

## Chapter 28

# Water and Society in Georgia From Historical Perspectives

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### **ABSTRACT**

*This chapter describes the water resources of Georgia, characterizing them from a historical point of view and demonstrating their contemporary role in the country. The discussion further refers to the water monitoring system in Georgia, featuring both modern and old irrigation systems used in the country. Various anti-drought rituals practiced in old times are also listed in the chapter. The drinking water supply system of ancient times together with old and modern water treatment methods are sufficiently detailed. Parallels are drawn between what alchemists and Georgian King, Vakhtang VI, thought of drinking water purity. The chapter investigates whether the same issues are faced by modern science, as noted in the book by the Georgian king, and specifically, what method of water purification was preferred by him. Ancient Georgian baths and materials for water utensil production are also reviewed in the chapter.*

### **INTRODUCTION - CHARACTERIZATION OF GEORGIAN WATER RESOURCES**

Georgia is rich in water resources. There are more than 26 thousand rivers in the country, belonging to the basins of Black Sea and Caspian Sea. Among them is the watershed Likhi Range. In most cases, rivers in western Georgia have independent catchments. For example, the rivers: Bzipi, Kodori, Enguri, Chorokhi, Rioni are distinguished by their large catchment areas. All the rivers in Eastern Georgia belong to the Mtkvari River basin. The Mtkvari River is the main and the longest river in the South Caucasus. It is 351 km long within the borders of Georgia. Most of the rivers are fed by rain and melting snow waters. The longest river of the country is Alazani, with the length of 407 kilometers, and the most affluent - Rioni. It originates in the Caucasus Mountains, eventually joining the Black Sea. The Enguri

DOI: 10.4018/978-1-7998-7356-3.ch028

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River is distinguished from other rivers of Georgia by its energy capacity. Enguri HPP, the most powerful hydroelectric power plant in our country, was constructed in its narrow valley.

There are 856 lakes and more than 40 reservoirs in Georgia (Fig.1). Lakes differ by origin, shape, depth, size, beauty and significance. Most of them are concentrated on the Javakheti volcanic plateau in southern Georgia. The deepest lake in Georgia is Ritsa. It is 101 meters deep. It is located in Abkhazia (currently occupied by Russia) in the Bzipi River valley, at an altitude of 884 m above sea level. Paravani Lake is the largest lake by area. It is located at an altitude of 2073 m between the volcanic ridges of Javakheti and Abul-Samsar. In ancient times, Paliastomi Lake used to be the bay of the Black Sea and was later separated from it by a strip of sand. The maximum depth of Paliastomi Lake is 3 m, due to which a large part of the lake is covered with vegetation. Almost all reservoirs in western Georgia are created for energy purposes. In the East, they are mainly used for irrigation. There is an abundance of fresh, as well as mineral, and thermal groundwaters in Georgia. Fresh groundwaters are unevenly distributed in the country. Their number increases from east to west. Fresh groundwater is highly important for the supply of the population with potable water.

*Figure 1. Rivers in Georgia*



There are about 2000 mineral springs in Georgia, distinguished by their composition and characterized by healing properties, such as world-known Borjomi, Sairme, Nabeghlavi, Utsera, Lugela and other mineral waters. Resorts have been built on them. Among groundwaters, most distinguished by their healing properties are Tskaltubo thermal water and Tbilisi sulfur hot waters. In Abkhazia, on the territory of Kindghi village, one of the hottest underground thermal water in the world, with a temperature of up to 100 degrees, has been discovered. It rises from a depth of more than 3000 meters. Tbilisi, the capital of the country, is famous for its hot mineral springs. The underground hot water zone is stretched for 3600 km<sup>2</sup>. Tbilisi thermal-sulfur springs have been used for hygienic and medical purposes since ancient

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