# Book Reviews

**Antonio Bonatesta**, *Acqua, stato, nazione. Storia delle acque sotterranee in Italia dall'età Liberale al Fascismo*, Donzelli Editore, Rome, 2023, 240 pp.

Writing the history of underground water in modern Italy poses some peculiar problems. Unlike surface water and the creation of a network of irrigation canals in northern Italy, which have been the privileged subjects of various traditions of rural history, Italy's groundwater has received scant attention. The "invisible" nature of this resource in Italian historiography makes organising a clear research agenda problematic. In this book, Antonio Bonatesta attempts to overcome these limits and offers the reader an overview of the incorporation of groundwater in the processes of capital expansion, social change, state and nation building that took place in Italy from the early nineteenth century to World War II. This periodization reflects the aims of the author to investigate these processes in their making rather than in the following phase of increasing consumption and environmental deterioration. The approach of the book is based on a solid tradition of rural and economic history, going back to the influential work of Emilio Sereni and the three volumes of the *Storia dell'agricoltura Italiana* edited by Piero Bevilacqua, one of the roots of Italian environmental history, and the debate on the territorially and socially unbalanced economic development of Italy. Within this framework, however, Bonatesta has been able to introduce elements of novelty. Embracing themes from environmental history and drawing from a variety of archival records, parliamentary debates, official publications, academic journals, the book investigates the role of local conditions of scarcity or abundance of water as a powerful element that conditioned the regionally differentiated development of Italy. From this point of view, the difference in economic development between the North and the South is embedded in a tension between the use of surface water and underground water. The first was subject to collective forms of management, the influence of public powers and the criteria of state technical bodies, which favoured the construction of dams and large reservoirs to create irrigation consortia and produce hydroelectricity. The second remained

in the hands of private owners throughout the period under consideration, supporting an autonomous, almost anarchic development of private drilling companies, individual landowners and local communities outside the control of the state. This is, in short, the main interpretative line of *Acqua, Stato, Nazione* and in this lies its original contribution to historiography. The interplay between different elements like politics, economics, law, techniques, and forms of knowledge is another of the book's merits. On the other hand, some arguments are less developed such as the idea of nation, which should be one of the key themes of the book, but which is investigated only in the first chapter, and in a few sparse lines in the following.

This does not, however, undermine the validity of Bonatesta's thesis, which is well argued from the very first chapter, which is dedicated to the "rediscovery" of the concepts and techniques of artesian well drilling, which had its roots in the French technical and entrepreneurial culture of the early nineteenth century. The presence of French drilling companies on the Italian territory was accompanied by the hope of redressing some of the imbalances in water accessibility in the Italian countryside and enriching the hydraulic resources of large Italian cities such as Naples and Venice. However, the initial enthusiasm for artesian resources was followed by disillusionment, as the exact location and depth of underground resources remained difficult to assess, while the question of potability gave rise to fierce controversies. This disillusionment was more acute in southern Italy, where the hydrogeological conditions made the search for underground water more complex than in the Po Valley, where it was relatively easy for landowners to find water a few metres underground, using simple devices such as the Norton and Calandra wells. The success of the landowners of the Po Valley in extracting underground water, the prestige of the hydrogeologists of the same region within the Italian technical milieu, the links between these subjects and the politicians of northern regions, led to a misunderstanding by the Italian State that struggled to understand that the search for underground water in the southern region required different criteria, a careful study of local conditions by well-trained and always understaffed technical bodies, adequate funding and powerful equipment. Moreover, the use of underground water was viewed with suspicion by the Royal Engineering of Mines, since intensive use of this resource would have damaged the nourishment of the river basin and undermined the state strategy of coordinating irrigation with hydroelectric production through large dams and reservoirs. However, this top-down push was balanced by a counter-push from local landowners and individuals who, during periods of agricultural price deflation or prolonged drought such as

those of 1890-91 and 1908-1914, drilled "many thousands of wells" in order to overcome the adverse conditions, with the help of water diviners who replaced state engineers unwilling, or simply too busy with other commitments to provide guidance in the search of aquifers. Water diviners, by contrast, offered an affordable, rapid, and to some extent reliable way of assessing location, and depth of aquifers, and thus private landowners extensively recurred to their skills. This contrast between official and unofficial forms of knowledge was not so clear-cut, however, as even a prominent geologist and palaeontologist such as Paolo Vinassa de Regny acknowledged that the abilities of water diviners had a practical value. This is a very interesting argument, one that is worthy of further attention and contextualised case studies. Bonatesta's line of thought is clear, and the conflicts between official and unofficial forms of knowledge reflect the multiple dichotomies – surface/underground, North/South, public/private, industrial/rural, capitalist/conservative – that form the backbone of the volume. The alternative between a spring-fed aqueduct and a series of artesian wells to supply water to arid Apulia follows this logic. The author is at his best here in showing the territorially differentiated social groups that supported the various options at the turn of the century: the conservative bourgeoisie of the province of Bari, which was poor in underground water, supported the need for the aqueduct, while the other two Apulian provinces – where the experiment with artesian wells had some relevant success – were unwilling to pay for an expensive infrastructure that would have restructured the hierarchy of production in the region to their detriment.

The low cost of drilling a well and the new technologies for pumping water made underground water an affordable alternative to long, expensive aqueducts and irrigation canals. These elements stimulated the projects of the Italian governments in the turbulent first years of the inter-war period. The political project of the Catholic Party (Partito Popolare Italiano), that in this phase produced three ministries of agriculture, was to reduce conflicts in the Italian countryside by splitting land ownership, increasing land productivity and creating a solid class of small landowners. A period of drought (1921-1923) saw an increase in the price of irrigation water and a new wave of drillings, particularly in the Po Valley. With this in mind, the state provided loans and tax breaks to encourage the search for and extensive use of aquifers from north to south. The Fascist regime pursued this strategy in an ambiguous way, depending on the political situation. The use of aquifers in agriculture, in some areas of Piedmont, Emilia-Romagna and between Lucania and Apulia, became so intensive that the groundwater level dropped significantly, but the state was unable to protect a resource

that was still under private jurisdiction, even though since 1933 the state jurisdiction over aquifers was formally extended. More effective in protecting the integrity of groundwater was the economic crisis of the early 1930s, which led to agricultural price deflation and rising energy costs. The protection of groundwater resources is an ambiguous point in the volume. At times, Bonatesta seems to see in the composite political front labelled as "reformist" and the state technocracies a programmatic vision "directed towards the construction of delicate balances in water uses and forms of supply" (p. 123) against a disorderly private appropriation of resources that led to increasing anthropic pressure on underground water. On the other hand, the author acknowledges that the complete and integral use of water resources in a period of intense international competition was the criterion that guided the actions of state technocracies. In this sense, one gets the impression that the role of the state was more to guide which social groups should benefit from the intensive use of water than to protect the ecological balance.

Nevertheless, *Acqua, Stato, Nazione* offers a fresh perspective on the multiple entanglements between the "*matrici ambientali*" and Italian society during a period of intense social, economic, and political change. Environmental, cultural, economic, and rural historians will find in this book a wealth of themes and problems worthy of their attention.

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