

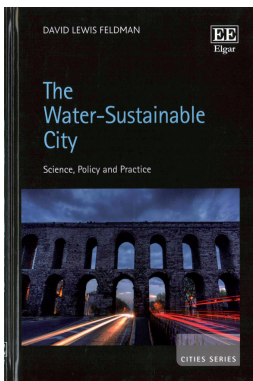
The author's choice to use free and open-source analytical tools is clever. There are many books that describe how to work with ESRI's ArcGIS products. Some tutorial books also cover QGIS. Yet to the best of my knowledge, this is the first book that presents under one umbrella a wide range of (online and downloadable) geospatial analytical tools. The analytical techniques are very basic and will not teach a student or a researcher how to conduct in-depth geospatial analysis. The book is not designed for GIS specialists or to geospatial researchers. As the author indicates, it is assumed that "your academic training falls outside these areas and that you are looking to identify ways in which the geoweb and basic forms of basic analysis can supplement research in your own area of expertise" (p. 74). I think that the book achieves this goal. While it does not provide advanced tools for geospatial analysis, nor more than (very) basic applications for each software, the book does expose the reader to the potential value for adding a spatial dimension to data and provides practical tools for visualization of spatial data. The division of the book into two sections also makes sense and does not seem artificial. The flow of the book as well as the relations between the two sections are clear.

One caveat relates to the title of the book ("Using Geodata & Geolocation in the Social Sciences"). I am not sure whether the book focuses on social science; the social dimension and the social theories in the book are quite minor. Having said that, a social scientist or a social science student will find the book practical.

To summarize, this book provides a clear and interesting overview of existing tools that allow a researcher to add a (necessary) spatial dimension to data. The relatively short overview that is provided on the evolution of geospatial big data is interesting and exposes students and researchers who have never worked with spatial data to many practical and relatively easy-to-implement techniques to map and share geodata. The balance between theory and technical instructions is good and the book will encourage students and researchers to explore more available tools to create and communicate spatial data.

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THE WATER-SUSTAINABLE CITY: SCIENCE, POLICY AND PRACTICE, by David Lewis Feldman. London: Edward Elgar Publishing Limited, 2017

In the 21st century, more than half of the human population lives in cities. This state of affairs makes sustainable water use by cities a very important issue. Feldman's book examines this issue in a wide range of aspects such as historical, technological, legal, economic, and political. He

starts his book with the question "What would a water-sustainable city look like if they could use water more sustainably – in ways that protect environmental quality, promote economic development, and foster just and equitable resource allocation and management?" In response he presents some of the principles and practices that might characterize such a future city. Among them he includes water regeneration, reduction of water use and low-energy approaches in water supply system. Alongside this he introduces his wide approach to water use in the city that includes the environmental impacts on the places from which water is supplied to the city as well as the impact on global climate due to green gas emissions from energy used to supply the water.

Feldman claims that rarely any of the water problems in cities today is new and many are traceable to cities in antiquity. One of the innovations of this book is the similarities presented between the current problems and historical precedents. Within this framework, Feldman reviews the history of water supply systems at some major cities starting in ancient Rome and following with Los Angeles, New-York, Tokyo, Mexico City and Melbourne. Lewis claims that the past precedents, traditions and patterns of behavior often shape and determine the manner in which later choices are made. From this point of view he analyses various aspects of water management in cities such as civil engineering, law and the institutional system of water management in cities.

Feldman then concentrates on the problem of present water availability, while big population growth and the increase of standard of living result in greater demand for water and cause shortages in many places. This shortage can be further intensified by the global climate change that causes reduction in precipitation in some regions. He introduces the concept of water productivity defined as the value of goods and services produced per unit of water used. He claims that by improving water productivity, communities can enjoy the same goods and services while generating less wastewater and leaving more freshwater in streams, rivers, lakes, and coastal estuaries to support biodiversity. Because less water is harvested, treated and transported, fossil fuel consumption and greenhouse gas emissions are reduced and thus water-energy footprint of cities is smaller. He introduces three strategies for improving water productivity: substituting higher-quality water with lower-quality water where appropriate (an interesting example of this method exists in Hong Kong which has a dual water system by supplying seawater for toilet flushing), regenerating higher-quality water from lower-quality water by treatment of waste water and reducing the volume of higher-quality water use to generate goods and services by actions such as water saving and leaks prevention. Feldman introduces a comprehensive review of technological methods for improving water productivity. He then discusses the influence of water pricing on water productivity. He emphasizes the need to include in water pricing not only the cost of water production and delivering but also the costs of promoting water conservation.

In the next part of the book several ways for better managing water in cities across the world are discussed. The first topic deals with the urban stream syndrome and how it can be treated. The urban stream syndrome describes the consistently observed ecological degradation of streams draining urban land caused by the change of the drainage system. This syndrome is caused by covering the land with infrastructure like buildings and roads which results in flash floods, drifting of pollutants from the city into water sources and, consequently, damage the ecosystem. Feldman introduces the LID (Low Impact Development) a new method to deal with this problem. Practical application of LID includes measures such as building biofilters (areas that function as soil and plant-based filtration devices that remove pollutants from the runoff water), placing containers to collect runoff water and replacing pavements and roads made with sealed asphalt coatings to permeable paving through which water can percolate. Feldman also analyzes the correlation between the way in which a community perceives its streams and the community's motivation to use LID. He suggests that a community which has a wide ecological perspective that grasps the urban streams not only as a drainage system but also as a feature that has aesthetic and ecological value will be open to use this new method, but communities with a narrow perspective that only want to eliminate flood risk will be satisfied with old methods of preventing floods.

The next parts of the book concentrate mainly in the social and the political aspects. In this framework Lewis discusses issues such as environmental justices' aspects in water pricing and the difficulties that water authorities are facing when they try to assimilate technological and financial means to avoid wasting water in cities. In the last part of this section the author presents three general urban theories (city as growth machine, zero-sum conflict and city as metropolitan nature) and uses those theories to explain how urban water is controlled. Lewis demonstrates how different approaches of the essence of a city lead to different city policy regarding water use. He ends this part by giving examples of institutional structures and approaches to water issues in Melbourne, New York and California. In relation to this chapter the book includes an interesting supplement containing parts of water legislation in Australia and California.

In conclusion Feldman's book presents a comprehensive approach to the subject of water use in cities. Starting with a historic description he then relates to the various aspects of urban water supply from the physical through the technological to the social and political levels. As such, this book can serve faithfully anyone who is interested in the various aspects of sustainable water use in cities.

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