

A comprehensive review on water resources management laws in Georgia

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Abstract

Water resources are vital for the sustenance of life and the development of any region. In Georgia, the state government has implemented a robust framework of water resources laws to ensure responsible management, conservation, and equitable distribution of this precious natural resource. This review aims to provide an overview and evaluation of the water resources laws in Georgia. It highlights key aspects such as water allocation, conservation measures, quality standards, and management strategies. The information presented here is based on the most recent available data and aims to provide a comprehensive understanding of the current state of water governance in Georgia.

Keywords: Water resources' rules; Marine law; Water management policies.

1. Introduction

Georgia, legitimately identified as the Republic of Georgia, is placed at the crossing of western Asia and eastern Europe and it is enclosed by Russia to the north, Armenia and Turkey to the south, the Black Sea to the west and Azerbaijan to the east. In terms of water resources management, Georgia encounters with several challenges due to its different geography and climate. The country has a mountainous terrain with numerous rivers and lakes, making water management crucial for various sectors such as agriculture, energy production, and tourism. The primary legislation governing water resources management in Georgia is the Water Code of Georgia. This code establishes the legal framework for water use, protection, conservation, and pollution prevention. It also defines the rights and responsibilities of water users and establishes mechanisms for monitoring and enforcement.

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The Water Code divides water resources into two categories: surface water (rivers, lakes) and groundwater (aquifers). It sets out principles for sustainable water use, including prioritizing domestic needs over other uses during times of scarcity. The code also promotes integrated water resources management by encouraging *coordination* among different stakeholders involved in water-related activities (Cummings *et al.*, 2002).

To ensure effective implementation of water management policies, Georgia has established various institutions responsible for overseeing different aspects of water resources. The Ministry of Environmental Protection and Agriculture is responsible for formulating policies related to water resources management. The Environmental Information and Education Centre provides information on environmental issues including water resources. Additionally, there are several river basin organizations in Georgia that play a crucial role in managing specific river basins. These organizations are responsible for developing river basin management plans that outline strategies for sustainable use of water resources within their respective basins (Cummings *et al.*, 2002).

In recent years, Georgia has been working towards improving its water infrastructure through projects aimed at enhancing irrigation systems, building reservoirs for hydropower generation, and improving access to safe drinking water in rural areas. However, like many countries around the world, Georgia also faces challenges related to climate change impacts on its water resources. Increasing temperatures can lead to changes in precipitation patterns and melting glaciers which can affect both quantity and quality of available freshwater sources (Wyeth, 2016).

Overall, Georgia identifies the importance of sustainable management of its precious water resources and continues to work towards implementing policies that balance economic development with environmental protection. Different action plans were taken in this regard:

1) Comprehensive water management plan

Georgia's water resources laws are anchored by a Comprehensive Statewide Water Management Plan (CSWMP). This plan serves as a blueprint for sustainable water management, addressing issues such as water supply, quality, conservation, and ecosystem protection. The CSWMP promotes collaboration among stakeholders and provides a long-term vision for managing Georgia's water resources effectively (Mullen, 2011).

2) Permitting system

To maintain water quality standards, Georgia follows guidelines set by the Environmental Protection Division (EPD) under the Georgia Department of Natural Resources. The state has established a permitting system that regulates the use of surface and groundwater resources. The EPD oversees this process, ensuring that permits are granted based on sound scientific principles and in compliance with environmental regulations. This system helps prevent overexploitation while allowing reasonable access to water for various purposes. The EPD monitors and regulates discharges into surface waters, sets limit on pollutants, and enforces compliance with federal clean water standards (MacGregor and Cowie, 2009).

3) Water conservation measures

Recognizing the importance of conserving water resources, Georgia has implemented several measures to promote efficient usage. These include requirements for low-flow plumbing fixtures in new construction projects, public education campaigns on water conservation practices, and incentives for implementing innovative technologies that reduce water consumption (Cleveland, 2014).

4) Inter-basin Transfers

To address regional disparities in water availability, Georgia's laws allow for inter-basin transfers (IBTs) under specific conditions. IBTs involve transferring water from one river basin to another to meet growing demands or mitigate drought impacts. However, these transfers are subject to rigorous scrutiny to ensure minimal ecological disruption and equitable sharing among affected basins (Purvis and Dinar, 2020).

5) Environmental Protection

Georgia's laws emphasize protecting aquatic ecosystems and maintaining healthy river systems. The EPD monitors compliance with environmental standards through regular inspections and enforcement actions against violators. Additionally, buffer zones along rivers and streams help safeguard against pollution runoff from adjacent lands (MacGregor and Cowie, 2009).

6) Drought Management

Given the vulnerability of Georgia's water supply during droughts, the state has established some protocols for managing these challenging periods effectively. Drought response strategies outline the measures such as voluntary restrictions on non-essential uses, increased monitoring of water resources, and coordinating between agencies to ensure adequate supply during prolonged dry spells (Saatsaz, 2020).

1.1. Current rules on water

The state of Georgia has implemented a robust regulatory framework to manage its water resources effectively. Water allocation is governed by the Georgia Water Stewardship Act, which establishes a permitting system for surface and groundwater withdrawals. The act aims to balance competing demands for water while ensuring sustainable use and protection of this vital resource.

Water conservation plays a crucial role in Georgia's overall water management strategy. The state has implemented various measures to promote efficient water use, including public education campaigns, mandatory watering restrictions during droughts, and incentives for implementing water-saving technologies. These efforts are aimed at reducing overall demand and preserving water supplies for future generations (Georgia, 2008).

This paper provides an overview of the current rules on water in Georgia but does not delve into specific details or recent updates. For more comprehensive information or specific inquiries regarding regulations or policies related to water resources in Georgia, it is

recommended to consult official government sources or relevant agencies responsible for managing these resources. There are several rules related to this subject that are gathered in this manner:

- 1) Law of Georgia on environmental protection (1996) - regulates issues related to water quality standards.
- 2) Law of Georgia on subsoil (1996)-regulates issues related to underground (ground) water.
- 3) Laws of Georgia on health protection (1997) and on public health (2007) regulate aspects related to water standards (sanitary-hygienic norms and rules applied to water quality).
- 4) The Maritime Code of Georgia (1997) and the law of Georgia on the maritime space (1998)- regulate the issues of protection of coastal and territorial waters from pollution/law of Georgia on the Sea, water bodies and rivers of Georgia.
- 5) On regulation and engineering protection of banks (2000)-regulates the issues of engineering protection of banks.
- 6) Laws of Georgia on soil conservation and fertility restoration-improvement (2003), and on environmental impact permit (2007) - regulate a number of environmental issues related to the water sphere.
- 7) The organic law of Georgia on local self-government (2006)-defines the powers of local self-government bodies in the field of water.
- 8) The law of Georgia on water mainly regulates the aspects related to surface waters and actually leaves underground (ground) water resources and coastal waters without regulation.
- 9) Since the adoption of the law of Georgia on water in the period after 1997, there has been no consistent reflection of the norms defined by the law in the adjacent branches of legislation, especially in the rules adopted in the field of land use and maritime legislation.
- 10) According to the legislation in force in the field of water, actually not Issues related to the management of natural water resources, as well as the possession, use and disposal of water bodies are regulated.
- 11) Fundamental improvements in the water sector can only be achieved through purposeful and consistent reforms in this sector. Such a reform should comprehensively cover all aspects related to the protection and rational and sustainable use of water resources – strategic, legal, normative-technical, institutional, administrative and financial.
- 12) In addition, the reform, from a methodological point of view, should be based on the modern requirements tested and internationally recognized in the developed

countries of the world, which have found expression in the modern principles and approaches of the integrated management of water resources.

- 13) The main task of the draft law can be defined as the creation of legal foundations for the implementation of the integrated management system of water resources.
- 14) The principles of integrated management of water resources have been most comprehensively and consistently reflected in the European water legislation.

1.2. Basic legislation of the European Union on water resources management

In addition to regulatory measures, Georgia also emphasizes collaborative approaches to managing its water resources. The state actively engages stakeholders through advisory committees, public hearings, and partnerships with local communities to develop comprehensive watershed management plans (István, 2020). Therefore, basic legislation of the European Union on water resources management has been defined and categorized as follows:

- 1) Framework directive on water (2000/60/EC)
- 2) Directive on water quality of beach areas or recreational area (2006/7/EC)
- 3) Directive on domestic waste water (91/271/EEC)
- 4) Flood risks directive (2007/60/EC)
- 5) Directive on water pollution by nitrates generated as a result of agricultural production (91/676/EEC)
- 6) Directive on the quality of water intended for human consumption (98/83/EC)

1.3. Scope of regulation

The scope of regulation varies depending on the country. However, there are some common aspects that can be found in many water resources management laws (Kundell, 2009). Here are some key points:

- 1) Surface waters
- 2) Transitional waters
- 3) Groundwater
- 4) Coastal waters
- 5) Water protection strips

1.4. Basic provisions of the laws on Water Resources Management

Water resources management laws typically establish a framework for allocating water rights among different sectors. This includes defining the process for obtaining permits or licenses to use water and setting criteria for prioritizing water allocations during times of scarcity. These laws often include provisions to protect and maintain the quality of water resources. This may involve setting standards for acceptable levels of pollutants, establishing monitoring and reporting requirements, and implementing measures to prevent

contamination (Bird *et al.*, 2009). Therefore, it is advisable to consult the relevant legislation in a specific country or region for more detailed information on the scope of regulation and provisions related to water resources management as the following groups:

- 1) Water bodies and the rights related to them
- 2) Water categories and provisions related to their legal status
- 3) Water protection requirements in the design and operation of water infrastructure facilities
- 4) Planning of protection and use of water resources and management system
- 5) Special rule on water use (permit system)
- 6) Integrated management and planning of catchment (river) basins into the spatial-territorial planning system
- 7) Basin management plans
- 8) Classification of water bodies and determination of water status
- 9) Risk management mechanisms of harmful effects of water
- 10) Economic mechanisms of sustainable use and protection of water
- 11) State accounting of water use
- 12) Ensuring access to the information in water sectors and public participation in the decision-making process
- 13) Water monitoring, supervision and control

2. Main challenges

While significant progress has been made in managing water resources in Georgia, challenges persist. Population growth, climate change impacts, and interstate disputes over shared waters pose ongoing challenges that require continuous monitoring and adaptive management strategies that are categorized as follow (Binita *et al.*, 2015):

- 1) Classification of rivers
- 2) Water quality status
- 3) Basin management plans
- 4) Permits for water intake/discharge
- 5) Water intake fee
- 6) Basin management councils

Several years (at least 5-6) will be needed for the full implementation of the rules. Therefore, the implementation of the norms integrated in the law should take place sequentially/gradually during the same period of time.

In case of adoption and implementation of the law, a number of legislative normative acts and parts of normative acts will be considered repealed. Also, in order to comply with the new legal norms established by the law, it will be necessary to make changes and additions to a number of legislative normative acts.

2.1. Normative acts Acceptable by law

Normative legal act is a written official document in the specified form, adopted by a law-making agency within the limits of its competence and directed at establishment, alteration and cancellation of legal norms, i.e., mandatory orders of temporary or permanent nature meant for multiple application (Vinogradov, 1996) as follows:

- 1) On approval of the list of water resources of special state importance
- 2) On the procedure for identifying and delimiting water bodies
- 3) On the work regulations of the governmental commission for the protection and use of water resources and the procedure for drawing up the national program for the protection and use of water resources
- 4) On the procedure for development, review and approval of river basin management plans
- 5) Regarding the approval of the regulation on river basin management plans
- 6) On the approval of the borders of the territorial units of integrated management of river basins
- 7) On the planning and implementation of water resources monitoring
- 8) On the calculation of the maximum permissible discharge norms of polluting substances discharged together with wastewater into surface water bodies
- 9) Provision on water protection strip
- 10) About sanitary protection zones of water bodies for drinking and domestic water supply, medical and resort needs
- 11) Regulation on approval of ecological standards of water quality
- 12) Consultative-coordinating councils of basin management
- 13) Composition and mode of activity
- 14) Forms of primary accounting of water use and the manner of their production
- 15) State monitoring program of water resources
- 16) Sub-legal normative acts determined by the law should be adopted in the field of water resources, taking into account the normative-technical requirements integrated into the legal acts of the European Union.

Conclusion

Georgia's comprehensive approach towards managing its water resources is commendable. The state's laws prioritize sustainable usage while protecting ecosystems and ensuring equitable distribution among users across different regions. By incorporating elements such as conservation measures, permitting systems, inter-basin transfers under scrutiny, environmental protection provisions, and drought management plans; Georgia demonstrates its commitment to responsible stewardship of this vital resource. However,

continuous monitoring and periodic updates may be necessary to address emerging challenges such as population growth or climate change impacts on water availability in the future.

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