects of omnipresent power relations (Nightingale, 2015) who through “other-than-

capitalist” (García-López et al., 2021) collaborative forms of organization and interactions among human and non-human actors shape the commons – an endeavor called commoning (Boelens et al., 2023; Hoogesteger et al., 2023a, 2023b; Villamayor-Tomas and García-López, 2021). This most recent interpretation of the commons is at odds with older concepts such as social capital, since exchanges are no longer perceived as transactional. These commons in contrast describe an organizational alternative which builds on and strengthens communality, which we in this context understand to be “a feeling or spirit of cooperation and belonging arising from common interests and goals” or “the state or condition of being communal” (Collins Dictionary, 2023. cf. Hoogesteger et al., 2023a).

The key concept applied to describe commoning in this article is conviviality, which Illich (1973a) described as the opposite of industrial productivity. “Commons are either convivial or only a variant of globalized (and institutionalized) sameness” (Groenemeyer, 2015, p.4). A convivial society is one of creative and autonomous intercourse between people in which services and goods are created by members of society, or as Illich put it: “People need new tools to work with rather than tools that ‘work’ for them” (Illich, 1973b, p. 10). Tools in this context are not limited to simple hardware but include institutions that produce both tangible and intangible goods (e.g. knowledge, governance forms) (Illich, 1973a). Such tools are considered convivial, if they “can easily be used by anybody as often or as seldom as desired, for the accomplishment of a purpose chosen by the user” (Illich, 1973b, p. 21). Convivial tools therefore must be accessible, and their complexity and size must be limited to allow for a maximum number of possible operators. Convivial tools allow for the collective creation of societal goods and oppose the tendency to reduce the role of citizens to mere consumers. By creating tools that allow citizens to cater for their own needs, societies reduce societal injustice resulting from dependence on tools that can only be used by a few and reduce their reliance on commodity inputs. Convivial tools are labor-intensive but not necessarily inefficient (Illich, 1973b). By creating the necessity to collaborate in socially beneficial activities, they address the desire of citizens for recognition (Convivialist International, 2020) and counter the meaninglessness of contemporary society (Illich, 1973b). Such a collaborative and non-profit mode of production provides a pathway for de-growth and challenges the neoliberal organisation of society (Büscher and Fletcher, 2019; Convivialist International, 2020). Neoliberalism in the public sector is primarily expressed by what Dean defined as “technologies of performance”, viz. the establishment of “quasi-markets”, the setting of performance indicators, benchmarking and “the corporatization and privatization

of formerly public services, and the contracting-out of services” (Dean, 2010, p. 197). Conviviality further opposes ideas of modernist development and progress, which profoundly characterize expert knowledge in the water sector (Boelens, 2015). Rather than radically breaking with the past and moving linearly towards a better modernist future through technological innovation, conviviality “refers to a specific kind of lived togetherness that is shared between the human and non-human inhabitants of a specific place in time” (Vetter, 2018, p. 161. cf. Houart, 2023). Convivial water governance tools build on grounded knowledge, rooted identities, hybrid organizational forms and multiscale complexities (see Hoogesteger, 2015; Sanchis-Ibor et al., 2017; Vos et al., 2020) and are therefore at odds with depoliticized expert interventions engrained in “state-bureaucratic and neoliberal water policies aim[ing] to construct ‘equals’” (Boelens, 2015, p. 197).

Following from this, one-sided structural and teleological analyses or rational choice new-institutionalist approaches, in which actors are relatively uniform and predictable agents, miss the point. They fail to understand real-life actors’ behaviours as embedded in actual social relationships (Duarte-Abadía, 2023; Dupuits, 2019; Owens et al., 2022; Zwarteveen et al., 2005). A convivial commons’ analytical approach must allow for understanding how agents creatively manoeuvre within structural circumstances (e.g. Boelens and Gelles, 2005; Goldman et al., 2018; Mirhanoglu et al., 2023). We therefore apply an actor-oriented approach as described by Long (2001). It builds on the conviction that agents and structures interact and co-constitute each other (Giddens, 1984). Similar structural circumstances can, depending on the agents involved, lead to different outcomes (Long, 2001). Empirically and conceptually, the messy worlds of water commons and hybrid water governance structures and practices provide many learnings for this (e.g. Dupuits et al., 2020; Flaminio et al., 2022; Hoogesteger et al., 2023c; Veldwisch et al., 2019; Venot et al., 2022; de Vos et al., 2006; Whaley, 2022).

THE HISTORICAL DEVELOPMENT OF COMMUNITY OWNED WATER SCHEMES

As outlined in the introduction, collective ownership and management has a long tradition in Switzerland (Schlappi, 2019) and still plays an important role in Swiss society (Stuber and Wunderli, 2021). Commons exist in Switzerland on different scales and sectors, with the two biggest supermarket chains (Benz, 2022), several large insurance companies and banks (Ideecooperative, 2023) and 5% of the housing sector (Rorato, 2018), but also regional cheese

producers, alpine pastures, forests (Haller et al., 2021) and local water schemes being organised as cooperatives. It is important though not to fall into what Schweizer (2018) coined the “commons trap” by romanticizing collective organizations as forms of organization that inherently produce more equity and sustainable solutions. Some cooperatives are deeply embedded in capitalistic markets and collective organizations have historically served as a protection against the claims of others (Stuber and Wunderli, 2021). They further used to have a strong normalizing effect since “troublesome members of the community could easily be expelled from political and economic communal life by labelling them as so-called “Übelhauser”, which means “bad housekeeper”” (Schläppi, 2019, p. 27). Only with the subordination of commons organization under public law in the 20th century were they forced to adjust such socio-political positions (Stuber and Wunderli, 2021).

For farming households common water schemes were (and still are) in many cases the most feasible manner to improve water access. The national parliament therefore created already in 1884 the legal basis for supporting projects to improve water infrastructure for farming households in mountainous regions, subsidizing these up to a maximum 40% of the project cost (Schweizer Bundesversammlung, 1884). Public subsidies supporting water access for farming households and animal husbandry formed part of a broader set of programs, summarized under the term soil improvements. To provide technical support, the Canton of Luzern created the position of a ‘cultural engineer’ (Regierungsrat des Kantons Luzern, 1905) and endorsed in 1908 its own, additional subsidies of 10–25% of the cost of planning, construction, and land acquisition of such projects (Der Grosse Rat des Kantons Luzern, 1908). The demand for soil improvement projects soon exceeded the available financial and personnel resources. The office of the cultural engineer kept growing and was turned into the department for Meliorations in 1945 (Regierungsrat des Kantons Luzern, 1945). In response to a growing water demand due to the intensification of agricultural production, the national government revised its policy in 1954 and made it a condition that the national subsidies cannot be higher than the subsidies from the Canton (Der Schweizerische Bundesrat, 1998). In response, the Canton raised its maximum subsidies to today’s level of 30% through new legislation passed in 1957 (Der Grosse Rat des Kantons Luzern, 1957).

During the three decades that followed most of the water schemes existing today were built. These schemes serve domestic uses and livestock production since only exceptional and very minor irrigated production takes

place in the area. It does therefore not surprise that the expansion of water schemes coincided with a drastic increase in livestock numbers in the Canton between 1956 and 1978 (LUSTAT, 2022). In the same period, the Canton extended its technical support and the department for meliorations grew from seven employees in 1957 (Regierungsrat des Kantons Luzern, 1957) to 14 employees in 1973 (Meliorationsamt Luzern, 1973). In the 1980s, the neo-liberalization of service provision according to the ideas of “wirkungsorientierte Verwaltung” (WOV) and New Public Management (NPM) rose to prominence and put pressure on this publicly funded technical support offered by the Canton.

The term New Public Management (NPM) emerged to describe administrative reforms in the United States, United Kingdom (McLaughlin and Osborne, 2005) and New Zealand (Boston, 1999). Under different names but with the same rules and strategies, NPM reforms worldwide promise to raise the efficiency and reduce the cost of public administration by introducing private sector principles such as customer orientation, performance auditing and competition, while reducing the size of the state through outsourcing and privatization (Boston, 1999; García-Mollá et al., 2020; Gruening, 2001). NPM takes a neoliberal perspective on public administration (Drechsler, 2005) and builds on ideas of neo-classical management and rational choice theories (Gruening, 2001). According to NPM principles the state should orient its practice on private service deliverers (Schedler, 2000a) and introduce a competitive market mechanism where possible, to provide services at the lowest cost possible (Rickenbacher, 1995). These schools of thought are based on the perception that societies are a conglomerate of rational individuals who seek to maximize self-interest (Duarte-Abadía et al., 2021; Espeland, 1998; Vos and Boelens, 2014, 2018). NPM reforms were adjusted to the Swiss circumstances and introduced under the term WOV which can be translated to “effect-oriented management”. WOV aims to increase the efficiency of public activities by precisely formulating targets and the introduction of management structures and indicators to measure success (Schedler, 2000b. cf. Venot et al., 2022; Whaley, 2022; Zwarteven et al., 2005).

Luzern became then in 1995 a pioneering Canton in Switzerland by starting a four year pilot to implement these ideas in two departments (Fellmann and Fässler, 1995). The positive evaluation of this pilot resulted in the revision of the legal framework, facilitating implementation of market mechanisms and outsourcing of services across all public departments (Der Grosse Rat des Kantons Luzern, 2001). In addition, the executive board of the Canton was reduced in 2001 from seven to five members through a

popular initiative.² These developments led to pressure on the agency providing technical support for water schemes to lower fixed costs and engage with private companies to provide support services (interviews with former employees, June/July, 2022). This strategy of outsourcing of responsibilities led to a reduction of public employees providing support to six, in 2005, and finally only three, in 2008.

This trend was reversed only after the onset of a severe drought in 2018/19, which led to rural water shortages in 60% of all municipalities (Department for Environment and Energy, 2019). Since then, officials of LAWA have noticed an increased interest in improving water access. In response, the Canton more than doubled the available funds for such projects in two steps (2021 and 2022) and in 2022 a fourth employee was hired to manage the rising number of projects. The LAWA further revised its support strategy for rural water schemes in 2022. In the future, the focus will be on building new collective water supply schemes and connecting or merging existing schemes.

THE FOUR PHASES OF A PROJECT ESTABLISHING WATER ACCESS

We situate our examination of state intervention with water commons' in four analytical project phases: identification and financing, planning, construction, and operation and maintenance (Hofstetter et al., 2020).

IDENTIFICATION AND FINANCING

To initialize a project, one or several of the potential beneficiaries submit an application describing their issue to the municipality. These champions were and still are generally farmers who are affected more than their neighbours by water shortages or farmers who have the financial means to invest and need to ensure water availability. The municipality then forwards the application to the department for structural improvement which is part of the LAWA. This two-step approach was introduced in 1995 to create transparency and coordination in the allocation of the subsidies. Before, allocation was heavily dependent on personal relations, hence municipalities without the right contacts were less likely to get any projects (personal communication with former and current employees, June/July 2022).

PLANNING PHASE

If the LAWA considers the agricultural interest sufficient to warrant subsidy,³ the process of working out a feasibility study is started. Once a cooperative has decided which

of the options presented in the feasibility study should be realized, they commission, under the lead of the project leader from the LAWA, an engineering consultancy firm for the detailed planning. The cooperatives must approve all decisions in this process and can raise their concerns, but the influence of the project leader who controls the allocation of the public subsidies is strong. One president of a cooperative described the relationship as: "The one who pays decides". Also, the engineer plays a major role in shaping possible project ideas since: "what the engineer does not propose, cannot be implemented" (personal communication with a project leader of the Canton, May 2022).

Before the introduction of NPM and the laying off of departmental staff, the Canton employed an engineer and technical drawers who were developing feasibility studies and planning water schemes in collaboration with the cooperatives. Since the department no longer has the manpower to perform these tasks internally, external expertise has to be commissioned. Outsourcing of governmental support services is premised on the lure of cost reduction due to proclaimed higher efficiency associated with competition in the private sector and the flexibility to only pay for someone when this person is needed (Girth et al., 2012; Kremic et al., 2006). Since the Canton has a fixed annual budget to support drinking water infrastructure for farming households (1.5 million USD), there is a constant spending pressure to initialise and plan new projects. The fact that these support tasks are conducted by expensive external service providers (140-160 USD per hour for an engineer), means that while the fixed costs can be kept low, higher public subsidies are paid due to inflated project cost based on commercial rates. Outsourcing of annually recurring tasks therefore either results in reduced time availability for planning activities and consultation processes, or in higher planning costs. In addition, this development has led to a privatisation of planning know-how (brain-drain) which according to several interviewees would be very difficult (if not impossible) for the Canton to rebuild internally.

CONSTRUCTION

Once the cooperative approved the final design, the engineers initialize the tender process for contractors with the cooperative and the Canton having oversight over the process. The cooperative's steering committee usually follows the construction of new infrastructure very closely, meeting regularly with the engineer and deciding on any unforeseen issues cropping up. Depending on the nature of the project, members of the cooperative may also assist the contractor, for example, by transporting materials.

At the end of the construction process, the steering committee is therefore often already familiar with their new infrastructure and only needs limited training by the engineers to start the operational phase.

OPERATION AND MAINTENANCE

The cooperatives have full ownership over the constructed infrastructure and maintain and operate it independently.⁴ All cooperatives have a steering committee responsible for coordination, which consists usually of five members. A regular general assembly, to which all members of the cooperative are invited, normally takes place once a year and is usually attended by many users.

While all schemes either have an agreed hourly rate or set a blanket amount for the work of their steering committee, these remunerations are significantly lower than common salaries for comparable work. The proximity of committee members to key infrastructure allows them to integrate monitoring tasks into daily routines. One president explained that he regularly checks the reservoir when collecting his cows and a master of the well who lives close to the wells made it a habit to regularly monitor their yield during droughts. These water schemes form part of people's daily lives and many of the small operation and management tasks are conducted on a voluntary basis. The interviews both with scheme representatives and current and former government officials showed that financial remuneration is not the driving factor to contribute. The most common motivational factor mentioned was that water access can only be maintained through collective action. This is also valid for roads and small cheese factories, which in the rural areas are commonly also organised as cooperatives. One steering committee member explained that "our society can sustain itself, only because we have a lot of people who are willing to contribute". This engagement is acknowledged by others and several committee members expressed pride to be contributing to good quality water access. While interviewees mentioned that due to what could be described as increased individualism, it has become more challenging to find steering committee members, these rural schemes keep finding motivated members.

THE UNIFICATION OF THREE SCHEMES

To analyse the interaction and negotiation of actors within current structures and the effects this has on this form of water access creation, we will describe the initialisation and planning process of one specific project in detail. We selected this project since it attempts to improve water access through the inter-connection of existing schemes,

which as explained above will be a key type of project to adapt to changing rainfall patterns.

THE START: REFURBISHING ONE SCHEME LEADS TO A PROPOSED MERGER OF THREE SCHEMES

This project was initially limited to scheme S constructed in 1962, serving 14 households and one cheese factory. The cooperative owning the scheme has a very stable structure: the president having served for over two decades. He is proud of "his" scheme and is planning to hand it over to the next generation. Before doing so, he wants to ensure the renewal of the infrastructure. Scheme S has very good wells, which allow it to provide water to three other cooperatives. In 2018 it was decided that the bad state of the infrastructure warranted a complete overhaul; an engineering consultancy was commissioned to formulate a feasibility study. This project was stopped because the reconstruction cost was too high for the cooperative (despite subsidies) and the Canton received requests for subsidies from two neighbouring cooperatives.

The municipality decided in collaboration with the public home insurance company to commission a local engineering company to prepare a general water service plan. The intention of this plan is to analyse the state of water schemes in a predefined area and identify possible synergies. The procedure of this planning process was outlined at an initial meeting, to which the steering committees of the schemes in the area were invited. After this initial meeting, the consultancy firm gathered relevant information about the schemes. The main author joined the project at this point, assisting the project leader of the Canton and, in this capacity, joining all meetings and supporting the data gathering of the consultant.

We focus here on the three schemes for which a collective project was proposed. Scheme K is a small scheme built in 1967, serving 11 households. The yields of their springs are prone to high annual variability, hence the cooperative had sought to secure access to additional water sources, unsuccessfully. During the drought of 2018/19 a water rationing system had been instituted, which led to a renewed search for an additional water source. In 2019 this resulted in a request for support from the Canton. Cooperative N also submitted a request for public subsidies in 2019. While the cooperative has very good wells, they urgently needed to renovate their two reservoirs. These reservoirs were constructed in 1970 and no longer met the minimum standard of the department of food security, that promptly issued an ultimatum forcing the cooperative to improve its infrastructure.

All three cooperatives emerged out of communal initiatives that had been supported by the Canton. Scheme N for example was initialised by a single farmer who did

not have sufficient water to cover the increased demand related to domestic uses and growing livestock numbers. When he requested public support, he was told to start a collective scheme. He then called in a public meeting and managed to convince his neighbours to join his effort. According to him, the offer of public support was so good that no one could refuse it. While these cooperatives are all situated in the same municipality, their extent is defined by the topography and there has not been a need to collaborate in the past.

DEVELOPMENT OF INFRASTRUCTURAL OPTIONS

Early on, the project leader of the Canton developed the idea to connect schemes S and K. This could potentially reduce the investment cost for S and solve the water scarcity problem of K. Since the yields of the springs of cooperative S were significantly affected by the dry spell 2018/19, their president indicated that such a connection would only be feasible if cooperative N would also join. It was then agreed with the representatives of the municipality and the housing insurance, that the consultant would develop a plan for a shared reservoir for the cooperatives S, K and N. Each of these schemes would in return give up one of their reservoirs (Figure 1). The consultant would additionally develop for each scheme a solution to solve their issue independently.

The feasibility study suggested that a connection of the schemes would solve the outstanding issues of three cooperatives in one go, ensuring safe and sustainable water access for many households. By merging the three schemes into one, the organisational structures could be simplified, while the increased complexity of the inter-

connected infrastructure would warrant the outsourcing of its operation and maintenance to an external, professional operator. Both these developments would simplify the implementation of state interventions in case of bigger maintenance tasks and refurbishments, which was a key reason for the support of officials of the Canton for this merger. Professionalisation would further allow to keep up with the increasingly strict regulations and standards related to water quality, a scenario that both public officials and engineers kept repeating in public meetings. The consultant shared this view about professionalisation and preferred the connection option due to the technical advantages he identified (one instead of three reservoirs and better water supply security). At this stage, these project ideas were not individually discussed with the steering committees of the affected cooperatives, to avoid a situation of imbalanced levels of information among the steering committees. Future organisation of the merged scheme was also internally not discussed, with both the project leader of the Canton and the consultant stating that questions of organisation and use could be clarified at a later stage in the project.

The assumption of both the project leader and engineer was, that it would be the cost of the different options that would be the decisive element. It was therefore assumed that the steering committees could be convinced through financial incentives. When dividing the cost of the collective solution among the three schemes, it became clear that the common solution would be financially interesting for scheme S and there was no feasible alternative to improve water availability for scheme K. For scheme N though, renovating their own two reservoirs would be cheaper than

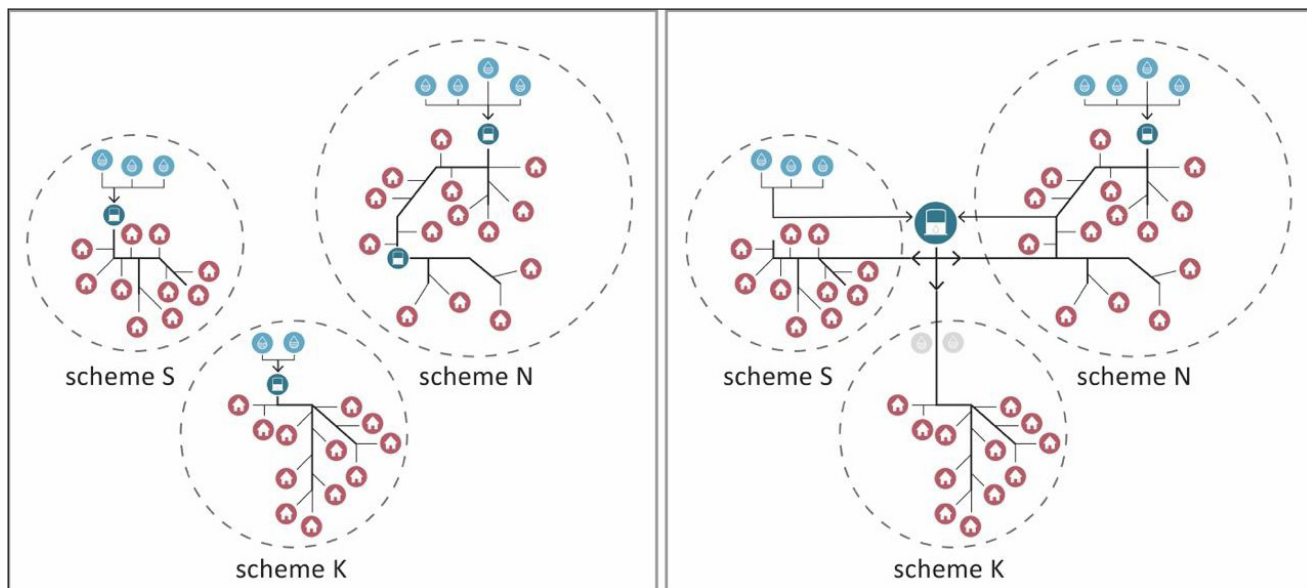


Figure 1 Current schemes (left) and inter-connected schemes (right) (source: own elaboration).

the inter-connection option. Since the inter-connection option, which the canton officials and the engineer considered to be the most efficient and sustainable option, could only be realised if cooperative N joined the project, the officials of the Canton decided that the independent refurbishment of the reservoirs of scheme N would not be allocated any federal subsidies. Without these subsidies, it would become too expensive for cooperative N to pursue the independent refurbishment of their own reservoirs and they would instead be forced to join the inter-connection option.

DEVELOPING A PLAN FOR MANAGEMENT

Once the different options with cost estimates and possible subsidies were evaluated, the steering committees of the selected schemes were invited to a presentation. Several representatives of the schemes later stated that they felt overwhelmed at this meeting, since it was the first time that they were hearing about the idea to connect the schemes. They raised many questions about what the organisation of such a connection option would look like, if it would be a necessity for the cooperatives to merge into one cooperative and what the running cost would be of the new scheme. No answers could be provided for these questions at that point. Other questions probed small inconsistencies in the plan, like the reservoir being situated too high to benefit from certain wells or a pipe that had been assigned to the wrong cooperative. It became clear to the main author that these inconsistencies could have been avoided through co-design and more active involvement of the steering committees in the planning.

Since the reception of the project was not as positive as anticipated, it was decided that the consultant together with the Canton representatives would discuss with the representatives of each scheme individually before meeting again. The president of scheme N was then the first to be invited to such a discussion, which turned out to be highly disharmonious. The steering committee of scheme N had in the meantime decided at an internal meeting, that they would under no circumstances agree to a merging of all cooperatives into one. During later informal discussions with members of scheme N they cited different reasons for this opposition. The main point raised was, that they did not see a reason to change and give out of hand a well-functioning scheme that delivers good water services. The cooperative owned good wells and there were young members who were willing to take responsibility. They also raised the fear of rising prices, since the water from their wells does not have to be pumped and they feared that this connection would force them in the future to contribute to pumping cost for the households of the other schemes.

In addition, their scheme functions with a low level of technology and they do not see a reason to become part of a larger, modernised scheme. They further mentioned that they were proud of the way this scheme was started by their relatives and the good water quality that their own scheme ensured.

After the agitated meeting with the president, the department of structural improvements invited the whole steering committee of cooperative N to the offices of the Canton. To increase the pressure on the steering committee to consent, the Canton explained that it would not be possible to foresee when the (already reduced) subsidies for the refurbishment of the two reservoirs could be paid. The steering committee of Cooperative N then stated that they were willing to share water with the other schemes, but that they would only support a project that would allow them to stay independent. The Canton agreed to elaborate such a management option.

Shortly after the meeting, the possibility was discussed to renovate both reservoirs of scheme N for them to stay fully independent. Through a connection, schemes K and S could receive water from scheme N. Such an approach could have solved the institutional issue at an estimated additional cost of 8%. It was ruled out, since to renovate an almost 60-year-old reservoir in close proximity to a newly built reservoir was considered un-sustainable. Allowing these schemes to stay independent would have to be achieved through a purely institutional solution, since Canton officials perceived the co-existence of these schemes only as an in-between step before they would realise the advantages of merging anyway. The opposition against the merging of the cooperatives was described as irrational. Moreover, it was argued that cooperatives needed to professionalise due to increasingly strict quality regulations, and only the larger ones would be able to do so.

The Canton then proposed as organisational solution the creation of an additional cooperative for the operation and maintenance of the shared reservoir, in which all cooperatives would be represented, financed through flat rate payments. This plan was then discussed with representatives of all steering committees individually and then again with all presidents in a collective meeting. They all agreed to present the project in this form at their general assemblies.

THE ISSUE OF THE 3RD CHAMBER AND THE GENERAL ASSEMBLIES

While the cooperative S directly called for a general assembly to take a decision on the project, the cooperatives K and N decided to first hold an information evening to

inform their members. The general assembly of scheme S was very well attended, with only two households out of 14 absent. After some probing questions, the members endorsed the connection project. A general assembly is also a social event, which in the case of scheme S takes place in the restaurant within the perimeter of the scheme. After the meeting, all members are invited to a meal and a drink by the cooperative and most members stay also after the meal and socialise with the other members. For the information event of Scheme K, the members were invited to the house of the president. The event was also well attended and in this case, there were also drinks and snacks served. Some questions were asked, but none was explicitly against, and they endorsed the connection project at their general assembly two weeks later.

The president of Scheme N requested a preparation meeting for the information event. This was deemed necessary since the steering committee of cooperative N had decided that they would only present the project to their members if their independence would be reflected in the infrastructural design. This could be guaranteed through the construction of an additional, third chamber next to the planned two reservoir chambers (Figure 2: Option 2). This was rejected by the project leader of the Canton and the engineer. The engineer argued that “the State is paying for almost all costs of this project, so they should stop demanding things”. He explained that the consultancy could keep adapting the project and test other options, but that this would inflate the cost, which

in this case had to be paid for by the municipality. Based on this argumentation, also the suggestion by leaders of scheme N for a physical separation of the schemes with two chambers (see option 3) was rejected.

To clarify that no additional changes could be discussed, the department officials decided to attend the information event of scheme N, which was attended by more than 50% of all involved households, though not all. During the question session, one member asked representatives of the Canton if they would be sure that the federal government would not pay subsidies for an independent refurbishment of the reservoirs of scheme N. He backed his question up with the legal text defining the conditions for support, which he had open on his phone. The officials explained that they had to efficiently spend the subsidies and therefore had the authority to decide this. Members of the steering committee later stated that while being aware of the decision power of the Canton, they were convinced that they could win, if they decided to challenge this decision in court. They explained though, that this would be expensive and time consuming and that it was not in their interest to engage in such a confrontation with the Canton.

No questions were raised regarding the setup of the reservoir. One member did express his fear that if the project would be constructed in the proposed manner, they would eventually lose their independence. After the meeting, while drinking a “Kafi Schnaps” (coffee with alcohol) which the cooperative traditionally offers its members, the steering committee explained that they purposely did not

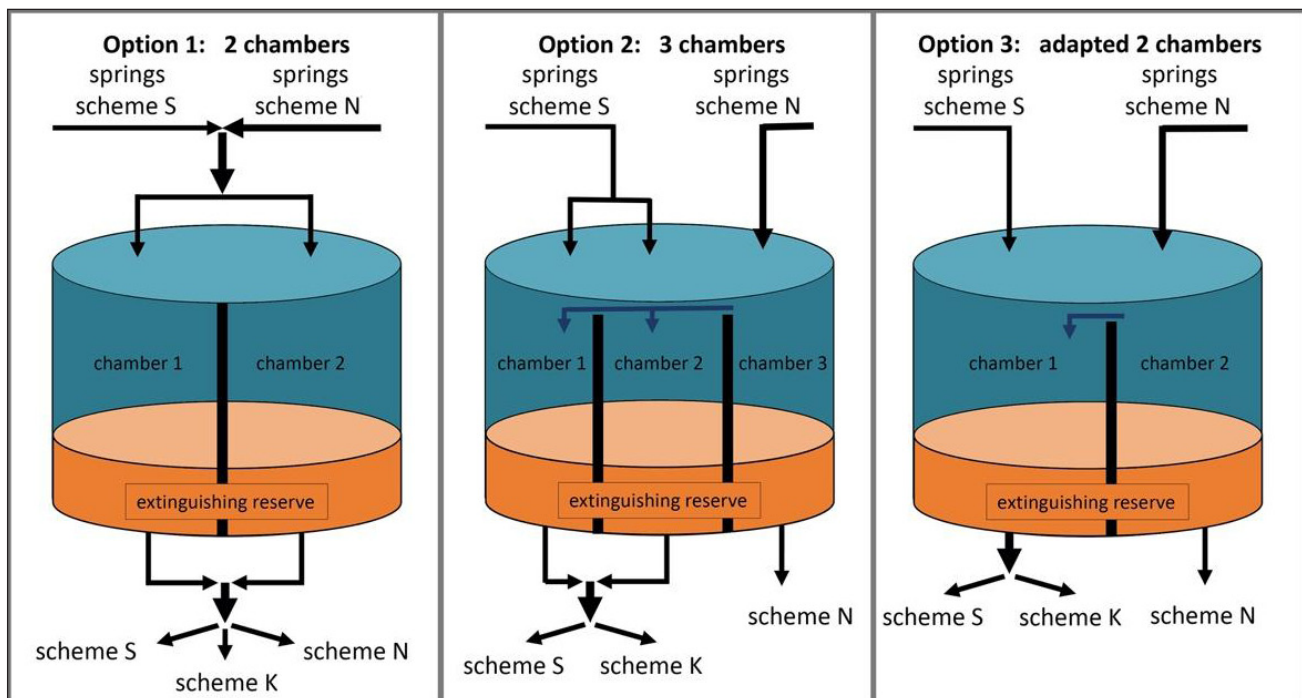


Figure 2 Different possible solutions for the new reservoir (source: own elaboration).

engage in a discussion with the Canton on the topic of the reservoir. The Canton representatives had communicated to them beforehand, that they did not want to discuss the issue of the reservoir and that they were not willing to negotiate. The steering committee therefore decided that they would let the general assembly decide over this physical separation of the reservoir without involvement or agreement of the Canton. “They can then figure out how they want to do it, since the project does not work without us.”

This general assembly of cooperative N took place three weeks after the information event, attended by slightly less than half of the members. When the planning of the connection project was discussed, many members were critical. The project leader of the Canton was again challenged to explain why there would not be any subsidies from the national government for an independent project. The answer that this was not considered a sustainable project, since it would mean substantial investments into two reservoirs that were already 60 years old with one of them being near the new collective reservoir of their neighbouring schemes, was challenged by a second member raising the same question again. Another member asked why the option of a direct connection between schemes N and K, as projected at an earlier occasion, was not chosen despite its assumed lower cost. While the planners were aware of this option during the initial situation analysis, it was not further considered, since initial data had suggested that the water resources of scheme N would not suffice to supply K during droughts. Based on better data that became available later, this option would have been a valid alternative, but since the focus of the planners had been fixed on the now presented option this was not reconsidered.

The steering committee refrained from raising the demand of a physical barrier to the other schemes through the design of the reservoir. They later stated that the majority of the steering committee members decided that they did not want to endanger the project. They felt that they already had a significant influence by preventing the merging of the schemes and they trusted that a good solution could be found ensuring their independence. Yet, the issue of a third chamber was raised by a member and sparked a fierce discussion. Several members believed a physical separation should be a pre-condition for scheme N to join the merger. The project leader of the Canton, the steering committee, and the consultant countered that this need not be decided now, since it was too detailed for the current state of planning and ensured that the independence could be secured without a physical manifestation. When it came down to the vote, the members decided with 14 to 4 votes to continue the planning of the connection

option. Three of the four opposing voters afterwards informally stated that their main concern was that they would lose their independence eventually. They want to prevent this, since they see the scheme as a heritage of their grandparents, and they feared that the state wanted to take over what was historically grown and independent. They further disliked the way the state was bullying them in case they did not choose the project option the Canton prefers. However, they emphasized that they wanted to state their opinions, but would ultimately accept the majority decision.

CONCLUSION: CONVIVIALITY AND THE THREATS OF MARKET-MODERNIST FORCES

Caught within the NPM paradigm, both consultants and public officials promote “efficient” technologies, presenting enlarged managerial units and professionalisation of management as inevitable to adapt to increasingly strict water quality regulations and changing climatic conditions. Opposition to this expert driven normalization is dismissed as representing forms of “naivety” or “lack of understanding”. The simplistic expert view of these collective actions as conglomerates of self-interested and rational individuals therefore actively undermines the continued functioning of collective schemes.

Outsourcing further strengthens the development of an expert class, whose opinions are difficult to question since it is too expensive to do so (see [García-Mollá et al., 2020](#)). This mechanism is also at play in the described example, where users are only consulted once the engineer is proposing a solution and advantages and disadvantages of specific ideas raised by users are never fully elaborated. The engineer stated that testing further options would be possible, but that this would raise the cost of planning, which eventually would have to be paid for with public money. This dependence on external experts becomes difficult to keep in check when public institutions lack access to home-grown counter-expertise (see also [Sanchis-Ibor et al., 2017](#)).

In the described commons, efficiency is created through proximity and the integration of tasks into daily lives. This allows them to be efficient despite being labour-intensive. They create purposeful functions within society which are recognised by other users and members of the cooperatives are proud of the level and quality of services provided. While in all cooperatively organised schemes, some form of remuneration is used, all interviewees stated that their motivation is not financial but to help themselves and their neighbours. Still, steering committee members

are not romanticising their contributions, but perceive them as an expression of civic duty, or as one steering committee member explained, “this is just how things work here in the countryside, everyone has to contribute, otherwise things break down”. Owning these schemes makes the users more than mere consumers – with water commons user identities that deeply differ from obedient project ‘water beneficiaries’, State-law ‘water recipients’ or market-based ‘clients’. Citizens actively interact, negotiate, and take collective decisions concerning the operation and maintenance, water pricing and future developments of their scheme, which strengthens social relationships in rural areas. Users value their schemes and oppose the pressure of normalisation and encroachment. The steering committee of cooperative N for example managed to block the merging of the three schemes into one. They further used their strategic position within the proposed scheme to repeatedly propose an alternative design of the reservoir.

The presented analysis suggests that the described schemes function based on “a feeling or spirit of cooperation and belonging arising from common interests and goals”, or communality (Collins Dictionary, 2023). To enable the collective action that permits these other than capitalist interactions, it is key that the organisation and infrastructure of the commons is convivial, meaning that it allows members of the society to interact in an autonomous and creative manner to create goods and services. When expert-driven interventions aim to enlarge the management units and modernise infrastructure in the name of efficiency as was the case in the described example, the viability of these commons is negatively affected (cf. Owens et al., 2022; Wutich et al., 2022). Within the irrigation sector, this socio-technical dimension of interventions has long been recognised (Bolding et al., 1995; Coward, 1985; Shah and Boelens, 2021; Uphoff, 1986) and described for example in cases of irrigation modernisation where the introduction of expert designs has disrupted water common’s social structures (e.g. Basel et al., 2022; Molle et al., 2009; Sanchis-Ibor et al., 2017). A failure to recognise the value of these commons for rural communities and their value as organisational alternatives from which we can learn will render their demise inevitable.

In the described water access schemes, users collaboratively organise and take responsibility for the use and maintenance of their hydraulic infrastructure. These commons are not functioning merely based on State endorsed, rational choice or market logics. Rather users are willing to contribute more than their neighbours in another than State-servant or capitalistic fashion motivated by the lived togetherness and collective engagement in purposeful

actions. For the users to be able to do so, it is key that the institutions and the infrastructure are convivial. This means that they are accessible, legible and controllable for as many community members as possible. It also implies some form of carefully negotiated assistance to allow them to reach the desired outcome while not externally taking over the tasks.

The analysis shows that marketized experts, by focusing on the technically ‘best’ and ‘most efficient’ solution, and government officials, with their aim to simplify and ‘equalize’ realities, often may endanger these commons. Within the current planning environment dominated by neo-liberal outsourcing, there is very limited recognition for the role of such self-governed schemes in maintaining healthy social relations and their value as alternative forms of social organisation. To create room for users to keep managing and co-creating their water access demands an open engagement with the realities of the users and a recognition that users are not simply self-interested, rational, or profit-maximizing individuals. Improvements to well-functioning water commons must be co-created with user collectives at the steering wheel, and their development cannot be outsourced to all-knowing experts and then dictated by the state.

Modernist actors aim to render such commons to be a thing of the past, but convivial forms of interaction and co-creation can help address both societal and natural resource related problems of our time. Yet, for these organisational alternatives to thrive, their complexity, networked autonomy, and rooted notions of belonging need to be recognised.

NOTES

- 1 For examples of such arrangements see Saladin (2000). Municipalities may also delegate water service provision to a private company, but such arrangements are exceptional.
- 2 As part of Switzerland’s direct democracy citizens groups or political parties who collect 5’000 signatures in the Canton within a year, can force the Canton to organize a referendum. If accepted, the text becomes cantonal law (Kanton Luzern, 2007).
- 3 Public subsidies target only agricultural households.
- 4 Cooperatives are obliged to keep their infrastructure functional (Schweizer Bundesversammlung, 2022) and conduct water quality tests to meet national standards (Eidgenössisches Departement des Inneren, 2021).

ACKNOWLEDGEMENTS

We would like to extend our gratitude to the people of the described water collectives who have shared their views and stories with us and made this research possible. We further would like to thank the SKAT Foundation, the Irene Jaeger-Foundation and the P. Herzog- Foundation

for supporting this research project financially and the two anonymous reviewers for their valuable, constructive comments and detailed suggestions.


FUNDING INFORMATION

This research was financially supported by the SKAT Foundation, the Irene Jaeger-Foundation and the P. Herzog- Foundation.


COMPETING INTERESTS

The authors have no competing interests to declare.

AUTHOR AFFILIATIONS

Moritz Hofstetter  orcid.org/0000-0002-4348-0847
Water Resources Management Group, Wageningen University, NL

Alex Bolding
Water Resources Management Group, Wageningen University, NL

Rutgerd Boelens  orcid.org/0000-0002-8412-3109
Water Resources Management Group, Wageningen University, NL;
Centre for Latin American Research and Documentation, University of Amsterdam, NL

REFERENCES

- Aubriot, O.** (2022). The history and politics of communal irrigation: A review. *Water Alternatives*, 15(2), 307–340.
- Basel, B., Hoogesteger, J., & Hellegers, P.** (2022). Promise and paradox: A critical sociohydrological perspective on small-scale managed aquifer recharge. *Frontiers in Water*, 4, 1–14. DOI: <https://doi.org/10.3389/frwa.2022.1002721>
- Benz, M.** (2022, May 17). Schröpfen Migros und Coop die Konsumenten? Retrieved from <https://www.nzz.ch/wirtschaft/hoher-marktanteil-schroepfen-migros-und-coop-die-konsumenten-ld.1681533?reduced=true>
- Boelens, R.** (2015). *Water, Power and Identity: The Cultural Politics of Water in the Andes*. Routledge. DOI: <https://doi.org/10.4324/9781315867557>
- Boelens, R., Escobar, A., Bakker, K., Hommes, L., Swyngedouw, E., et al.** (2023). Riverhood: political ecologies of socationature commoning and translocal struggles for water justice. *Journal of Peasant Studies*, 50(3): 1125–1156. DOI: <https://doi.org/10.1080/03066150.2022.2120810>
- Boelens, R., & Gelles, P. H.** (2005). Cultural politics, communal resistance and identity in Andean irrigation development. *Bulletin of Latin American Research*, 24(3), 311–327. DOI: <https://doi.org/10.1111/j.0261-3050.2005.00137.x>
- Bolding, A., Mollinga, P. P., & Van Straaten, K.** (1995). Modules for modernisation: colonial irrigation in India and the technological dimension of agrarian change. *Journal of Development Studies*, 31(6), 805–844. DOI: <https://doi.org/10.1080/00220389508422392>
- Boston, J.** (1999). New Models of Public Management: The New Zealand Case. *Samfundskøkonomi*, 5, 5–13.
- Büscher, B., & Fletcher, R.** (2019). Towards convivial conservation. *Conservation & Society*, 17(3), 283–296. DOI: https://doi.org/10.4103/cs.cs_19_75
- Caffentzis, G., & Federici, S.** (2014). Commons against and beyond capitalism. *Community Development Journal*, 49(SUPPL.1), 92–105. DOI: <https://doi.org/10.1093/cdj/bsu006>
- Convivialist International.** (2020). The Second Convivialist Manifesto: Towards a Post-Neoliberal World. *Civic Sociology*, 1(1), 1–24. DOI: <https://doi.org/10.1525/001c.12721>
- Collins Dictionary.** (2023). Communitality. Retrieved July 19, 2023, from <https://www.collinsdictionary.com/dictionary/english/communitality>
- Coward, E. W.** (1985). Planning technical and social change in irrigated areas. In M. M. Cernea (Ed.), *Putting People First* (pp. 46–72). New York: Oxford University Press.
- De Angelis, M., & Harvie, D.** (2014). Commons revised. In M. Parker et al. (Eds.), *Routledge Companion to Alternative Organizations* (pp. 280–294.). Routledge.
- Dean, M.** (2010). *Governmentality: power and rule in modern society*. SAGE.
- Department for Environment and Energy.** (2019). *Auswirkungen der Trockenheit 2018 auf die Wasserversorgung den Gemeinden*. Luzern, Switzerland.
- Der Grosse Rat des Kantons Luzern.** (1908). *Gesetz betreffend der Unterstützung von Bodenverbesserungen*. Luzern, Switzerland.
- Der Grosse Rat des Kantons Luzern.** (1957). *Kantonsgesetz zur Unterstützung der Bodenverbesserungen*. Luzern, Switzerland.
- Der Grosse Rat des Kantons Luzern.** (2001). *Gesetz über die Organisation von Regierung und Verwaltung*. Luzern, Switzerland.
- Der Schweizerische Bundesrat.** (1998). *Verordnung über die Strukturverbesserungen in der Landwirtschaft*. Bern, Switzerland.
- de Vos, H., Boelens, R., & Bustamante, R.** (2006). Formal law and local water control in the Andean region: A fiercely contested field. *Water Resources Development*, 22(1), 37–48. DOI: <https://doi.org/10.1080/07900620500405049>
- Dolenc, D., & Žitko, M.** (2016). Exploring Commons Theory for Principles of a Socialist Governmentality. *Review of Radical Political Economics*, 48(1), 66–80. DOI: <https://doi.org/10.1177/0486613415586986>
- Duarte-Abadía, B.** (2023). Utopian River Planning and Hydrosocial Territory Transformations in Colombia and Spain. *Water*, 15(14), 2545. DOI: <https://doi.org/10.3390/w15142545>

- Duarte-Abadía, B., Boelens, R., & Buitrago, E.** (2021). Neoliberal commensuration and new enclosures of the commons: mining and market-environmentalism governmentalities. *Territory, Politics, Governance*, 1–21. DOI: <https://doi.org/10.1080/21622671.2021.1913216>
- Dupuits, E.** (2019). Water community networks and the appropriation of neoliberal practices. *Ecology and Society*, 24(2): 20. DOI: <https://doi.org/10.5751/ES-10857-240220>
- Dupuits, E., et al.** (2020). Scaling up but losing out? Water commons' dilemmas between transnational movements and grassroots struggles in Latin America. *Ecological Economics*, 172, 106625. DOI: <https://doi.org/10.1016/j.ecolecon.2020.106625>
- Drechsler, W.** (2005). The Rise and Demise of the New Public Management *Post-Autistic Economics Review*, 33(14), 17–28.
- Eidgenössisches Departement des Inneren.** (2021). *Verordnung des EDI über Trinkwasser sowie Wasser in öffentlich zugänglichen Bädern und Duschanlagen*. Bern, Schweiz
- Esteva, G.** (2014). Commoning in the new society. *Community Development Journal*, 49(1), 144–159. DOI: <https://doi.org/10.1093/cdj/bsu016>
- Espeland, W. N.** (1998). *The struggle for water: Politics, rationality, and identity in the American Southwest*. University of Chicago Press.
- Fellmann, K., & Fässler, U.** (1995, November 22). Protokoll der Debatte im Grossen Rat des Kantons Luzern. *Luzerner Neuste Nachrichten*. p. 28.
- Flaminio, S., & Reynard, E.** (2023). Multipurpose Use of Hydropower Reservoirs: Imaginaries of Swiss Reservoirs in the Context of Climate Change and Dam Relicensing. *Water Alternatives*, 16(2), 705–729.
- Flaminio, S., Rouillé-Kielo, G., & Le Visage, S.** (2022). Waterscapes and hydrosocial territories: Thinking space in political ecologies of water. *Progr Environm Geography*, 1(1–4), 33–57. DOI: <https://doi.org/10.1177/27539687221106796>
- García-Mollá, M., Ortega-Reig, M., Boelens, R., & Sanchis-Ibor, C.** (2020). Hybridizing the commons. Privatizing and outsourcing collective irrigation management after technological change in Spain. *World Development*, 132, 104983. DOI: <https://doi.org/10.1016/j.worlddev.2020.104983>
- García-López, G. A., Lang, U., & Singh, N.** (2021). Commons, Commoning and Co-Becoming: Nurturing Life-in-Common and Post-Capitalist Futures. *Environment and Planning E*, 4(4), 1199–1216. DOI: <https://doi.org/10.1177/25148486211051081>
- Giddens, A.** (1984). *The Constitution of Society*. University of California Press.
- Girth, A. M., Hefetz, A., Johnston, J. M., & Warner, M. E.** (2012). Outsourcing public service delivery. *Public Administration Review*, 72(6), 887–900. DOI: <https://doi.org/10.1111/j.1540-6210.2012.02596.x>
- Goldman, M. J., Turner, M. D., & Daly, M.** (2018). A critical political ecology of human dimensions of climate change: Epistemology, ontology, and ethics. *WIREs Clim Change*, 9(4), e526. DOI: <https://doi.org/10.1002/wcc.526>
- Groenemeyer, M.** (2015). Conviviality. In D. Bollier & S. Helfrich (Eds.), *Patterns of Commoning*. Amherst: Off the Common Books.
- Gruening, G.** (2001). Origin and theoretical basis of New Public Management. *International Public Management Journal*, 4, 1–25. DOI: [https://doi.org/10.1016/S1096-7494\(01\)00041-1](https://doi.org/10.1016/S1096-7494(01)00041-1)
- Haller, T., Liechti, K., Stuber, M., Viallon, F.-X., & Wunderli, R.** (2021). *Balancing the Commons in Switzerland*. Rutledge. DOI: <https://doi.org/10.4324/9781003043263>
- Hardin, G.** (1968). The tragedy of the commons. *Science*, 162(3859), 1243–1248. DOI: <https://doi.org/10.1126/science.162.3859.1243>
- Head-König, A. L.** (2019). The commons in highland and lowland Switzerland over time: transformations in their organisation and survival strategies (seventeenth to twentieth century). In T. Haller et al. (Eds.), *The Commons in a Glocal World* (pp. 156–172). Rutledge. DOI: <https://doi.org/10.4324/9781351050982-11>
- Hofstetter, M., Bolding, A., & van Koppen, B.** (2020). Addressing failed water infrastructure delivery through increased accountability and end-user agency: The case of the sekhukhune district, South Africa. *Water Alternatives*, 13(3), 843–863.
- Hoogesteger, J.** (2015). Normative structures, collaboration and conflict in irrigation; a case study of the Pillaro North Canal Irrigation System, Ecuadorian Highlands. *International Journal of the Commons*, 9(1), 398–415. DOI: <https://doi.org/10.18352/ijc.521>
- Hoogesteger, J., Bolding, A., Sanchis-Ibor, C., Veldwisch, G. J., Venot, J. P., Vos, J., & Boelens, R.** (2023a). Communitarity in farmer managed irrigation systems: Insights from Spain, Ecuador, Cambodia and Mozambique. *Agricultural Systems*, 204, 103552. DOI: <https://doi.org/10.1016/j.agsy.2022.103552>
- Hoogesteger, J., et al.** (2023b). River Commoning and the State: A Cross-Country Analysis of River Defense Collectives. *Politics and Governance*, 11(2): 280–292. DOI: <https://doi.org/10.17645/pag.v11i2.6316>
- Hoogesteger, J., Konijnenberg, V., Brackel, L., Kemink, S., Kusters, M., et al.** (2023c). Imaginaries and the commons: insights from irrigation modernization in Valencia, Spain. *International Journal of the Commons*, 17(1), 109–124. DOI: <https://doi.org/10.5334/ijc.1216>
- Houart, C.** (2023). Engaging with Water and Rivers from a Multispecies Justice Perspective. *Blue Papers*, 2(1), 50–57. DOI: <https://doi.org/10.58981/bluepapers.2023.1.05>

- Ideecooperative.** (2023). Ideecooperative. Retrieved July 19, 2023, from <https://www.ideecooperative.ch/de/mitgliedschaft/mitglieder>
- Illich, I.** (1973a). Re-Tooling Society. *Philippine Studies*, 21(1/2), 125–185.
- Illich, I.** (1973b). *Tools for conviviality*. Harper & Row, Publishers.
- Kanton Luzern.** (2007). *Merkblatt Wie starte ich eine kantonale Initiative?* Luzern, Switzerland.
- Kremic, T., Icmeli Tukel, O., & Rom, W. O.** (2006). Outsourcing decision support. *Supply Chain Management*, 11(6), 467–482. DOI: <https://doi.org/10.1108/13598540610703864>
- Long, N.** (2001). *Development sociology: actor perspectives*. Routledge.
- LUSTAT.** (2022, October 31). *Tierhalter und Nutztiere seit 1946*. Retrieved from https://www.lustat.ch/files_ftp/daten/kt/0003/w072_002t_kt0003_zz_d_0000.html
- McLaughlin, K., & Osborne, S. P.** (2005). *New Public Management: Current Trends and Future Prospects*. Routledge. DOI: <https://doi.org/10.4324/9780203996362>
- Meliorationsamt Luzern.** (1973). *Organigram des Kantonalen Meliorationsamtes 1973*. Luzern, Switzerland.
- Mirhanoglu, A., Özerol, G., Hoogesteger, J., Van den Broeck, P., & Loopmans, M.** (2023). Socio-Material Bricolage:(Co)Shaping of Irrigation Institutions and Infrastructures. *International Journal of the Commons*, 17(1), 69–86. DOI: <https://doi.org/10.5334/ijc.1188>
- Molle, F., Mollinga, P. P., & Wester, P.** (2009). Hydraulic bureaucracies and the hydraulic mission: flows of water, flows of power. *Water Alternatives*, 2(3), 328–349.
- Netting, R.** (1974). The system nobody knows: Village irrigation in the Swiss Alps. In T. E. Downing & M. Gibson (Eds.), *Irrigation's impact on society* (pp. 67–76). University of Arizona Press.
- Nightingale, A. J.** (2015). Commons and Alternative Rationalities: Subjectivity, Emotion and the (Non)rational Commons. In D. Bollier & S. Helfrich (Eds.), *Patterns of Commoning*. Amherst: Off the Common Books.
- Ostrom, E.** (1990). *Governing the Commons: the evolution of institutions for collective action*. Cambridge University Press. DOI: <https://doi.org/10.1017/CBO9780511807763>
- Owens, K., Carmody, E., Grafton, Q., O'Donnell, E., et al.** (2022). Delivering global water security: Embedding water justice as a response to increased irrigation efficiency. *WIREs Water*, 9(6), e1608. DOI: <https://doi.org/10.1002/wat2.1608>
- Regierungsrat des Kantons Luzern.** (1905). *Bootschaft des Regierungsrates zur Einstellung eines Kulturingenieurs*. Luzern, Switzerland.
- Regierungsrat des Kantons Luzern.** (1945). *Meliorationsamt des Kantons Luzern*. Luzern, Switzerland.
- Regierungsrat des Kantons Luzern.** (1957). *Bootschaft vom Regierungsrat an Grossenrat von wegen Bodenverbesserungsgesetz*. Luzern, Switzerland.
- Reynard, E.** (2005). Governance of Farmer Managed Irrigation Corporations in the Swiss and Italian Alps. In *Farmer Managed Irrigation Systems*, 67–86, Kathmandu.
- Rickenbacher, I.** (1995, November 28). Verwaltungsreform – die Kehrseite. *Luzerner Neuste Nachrichten*, p. 2
- Rorato, M.** (2018). *Wohnbaugenossenschaften*. Lebendige Traditionen. Winterthur, Schweiz.
- Saladin, M.** (2000). *Community Water Supply in Switzerland*. St. Gallen, Switzerland: Skat Foundation
- Sanchis-Ibor, C., Boelens, R., & Garcia-Molla, M.** (2017). Collective irrigation reloaded. Re-collection and re-moralization of water management after privatization in Spain. *Geoforum*, 87, 38–47. DOI: <https://doi.org/10.1016/j.geoforum.2017.10.002>
- Schedler, K.** (2000a). Wirkungsorientierte Verwaltungsführung : Begriffe und aktueller Stand der Entwicklung. In D. Pulitano (Ed.), *New Public Management. Terminologie – terminologie – terminologia* (pp. 33–47). Paul Haupt.
- Schedler, K.** (2000b). Ist der Leistungsauftrag mit Globalbudget ein Ersatz für den detaillierten Voranschlag ? In *75 Jahre Verband für öffentliches Finanz- und Rechnungswesen* (pp. 42–58). Bern, Schweiz: Finanzverwaltung.
- Schläppi, D.** (2019). Shared ownership as a key issue of Swiss history. In T. Haller, T. Brey, T. De Moor, C. Rohr & H. Znoj (Eds.), *The Commons in a Glocal World*. Routledge. DOI: <https://doi.org/10.4324/9781351050982-3>
- Schweizer, R.** (2018). Avoiding the Commons Trap: An Exploration of Local Community Governance of Water in Valais, Switzerland. In C. Bréthaut & R. Schweizer (Eds.), *A Critical Approach to International Water Management Trends* (pp. 23–44). Palgrave Macmillan. DOI: https://doi.org/10.1057/978-1-137-60086-8_2
- Schweizer Bundesversammlung.** (1884). *Bundesbeschluss betreffend Förderung der Landwirtschaft durch den Bund*. Bern, Schweiz.
- Schweizer Bundesversammlung.** (1979). *Bundesgesetz über die Raumplanung: SR 700 §*. Bern, Schweiz.
- Schweizer Bundesversammlung.** (2022). *Bundesgesetz über Lebensmittel und Gebrauchsgegenstände*. Bern, Schweiz.
- Shah, E., & Boelens, R.** (2021). The moralization of hydraulics: Reflections on the normative-political dimensions of water control technology. *Geoforum*, 121, 93–104. DOI: <https://doi.org/10.1016/j.geoforum.2021.02.009>
- Sommaruga, S.** (2011, November 3). *Erfolgsmodell Genossenschaften?* Retrieved from <https://www.admin.ch/gov/de/start/dokumentation/medienmitteilungen.msg-id-91213.html>
- Stuber, M., & Wunderli, R.** (2021). Transformations of common pastures and woodlands in Switzerland: A historical perspective Martin. In T. Haller, et al., *The Commons in a Glocal World* (pp. 17–34). Routledge. DOI: <https://doi.org/10.4324/9781003043263-3>

- Uphoff, N.** (1986). Getting the process right: improving irrigation water management with farmer organisation and participation. In *Water Management Synthesis II Project, USAID* (Vol. 29, p. 139). Washington, USA.
- Veldwisch, G. J., Venot, J.-P., Woodhouse, P.,** et al. (2019). Re-introducing politics in African farmer-led irrigation development. *Water Alternatives*, 12(1), 1–12.
- Vetter, A.** (2018). The Matrix of Convivial Technology – Assessing technologies for degrowth. *Journal of Cleaner Production*, 197, 1778–1786. DOI: <https://doi.org/10.1016/j.jclepro.2017.02.195>
- Venot, J. P.,** et al. (2022). A bridge over troubled waters. *Nature Sustainability*, 5(2), 92–92. DOI: <https://doi.org/10.1038/s41893-021-00835-y>
- Villamayor-Tomas, S., & García-López, G. A.** (2021). Commons movements: Old and new trends in rural and urban contexts. *Annual Review of Environment and Resources*, 46, 511–543. DOI: <https://doi.org/10.1146/annurev-environ-012220-102307>
- Vos, J., & Boelens, R.** (2014). Sustainability standards and the water question. *Development and Change*, 45(2), 205–230. DOI: <https://doi.org/10.1111/dech.12083>
- Vos, J., & Boelens, R.** (2018). Neoliberal water governmentalities, virtual water trade, and contestations. In: *Water Justice*, pp. 283–301. Cambridge University Press. DOI: <https://doi.org/10.1017/9781316831847.019>
- Vos, J., Boelens, R., Venot, J. P., & Kuper, M.** (2020). Rooted water collectives: Towards an analytical framework. *Ecological Economics*, 173, 106651. DOI: <https://doi.org/10.1016/j.ecolecon.2020.106651>
- Whaley, L.** (2022). Water Governance Research in a Messy World. *Water Alternatives*, 15(2), 218–250.
- Wutich, A., Beresford, M., Montoya, T., Radonic, L., & Workman, C.** (2022). *Water security and scarcity*. In Oxford Research Encyclopedia of Anthropology. Oxford University Press. DOI: <https://doi.org/10.1093/acrefore/9780190854584.013.475>
- Zwarteveen, M., Roth, D., & Boelens, R.** 2005. Water rights and legal pluralism: Beyond analysis and recognition. In D. Roth, R. Boelens & M. Zwarteveen (Eds.), *Liquid Relations. Contested water rights and legal complexity* (pp.254–268). Rutgers University Press. DOI: <https://doi.org/10.36019/9780813537849-014>

TO CITE THIS ARTICLE:

Hofstetter, M., Bolding, A., & Boelens, R. (2023). Conviviality Under Pressure of Market-Modernist Expertocracy: The Case of Water Commons in Rural Switzerland. *International Journal of the Commons*, 17(1), pp. 375–389. DOI: <https://doi.org/10.5334/ijc.1256>

Submitted: 31 December 2022

Accepted: 24 October 2023

Published: 06 November 2023

COPYRIGHT:

© 2023 The Author(s). This is an open-access article distributed under the terms of the Creative Commons Attribution 4.0 International License (CC-BY 4.0), which permits unrestricted use, distribution, and reproduction in any medium, provided the original author and source are credited. See <http://creativecommons.org/licenses/by/4.0/>.

International Journal of the Commons is a peer-reviewed open access journal published by Ubiquity Press.