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#### 1 EXECUTIVE SUMMARY

Albanian territory is rich in water resources, with about 35% of the hydrographic watershed extended beyond the political borders. More than 150 torrents and small rivers form finally 7 large rivers: Buna, Drini, Mati, Erzeni, Shkumbini, Semani and Vjosa, with a total flow of 1308 m3/s, which are the most important water suppliers in eastern Adriatic, beside River Po in western side (Italy, total flow of 1459 m3/s; Stanners & Bouredau, 1995). The main hydrological characteristics of Albanian territory are given by Kabo (1990–91). Albanian hydrographic map is reported in the figure 1, showing also the main sources of pollution: urban, industrial, river and coastal pollution, elaborated after UNEP (2000). Cullaj et al. (2005), in a review paper, summarize the current situation regarding Albanian natural aquatic ecosystems, addressing also the environmental problems caused by human impact.

In the eastern, mountainous part, Albanian rivers exhibit a torrential and erosive regime, with large and undulated beds in the Western Adriatic Coastal Lowland. Their valleys are of enormous importance for the biodiversity and tourist values, especially the valleys of Vjosa, Drini, Mati, and most of the mountainous tributaries, where rivers of Cemi, Thethi and Valbona in Albanian Alps are distinguished. The rivers are important source of energy for the country, supporting more than 85% of the total installed power generation capacity; in year 2005, the total installed power generation capacity in Albania was 1659 MW, including 1446 MW hydro from the river reservoirs and 213 MW thermal (source <a href="http://www.energyagency.at/enercee/al/supplybycarrier.htm">http://www.energyagency.at/enercee/al/supplybycarrier.htm</a>). They are not only important for irrigation and industry, but also source of drinking water and aquaculture; the Bovilla reservoir, constructed recently over Terkuza river (tributary of Ishmi), is the main water supply for the Tirana town and its suburbs (ca. 900 000 inhabitants).

The rivers are important for the coastal activity, for the coastal wetlands and lagoons. Starting from the northern part, lagoons of Viluni, Merxhani, Ceka, Patoku, Karavasta, Narta and Orikumi are situated along Adriatic coast, respectively under the activity of rivers Buna, Drini, Mati, Erzeni, Shkumbini, Semani and Vjosa; only Butrinti lagoon is situated in the Southern part, in Ionian Sea (Fig. 1) (NEA/AKM, 1999). Those habitats are distinguished the richness of breeding and refuge habitats for flora and fauna, especially for waterbirds. After Database Protected fishes and World on (http://sea.unep-wcmc.org/wdpa/index.htm), along the Albanian cost there are extended three Wetlands ofInternational Importance (Ramsar): Butrinti (13500 ha), Karavasta Lagoon (20000 ha) and Lake Shkodra and River Buna (49562 ha); there are also 7 sites of Managed Nature Reserves (ca. 30000 ha);

two sites, Divjaka and Kune belong to Barcelona Convention. The coast, wetlands and rivers are important habitats for fishing and aquaculture.

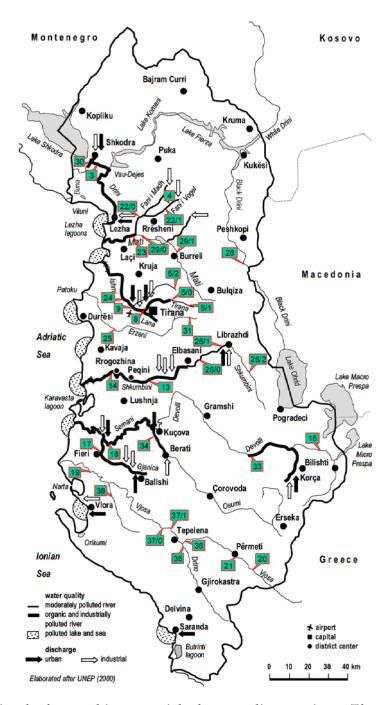


Figure 1. Albanian hydrographic map with the sampling stations. There are also shown the main sources of pollution: urban (black arrows), industrial (not filled arrows), river (differently bolded) and coastal pollution (dotted areas) (elaborated after UNEP, 2000)

### 2 INTRODUCTION

There are 136 rivers and streams in Albania with a total length of approx. 50,000km. The water of this network is collected by 10 main rivers flowing down to the Adriatic Sea. The territory is divided into six river basins. The most important rivers (length within Albanian border) are Drini, Buna, Mati, Fani, Ishmi, Erzeni, Shkumbini, Devolli, Semani, Gjanica, Vjosa and Bistrica.

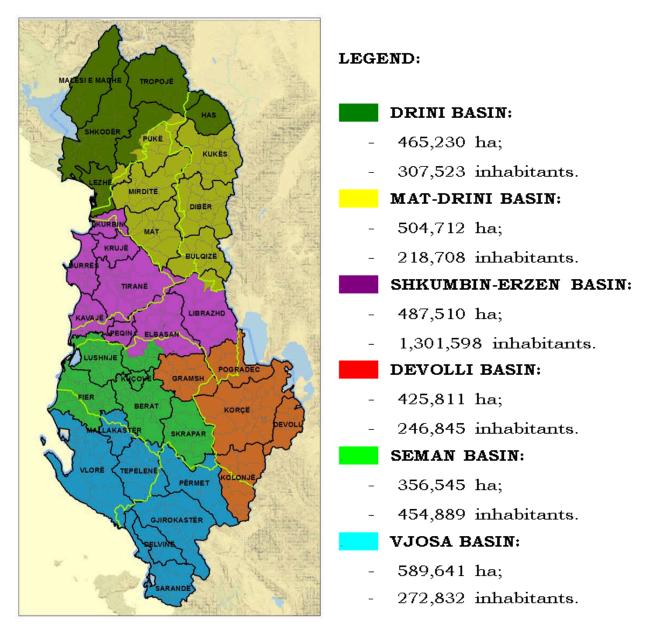


Figure 2. Albanian map divided in 6 regions according the six rivers basins

Lakes cover 4% of Albania's territory and their number amounts to 247. The shores of the three major lakes, Ohrid (363 km2), Prespa (285 km2) and Shkodra (368 km2), are shared with neighbouring countries Macedonia, Greece and Montenegro. 626 reservoirs for irrigation with a total capacity of 562 million m³ are located along rivers Drini, Mati and Devolli. Larger wetlands, swamps and lagoons with key biodiversity importance such as Karavasta, Narta and Butrint lagoon are situated along the seacoast. There are also some big hydropower station artificial lakes (Fierza, Vau I Dejes, Uleza, Shkopeti, etc.).

The coastal line has a total length of 427 km, 273 km of which belongs to the Adriatic Sea and 154 km to the Jonian Sea. There are numerous beaches (about 22): Shkodra lake, Velipoja, Shengjin, Gjiri i Lalezit, Spille, Currila, Shkozet, Shkembi I Kavajes, Golem, Seman, Divjake, Vlore, Dhermi, Vuno, Himare, Qeparo, Borsh, Jale, Sarande, Ksamil, Pogradec Lake, Prespa lake. etc.

#### **Drinking water**

The number of water and sanitation connections in Albania has increased moderately over the past decade in urban areas but not at a satisfactory level in rural areas. Historically, rural areas have been granted less attention by the government and this is quite visible in the very poor level of service provided. In the early 1980s, there has been a political campaign known as 'drinking water action.' It consisted of expanding piped water supply in rural areas. During this action about 1460 villages were supplied with drinking water. This investment was not continuously maintained in the past years and after the political changes (1990) the water supply systems have been destroyed, by taking off the pipelines, pumps, etc.

Groundwater is relatively abundant in Albania and well distributed over the country. Groundwater resources are Albania's major source of drinking water, 70% of the main cities are supplied by wells. The quality of ground water which is used as a drinking water is of good quality at the source. The problem is in the distribution network where the level of the losses is to be taken into consideration. Chlorination is another treatment that needs to be improved in order to assure permanent drinking water quality. In some costal areas there are salt water intrusion into ground water aquifers.

However, in the last decade government has undertaken reforms and actions that has significantly improved the situation water supply and the drinking water quality and consequently also improved the sanitation in Albanian. Below are presented some facts about sanitation in Albania:

- 1. Basic sanitation services are increasing. People living in the rural section of Albania are using basic sanitation services, which is nearly a 15 percent increase from its lowest value of 82.19 percent in 2000. That means these people are using basic services that other households do not share.
- 2. Sanitation conditions have grabbed the EU's Attention. Since achieving the candidacy of the EU in 2014, Albania has made a commitment to bring its water and sanitation sector up to EU standards. The Albanian government has implemented numerous reforms and is also progressively decentralizing public services, which means more decision-making responsibilities have gone to local governments and public authorities.
- **3.** National service providers are improving commercial and technical expertise. Albania's water sector institutions are in cooperation with the National Ministry of Infrastructure and Energy. This partnership gives the project an outreach that extends to all cities to help communication flow between water users and the public with the institution using an online customer portal for service providers.
- **4. Albania has resources for fresh water.** Albania is a small country with over 150 rivers, including streams and lakes. Ninety-five percent discharge into the Adriatic Sea and only 5 percent of rivers go into the Ionian Sea. There are two periods of water flow during a calendar year. The shorter dry period runs from June through September. The wet period spans from October through May.
- **5.** The European Union supports clean water supply in Albania. In 2018, the EU contributed a 24 million euro grant to Albania. In the last 10 years, the grant support to its water supply exceeded 110 million euros. A large percentage of the grant goes to wastewater collections and treatment in Albania coastal regions.
- **6. Albanian schools are promoting personal hygiene.** Are being implemented projects that result in renovating and reconstructing bathrooms and plumbing to improve the conditions of the schools due to damages from clogged toilets and sinks without running water or sinks running dirty water. Also, health fairs are organized to give lessons in personal hygiene to young students.
- 7. Worcester Polytechnic Institute (WPI) students provide data to remedy water issues in Albania. Each year, 24 WPI students go to Albania to work in four-person groups on six projects to address topics that include the water issues and how to solve them. These projects

include documenting environmental conditions along major rivers, developing a water education program for Albanian high schools and promoting community-based tourism in villages that have previously inaccessible caves.

- 8. The Albanian Water Regulatory Authority and Consumer Protection Commission developed a partnership to alleviate water and sanitation issues. The Water Regulatory Authority and Consumer Protection Commission have created a model contract between providers of water and sewerage services and their customers. The intent of the contract is to protect consumers' interests with provisions for consumer protection and Albania's water and environmental resources. This addresses issues concerning the access and quality of water and sanitation. This also educates both parties on ways to improve the quality of water and sanitation services.
- **9.** The Western Balkan Investment Framework (WBIF) supports water supply and sanitation services among other needs for Albania. The WBIF has supported 30 projects that value up to 2 billion euros which provide better schools, energy sources, modern sanitation services and supply water for its sectors eligible for rebuilding and renovation. The achieved results include wastewater systems for over 260,000 people with expectations to exceed another 100,000, in addition to improved waste services to 180,000.
- 10. Water Charity contributes to rebuilding sanitation efforts in Albania. Water Charity has started a program to work on 100 water projects in Albania, including 10 school bathroom projects. The program falls under the Let Girls Learn Initiative. It is a collaborative effort from former First Lady Michelle Obama and the Peace Corps, which expands access to education for girls around the world

#### 3 LEGISLATIVE FRAMEWORK

# Albania Legislation:

- Law no. 8102, dated 28.03.1996, as amended, "On Regulatory Framework of the Water Supply Sector and Disposal and Processing Wastewater"
- Law no. 9902, dated 17.04.2008, "On Consumer Protection", as amended
- Law no. 11/2012 "On integrated water resources management"

The Albanian government has taken clear steps towards integrated water resources management. The former service sector of water supply, collection, disposal and treatment of wastewater is one of the sectors of special importance and sensitivity, as it directly affects the quality of life of citizens.

In the framework of the territorial administrative reform, approved by Law no. 115/2014 "On the administrative-territorial division of local government units in the Republic of Albania," the need arose for the reorganization of the Water Supply and Sewage (WSS) sector.

Law no. 8652 dated 31.07.2000 "On the organization and functioning of local government", as well as law 139/2015 "On local self-government" provides for the service of water supply, collection, disposal and treatment of wastewater, as a function of its own local government.

With law 30/2015 «For some changes and additions to law no. 8652 dated 31.07.2000 "On the organization and functioning of local government" it was determined that the municipality is the basic unit of local government. In this context, it was necessary to regulate the consequences of the territorial reorganization in the water supply and sewerage sector.

DCM 63/2016 through the mechanisms it offers, aims to make possible a quality service for citizens. This decision comes as a result of an in-depth analysis of the sector, its management capacity and human resources, the financial and economic situation, as well as the technical situation.

Some advantages of this decision are:

- Enables the identification of the area of jurisdiction with the service area of the WSS companies, making it possible for every citizen to be offered a service by one of the WSS companies.
- Emphasizes the approach of investment distributions in accordance with the performance of the Company, which will be detailed in other bylaws, as well as in accordance with strategic documents.
- Gives in detail the duties and responsibilities of the Municipality as well as the WWS Companies by orienting towards the management of the Company through the achievement of objectives with an employment contract with concrete performance indicators, which are measurable.
- Standardizes the way of organization and functioning of the operators that provide this service by proposing their organization in a more operational and simpler form, but at the same time maintaining the principle of commercialization of this service.

- It enables every WSS Company already to provide water and sewerage services (currently some of the WSS Companies only offer water supply service), as well as wastewater treatment in cases there are plants.
- Makes possible the implementation of law 8102/1996 "On the Regulatory framework of the water supply and wastewater disposal and treatment sector", forcing each of the WWS Company to be licensed.
- Orients towards further service aggregation, towards joining the WSS Companies, increasing the economies of scale.
- Details how to use WSS Companies profit by forcing them to invest the profit in relation to the approved business plan and investment needs.

The reform is still in the process of implementation and is being closely followed by National Agency for Water Supply, Sewerage and Waste Infrastructure (NAWSW) in the implementation of performance contracts signed between the Ministry of Infrastructure and Energy (MIE) and the Municipalities based on performance indicators that in many cases are defined a priori. NAWSW should increase its efforts together with the respective WSS companies in more accurately determining the values of the Key Performance Indicators as the basis of these Contracts that condition the distribution of subsidies, as well as incentives for physical investments. However, the pursuit of reform by NAWSW has given positive results for the sector in terms of:

- Elimination of illegal connections, as a result of the action taken at the national level, it was possible to identify a significant number of illegal connections, this also affects the increase in the number of clients;
- increase in the number of water meters installed: almost all companies for 2018 have increased the number of water meters installed, this has also affected the improvement of the indicator level of measurement;
- arrears collection: the civil liability for the liquidation of arrears increased significantly by becoming part of individual agreements for their repayment.

However, at the end of 2019, despite the slight improvement of the financial situation of the sector, it turned out that the expectations projected by the reform were not met, especially in terms of the impact of reducing losses from the elimination of illegal connections. To reduce losses and develop an action plan to reduce them with foreign assistance, funded by GIZ, a study was conducted on the eight largest WSS companies in the country that provide services to over 70% of the country's population.

# 4 THE NATIONAL AGENCY FOR WATER SUPPLY, SEWERAGE AND WASTE INFRASTRUCTURE

The National Agency for Water Supply, Sewerage and Waste Infrastructure NAWSW is the only state body in Albania specialized in the field of drinking water supply, sewage and white water and their treatment (water infrastructure). It technically supports the policies of the Ministry of Infrastructure and Energy, in accordance with the legislation and Government policies set out in the sector strategies.

The role of "NAWSW" in the field of its activity is to realize through its legal and technical authority, the coordination and monitoring of the activity for the provision of water supply, sewage of used water and their treatment for the entire population of the country, in cooperation with local governments and water infrastructure management entities.

To carry out its mission in support of the general staff of the Ministry, "NAWSW:

- ❖ Drafts the strategic framework for the development and management of the water supply and sewerage sector in our country;
- Proposes the annual investment planning from the State Budget based on the needs presented by the Local Government Units / JSC Water Supply and Sewerage and submits it for approval to the Minister of Infrastructure and Energy;
- ❖ Supports with financing, through the Ministry of Infrastructure and Energy, the needs for local costs, customs duties and VAT refunds, approved contracts financed by foreign donors.
- ❖ Proposes standards and technical specifications for water supply and sewerage and sends them to the relevant bodies for approval;
- ❖ Drafts and prepares draft laws and bylaws related to the field of administration and distribution of drinking water, organized disposal and treatment of wastewater;
- Organizes and directs the work for the identification of new projects in the water infrastructure sector;
- ❖ Follows the reforms undertaken by the Government to improve the management, operation and improvement of the sector indicators by supporting the Local Government Units and the subjects of water infrastructure management;

- ❖ Prepares the documentation and follows the progress of the development of alternative forms of management in the Water Supply and Sewerage sector;
- ❖ Cooperates with central and local institutions, foreign donors, local or foreign non-governmental associations, interested in the development of the water infrastructure sector.
- ❖ Cooperates with the Secretariat of the National Water Council and the Water Basin Agencies for an efficient management of water resources, especially those used for drinking water;
- ❖ Organizes and directs the work for investment procurement (studies, designs, maintenance, rehabilitation, new constructions) according to the legislation in force;
- ❖ Monitors the progress of projects with foreign donors through its subordinate project implementation units and is responsible for their progress. Coordinates with the Directorate of Project Management in the Ministry of Infrastructure and Energy for water infrastructure projects;
- ❖ Promotes and implements appropriate realistic policies in the water supply and sewerage sector in Albania, through the effective implementation of the monitoring program;
- ❖ Organizes and directs data collection from all water supply and sewerage companies operating in the country, reviews and evaluates data periodically, maintains their integrity, develops realistic standards for comparative evaluation within the sector, monitors the progress of enterprises analyzed in order to improve their performance, all based on performance indicators;
- ❖ Cooperates with the Sector of Civil Emergencies and institutions interested in the design and implementation of programs for the provision of water infrastructure facilities;
- ❖ Follows and develops relations with international organizations and institutions for the water infrastructure sector;
- Organizes and directs the qualification of AKUM staff and water supply and sewerage companies through courses and seminars that take place inside and outside the country;
- ❖ Follows and monitors the level of water supply and wastewater disposal service by identifying problems, providing ways to solve them by informing in each case the Heads of the Ministry.

- ❖ Enables public awareness campaigns to promote new techniques of cooperation with the community in the service of solving the problems of water supply and sewerage companies, increasing the level of water payment by consumers, reducing drinking water misuse, etc.
- ❖ Follows the progress of campaigns organized by Enterprises and NAWSW.

## 5 WATER REGULATORY AUTHORITY

Water Regulatory Authority (WRA) is an independent public institution that regulates the water supply and sewerage sector in Albania, established by law 8102 dt. 28.03.1996, as amended, to ensure the guarantee and protection of public interests and to create a transparent regulatory environment.

WRA is an independent public institution and directly responsible to the Council of Ministers and the Assembly of Albania, to which it reports regularly.

WRA has the following functions and competencies:

- License natural or legal persons that provide water supply and sewerage service for public benefit;
- Ensure that operators provide customers with good quality and efficient services at a reasonable price;
- Set service tariffs, in order to ensure the financial viability of operators as well as their affordability by customers;
- Monitoring the performance of operators by ensuring the implementation of measures to protect the interests of customers and promoting continuous service progress, by setting efficient and challenging objectives;
- Ensure that operators do the best for customers and the environment in the long run;
- Analyze customer complaints and support them in resolving them between customers and operators;
- Contribute in all important processes in the sector as in the drafting of strategies, policies and national legislation for the water supply and sewerage sector;
- Compile and make available information on the water supply and sewerage sector to all actors in the sector and the general public, e.g. through Annual and Performance reports.

#### **6 RECOMANDATIONS**

- ➤ Review and approval of amendments to law no. 8102 on the Water Regulatory Authority proposed by the WRA in the Albanian Parliament, regardless of the approval or not of the draft law on the water sector.
- ➤ Repeal of the current Water Code (Regulation on water supply and sewerage in the service area of the water supply and sewerage company) and its review and approval by the WRA, as a necessity in response to the current requirements of the sector, and in particular for a relationship and the most objective treatment of consumer complaints.
- ➤ Drafting of a guide and unified model of the 5 Year Business Plan for WSS Companies by WRA, as a basic document in support of the justification of tariffs proposed by WSS Companies, and as a necessary instrument for improving the management of companies in terms of increase their financial viability.
- ➤ Drafting of the necessary bylaws by the Ministry of Health in cooperation with the Ministry of Infrastructure and Energy to specify the procedures for issuing the Hygienic Sanitary Approval Act for WSS companies, as well as the regulation of Hygienic Sanitary Inspections for water supply and sewerage systems of wastewater. The drafting of the above sub-articles will serve to increase the guarantee of public health safety to reduce the risk of contamination of the water distribution networks, as a necessity for solving the problem of licensing of UK companies.
- ➤ Start as soon as possible the process of aggregation of UK Companies as an advantage of economies of scale based on the principle "on a voluntary basis and with incentives from the central government" initially aiming to achieve 2-3 successful aggregations, where WRA must first assess the aggregate tariffs in the selected cases for aggregation.
- ➤ Promote the improvement of the performance of WSS Companies through the drafting of Performance Contracts between AKUM and the Municipalities based on Performance Indicators and Objectives assessed in accordance with the real situation of WSS Companies and ambitious for the future.