

Introduction

This e-Atlas aims to provide a comprehensive overview of water resources, infrastructures, usages and management issues in the Orontes River basin. It is developed within a research program led by the Graduate Institute of International and development Studies with the support of the Global Program Water Initiatives of the Swiss Development and Cooperation Agency as part of an overall project on Water Security in the Middle East. The program aims to analyze water management challenges and perspectives and to establish a multidisciplinary scientific and technical network on water management in the Orontes River basin including Lebanese, Syrian and Turkish organizations. It is conducted in collaboration with the Lebanese Agricultural Research Institute, the Hydrogeology Center of the University of Neuchâtel, the Laboratory of Geographic Information Systems of the Federal Institute of Technology, Lausanne, the Faculty of Geosciences and Environment of University of Lausanne, the “Maison de l’Orient et de la Méditerranée”, Lyon.

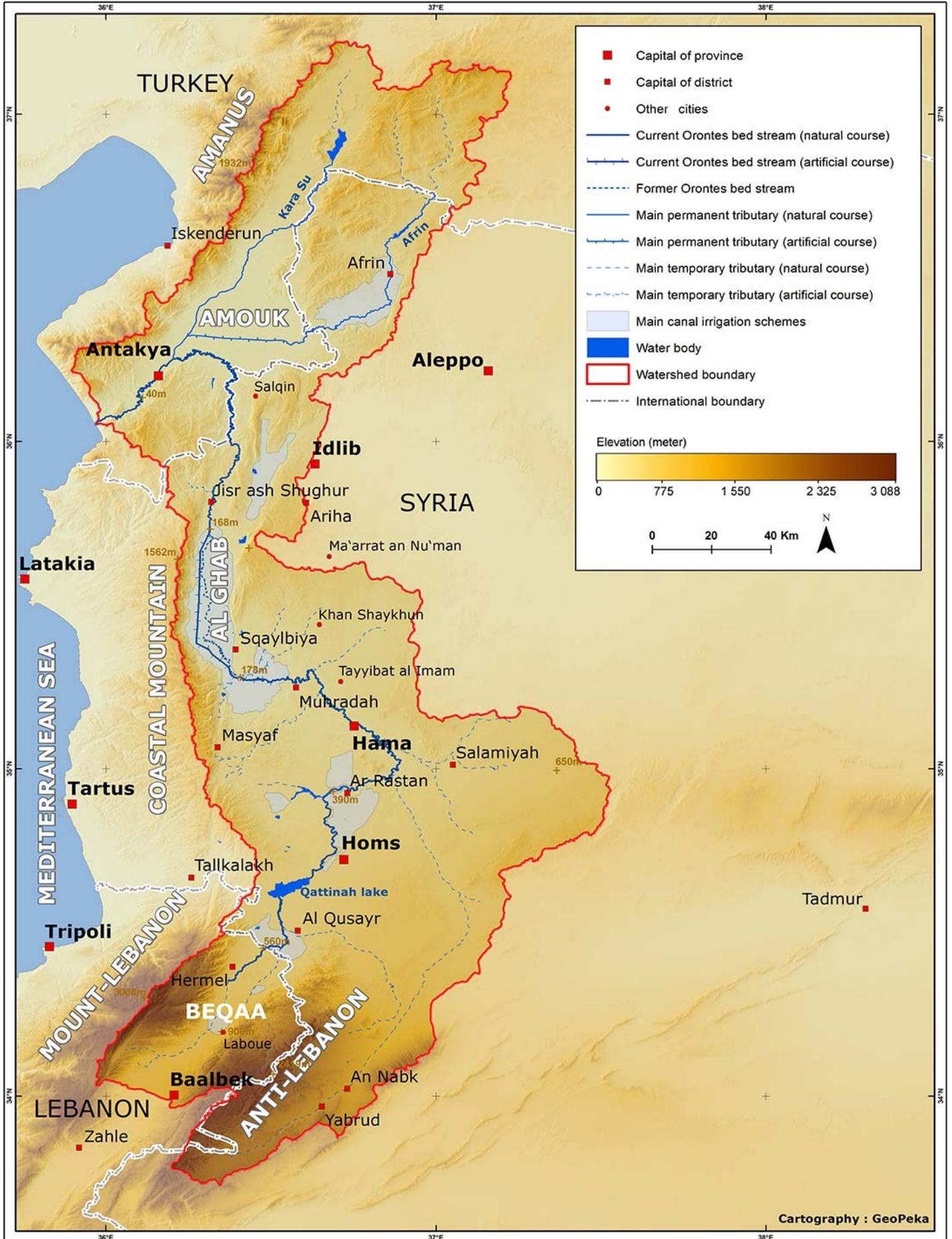
The Atlas is under development, the current version focuses on the upper and middle reaches of the basin. The Turkish section of the basin will be addressed in the second phase of the program. The atlas presents maps, short descriptions, tables and charts addressing several topics from the physical environment to water usages and their evolution in a spatial and historical perspective. It will be gradually completed with additional topics and will also examine the lower reach of the basin.

The history of human settlement in the Orontes River basin and the spatial distribution of activities are largely related to the availability and exploitation of water resources. The oldest dated water infrastructures, dating back to the Bronze Age, are found in the upper reach of the basin. These installations were extended in the Hellenistic, Roman and Byzantine periods and restored from the 1920s. While the Orontes River and the numerous springs located in the basin were the main source of water until recently, underground resources currently provide over 50% of the water extracted in the basin. Furthermore, over 80% of the surface water originates from springs. Groundwater management has become a critical issue.

ATLAS

OF THE ORONTES RIVER BASIN

Overview



The Lebanese section of the Orontes River basin, the northern Beqaa valley, is often viewed as poor and marginal. However, it is an area where large private investments have been made in the past three decades in irrigation development. The Lebanese and Syrian sections of the basin, in many respects, contrast each other, in terms of the intensity of the exploitation of water resources to the structure of the economy and the role of State in governing water resources. They are also closely interlinked making transboundary water management a complex issue hardly reducible to the water-sharing agreement between the two countries.

With more than four million inhabitants the Orontes River basin in Syria is an area of prime importance for both agriculture and industry. The basin contains the two major urban centres of Homs and Hama, several medium size cities and a wide range of industrial activities. Land irrigated using surface water and groundwater covers over 290'000 hectares, close to the area irrigated in the Euphrates basin which has received far more attention in the past four decades. The Orontes basin became one of the first industrialized regions of Syria with the establishment of state plants such as the sugar factory in 1948 and oil refinery in 1957 in Homs. The state industrial sector grew in the 1970s and 1980s with the establishment of plants including a fertilizer production factory close to Lake Qattinah, spinning mills and a large metallurgical complex in Hama. Industrialization accelerated in the 1990s with the development of private industries in particular chemical and pharmaceutical plants. The agricultural and industrial development in the region, led to a strong growth in the population of the Orontes basin.

In Syria, the Orontes River basin was subjected to a profound economic and environmental crisis prior to 2011. It comprises some of the most conflict-affected urban and rural areas in the country. The Orontes River basin is a key region in the ongoing conflict and will remain so during the post-conflict transition period. Massive population displacements and the widespread destruction are linked to the highly strategic nature of the basin due to the diversity of the population, the borders areas with Lebanon and Turkey, the access to the coastal areas, the Damascus – Aleppo highway and the large water and agricultural resources.

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