Water Resources Sustainable Management
and the Role of Water Regulatory Authority

Our planet is a system with a closed cycle of water within nature. Water resources, as an integral part of this cycle, are now an invaluable assets for human life activity, where a part of these reserves with drinkable water quality comprises only about 0.3% of the total water reserves on Earth, and not all of this amount is accessible for use. Oceans and seas hold approximately 70% of the Earth's surface water, but this reserve is practically unusable for human consumption and industrial purposes due to extremely high production costs, as well as the huge distances for delivering to the customer.

For several decades, the problem of the urgent need for rational management of these resources has emerged due to the negative factors, on the one hand, by the continuous increase of the water demand from the population and industry, the deterioration of their quality from the legal and illegal activity of waste water that causes their pollution, and finally the negative influence of climate change (floods/droughts).

The policies of a rational water management are closely linked to the Integrated Management of Water Resources, where in addition in fulfilling the demand for drinking water are foreseen the demands from other water users such as agriculture, fishing, recreational activities and so forth.

Recently, our country approved the Integrated Water Resources Management law, which clearly sanctions in detail the entire legal framework that guarantees policies and obligatory executive measures aligned with the principles of water resource management in our nation and in compliance with European Union Directives, as one of the conditions of the "Acquis Communautaire" that our country should meet.
The basic principles of the law for a sustainable management of water resources, which include, ae well WWS services, are:

- **Cost Recovery Principle, and**
- **The Polluter Pays Principle.**

To those basic principles can be attached other auxiliary principles, but no less important, such as ***Economic Efficiency, Environmental Protection*** and ***Social Equality.***

The EU water legislation states that the costs of WWS services in using water resources (European Environment Agency, 2013) in application of the principle of Cost Recovery must be paid by the consumers through the tariffs, sanctioned in the Water Framework Directive (WFD, Directive 2000/60/EC), where its Article 9 specifically requires that Member States should take into account the principle of cost recovery of water services, including environmental and resource costs (European Parliament and Council of the EU , 2000)

Implementation of these principles in the Albanian WWS Sector

Utilities, in compliance with the above two principles of integrated management of water resources, in water and wastewater tariffs, must include also the costs of using water resources, as well as those for eliminating environmental pollution.
In Albania the W&WS sector continues to remain financially unsustainable. The economic survivor of the utilities in covering operation and maintenance (O&M) costs relies on the subsidies granted from the central government. Before the initiation of the water sector reform start of the reform on 2022, the sector was fragmented with 58 WSS utilities, where only 12 of them managed to cover the O&M costs. In ***this situation it has been difficult to claim the implementation of the Cost Recovery principle by all 58 WSS companies operating in the sector.***

Currently, the sector is almost aggregated in 15 Regional Utilities with the main shareholder central government. The economy of scale is expected to bring an improvement of their financial sustainability by creating the conditions in fulfilling the above principles.

The Water Regulatory Authority (WRA) is a basic institution that, through utilities, plays a very important role in respecting the above principles in the sector by the legal instruments at its disposal, where the Tariff Approval Methodology is the basic document that refers to it.
The basic criteria on which this methodology is based are:

1. ***Justified O&M or Total Costs***
2. ***Evaluation of the utility's performance through Key Performance Indicators (KPIs)***
3. ***Customer's bill affordability***
4. ***Environmental protection and preservation of water resources from overuse.***

From the above, it can be seen that the tariff approval methodology *does not obligate* utilities *to propose tariffs for approval covering O&M and Total Costs*, but WRA, during the implementation of the above four criteria, plays an active role for a sustainable management of water resources and cost recovery principle, as follows:

1. *Justified O&M or Total Costs*

In the methodology, WRA has included in Article 10, point k, that when utilities apply for new tariffs, they are required to submit the Water Use License obtained from the Basin Administration Office, in which is indicated the quantity of water extracted allowed from the related water basin, including the related water extraction (use) tariff. Additionally, they must demonstrate clearance of all financial settlement related to the water usage as specified in the permit. The water usage costs must be reflected in the balance financial statements of the utilities as costs accepted by WRA part of the tariff costs approved by WRA.

2. *Evaluation of the utility's performance through KPIs*

WRA in drafting the Annual Water Balance report and their analysis of the new tariffs proposals from utilities, gives a particular attention to the indicator of Non-Revenue Water (NRW), as the main indicator related to the issues for a rational management of water resources and the financial sustainability of utilities.
Currently, this indicator that expresses in percentage the amount of water that is lost (not billed to customers) compared to the amount of water produced, for the whole sector is at an average of 65%, which is considered a rather high and unacceptable value.
WRA makes a careful assessment of this indicator and sets quite aggressive objectives for the utility to improve it in the future, thus contributing towards a better management of water resources by utilities.

3 *Customer's bill affordability* .

The Water Resources Management Agency acknowledges the financial costs and related challenges for the effective operation of basin institutions to fulfill their legal tasks. An analysis of the potential revenues which Basin Administration Offices (BAA) can obtain by utilities as water usage tariffs or fees, in 2023 reveals the following findings:

- Referring to the 2023 year data, on a national level the utilities in order to develop their activity produced about 312 million m^3 of water, from which 76 million m^3 belongs to surface sources (reservoirs) and 236 million m^3 from underground sources.

- The Decision of Ministers' Council no. 993, of 2020 determines water usage tariffs for utilities, namely 0.05 ALL/m^3 for surface water and 0.08 ALL/m^3 for underground water.
- Referring to the above annual production, BAA from the entire sector must collect in total 22.7 million ALL per year revenues from Water Use Permits from utilities, respectively 18.9 million ALL for those using underground resources and 3.8 million ALL for surface ones.
- The average O&M cost of $1m^3$ of water for both water supply and wastewater services is estimated 54 ALL/m^3.

Referring to the above volumes of water produced, the average water usage tariff is 0.075 ALL/m^3 for both types of water resources used by utilities, which represents 0.14% of the average O&M costs, meaning that:

The component cost of water use in the monthly bill of household customers for an normal average consumption of about 12 m^3/month it is <u>0.9 ALL/month per customer or for an average family of 4 people.</u>

4 *<u>Environmental protection and preservation of water resources from overuse</u>*

The fourth criteria considered by WRA during tariff approval proposed by utilities relays also to the issues for a good management of water resources. In order to preserve the water resources from over-consumption it needs to discourage the consumers to consume water more than normal norms.

On this purpose WRA gives the possibility to the utilities to propose applying to the customers the" tariffs on block", according to the principle that up to a certain usage norm (e.g. 150 liters/day, person) consumers must pay normal rates. Beyond this threshold, consumers have to higher tariff, as shown in the table of Article 19, Point 6 of the methodology, here below:

Client Category	**Household**	**Public**	**Private**
Multiplication Coefficient Price for 1 m^3 water	Consumption (m^3/month)	Consumption (m^3/month)	Consumption (m^3/month)
1.0	until 18	Historical average of Final Year (MH)	Last Year Historical Average (MH)
1.0 to 3.0	18 to 30	Up to 3 times the MH	Up to 3 times the MH
1.5 to 4.0	over 30	Over 3 times the MH	Over 3 times the MH

Regarding the *"polluter pays" criterion*, if the service area of the utility is situated a WWTP, for the related customers is applied the above criteria because their monthly bill includes the operating costs of the treatment plants, while for service areas that are not covered WWTP, this principle remains to be respected in the future.

However, WRA, in the tariff approval methodology in article 19, point 7 provides that for customers who are causing high level of pollution, the utility can propose special tariffs in accordance with the implementation of the "polluter pays" principle, but this argument in the future should be developed in more details and by additional sub-acts.

Conclusions:

- *The tariff costs of Water Use License for utilities in the monthly household bill, are relatively low, so there is possibility for raising them in order that the institutions responsible for managing water basins have sufficient budgetary resources to fulfill their legal tasks and develop their activities effectively.*

- *Referring to the criteria in the tariff setting methodology, WRA does not directly impose utilities to apply for tariffs that can cover all costs in respect of the principle of Cost Recovery.*

- *The proposal for new tariffs is an exclusive right of utilities prepared by the management staff of the utility, approved by the relevant Supervisory Board and accompanied by the opinion of the shareholders.*

- *In the W&WS Sector the implementation of Cost Recovery principle of by regional utilities, is strongly supported and encouraged by WRA, but the central government has the main role in its full implementation. The central government, as the main shareholder of regional utilities, decides what tariffs Regional Utilities will propose to WRA for approval.*

- *The increase from the government of Water Usage (extraction right) tariffs for utilities will encourage them to improve the NRW indicator.*

- *To improve the NRW indicator utilities should consider implementing "block tariffs" that discourage excessive water consumption, particularly from the consumers in rural areas and non-family households.*

- The reform in the W&WS sector is expected to have a sector financially sustainable in medium terms, which enables WRA to update the current methodology by defining cost recovery as a mandatory condition for the utilities in applications for new tariffs.

- Referred to the Decision of Ministers' Council no. 302 of the year 2022, as the basic legal act of implementation of the aggregation reform in the sector, it is supposed that the W&WS sector will be self-financed for a maximum term of 10 years. The current commitment of the stakeholders in the reform implementation, makes optimistic that situation where the coverage of all costs by the tariffs within the sector is expected to be reached before the deadline, ensuring a full implementation of the Cost Recovery principle.