

## Water Bill Affordability for Household Customers

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# Tariff Setting Criteria



Tariff Setting Methodology of WRA stands in four criteria or pillars:

- Justified Cost Coverage of the utility activity
- Management Efficiency of the utility
- Affordability of the bill by the customers
- Environmental Efficiency



***In many cases utilities propose very high tariffs in order to cover 100% of the W&WS services costs with the revenues.***



***Household customers generally consider very high and contest the water tariffs proposed by the utilities.***



***It is needed an quantitative indicator to estimate the affordability of the water tariffs proposed against the customer's claims.***

# Concept of Affordability



## Affordability Definition:

***The economic ability of household customers to pay for the necessary consumption of WSS services without compromising the minimum value that a household needs to consume other necessary services/goods.***

***It is expressed as a percentage of monthly ratio amount of the water bill towards the average monthly income of household customers.***

- This is a tool in hands of the Regulator to protect the customers interests, and helps the local and central government in planning the public funds for subsidies and physical investments in the water sector.
- In the other hand an accurate assessment of the affordability enables that part of the investment plans the utilities needs can be afford by the tariffs of the services.

# Affordability Criteria according WRA



- WRA consider that the bill for the WSS service to be financially AFFORDABLE from household customers, should not exceed 5% of their average income\* .
- The 5% is reflected in the “The Methodology and Procedure for the Approval for WS and WW Services Tariffs “, but WRA takes into account the average monthly expenses of a household instead of average monthly income for double checking the water bill Affordability (the only data available from INSTAT).
- Regulator excludes from this rule "low-income and vulnerable customers" that are treated with special policies and financial support from the central and/or local government.
- It is proposed in the revised Water Code that the category of « social help » customers should be supplied for free from the operators with 50 liters/capita, day, \*\*.

\* *The United Nations Human Rights Resolution on Drinking Water and Sewerage at the Human Rights Council on 24 March 2011 recommends that spending on the water bill should not exceed 5% of the average monthly household income.*

\*\* *According to the World Health Organization (WHO), in order to meet basic needs are needed 50 to 100 liters per person per day.*

# European Situation



## Affordability and Revenue Water Bills for some European Community Countries

State	Affordability Limit	Water Bill / Monthly Household Income (in%)	Comments
Belgium	3%	1,1%	Discuss to lower the affordability limit to 2%
Germany	-	0,9%	Tariffs are set by the Local Government
Spain	-	0,8%	Tariffs are set by the Local Government.
Scotland, England	3%	under 3%	Tariffs are set by Regulator.
Italy	-	Is not used as a criteria	The tariff takes into account a percentage of unpaid water percentage that varies from North-South (2.4-8.6%)
Albania	5%	from 3,7% to 1,85%	Given on monthly expenses
United Nations	5%		The UN Resolution on Human Rights in Drinking Water and Sewerage, at the Human Rights Council on 24 March 2011. The previous UN Resolution of 2006 set this limit at 3%.

## ***Data offered by INSTAT to Support the Process of the Affordability***

INSTAT provides detailed data that allow a more precise and deep analysis for estimation of the Affordability criterion, namely:

- ❑ Data are provided on a county basis for the average monthly expenditure of a household for 10 categories of the population (deciles) from the poor (deciles 1) to the rich (deciles 10).
- ❑ The data are detailed for different family sizes according to the average number of persons occupancy, respectively 3.8 persons per household for the total of 10 deciles and 3.9 persons per household for the sum of the deciles from 1-9.
- ❑ The data give as a percentage the monthly expenditures of households for the total expenditures on energy, water, rent (about 10.2% to 10.4% of the total), but not separately for the water services.

# Average Monthly Household Expenses (INSTAT)



## Expenditures-Decile by Counties

Deciles	Berat	Dibër	Durrës	Elbasan	Fier	Gjirokastrë	Korçë	Kukës	Lezhë	Shkodër	Tiranë	Vlorë	Total Average
1	27,299	34,309	35,926	34,023	31,562	28,715	30,850	39,360	40,565	34,187	32,907	29,639	33,237
2	45,128	41,000	47,466	41,967	43,621	40,043	37,714	51,174	44,631	48,881	44,748	39,713	43,805
3	54,262	43,354	54,170	46,528	48,819	46,676	50,086	59,654	57,645	53,101	53,133	40,485	50,809
4	56,811	54,019	59,060	56,137	57,535	54,474	47,060	71,145	61,457	58,849	62,478	47,123	57,244
5	59,301	55,246	56,309	53,571	63,163	52,285	60,356	61,219	66,649	60,265	69,367	46,046	61,127
6	64,325	57,507	77,765	69,239	68,872	64,276	70,924	71,652	68,349	75,761	73,967	58,963	69,532
7	77,625	64,185	85,158	72,912	76,013	66,257	74,798	80,817	72,434	79,375	77,376	61,310	75,691
8	87,085	67,052	91,334	70,219	86,030	92,150	78,955	72,722	81,933	84,465	92,259	75,886	86,089
9	94,555	89,439	110,239	85,987	110,271	82,262	104,372	71,885	116,322	101,662	108,199	101,133	104,398
10	141,868	91,948	138,155	101,560	163,988	135,669	154,703	183,805	167,664	163,115	158,404	136,702	152,079
Average Monthly Expenditures (Decila 1-10)	70,826 (590€)	59,806 (500€)	75,558 (630€)	63,214 (527€)	74,987 (625€)	66,281 (552€)	70,982 (591€)	76,343 (636€)	77,765 (648€)	75,966 (633€)	77,284 (644€)	63,370 (528€)	73,401 (612€)
Average Monthly Expenditures (Decila 1-9)	62,932 (524€)	56,234 (469€)	68,603 (572€)	58,953 (491€)	65,096 (542€)	58,570 (488€)	61,679 (514€)	64,402 (537€)	67,776 (565€)	66,282 (552€)	68,270 (569€)	55,588 (463€)	64,659 (539€)
Rate 10/av. sum 1-9	2,25	1,62	2,01	1,72	2,52	2,32	2,51	2,85	2,47	2,46	2,32	2,46	2,35

# Criteria for Setting the Level of Affordability



- Affordability is more comprehensible by the customer if it is expressed as the average amount of the monthly water bill the household customer has to pay based on metering or flat rate.
- INSTAT provides data in 10 deciles reflecting the difference of living standard of the population. It is noted that the 10<sup>th</sup> decile of the households (the rich stratum of the population) consumes more than twice (2,35) of the monthly amount of expenditures than 95% of households nationwide.
- The “rich” families (10<sup>th</sup> decile) is disbalancing the average monthly expenditures calculation for the whole population, so it will be more appropriate to exclude it from the calculation of the average of the monthly expenditures used for the affordability criteria.
- The comparison is also made for the expenditures of decile families 1st and 3rd representing the poor and close to poor families.



# Criteria for Setting the Level of Affordability (continues)



- The comparative average amount of the monthly expenditure used for the affordability criteria referred by INSTAT to a family with 4 persons occupancy (3,9), which represent over 95% of the total number of families nationwide.
- Both types of customer billing methods, metered and flat are taken into consideration.
- The affordability assessment is made for a family of 4 people with an average amount of water consumption 100 liters/day, households metered billed, and 150 liters/day, households billed on flat rate.
- The operators often offer a non continuous regime of water supply and without the minimum standard pressure, thus households are obliged to install the individual buster pumps i.e. additional capital and energy costs to be included during the assessment of affordability. Those additional costs are estimated around twice of the cost of the water bills, but are not considered as costs for a transition period of time\*.

\* *COWI, draft WSS Sector Strategy Financing Model, May 2016*

# Metered and Flat Monthly Bills (WRA)



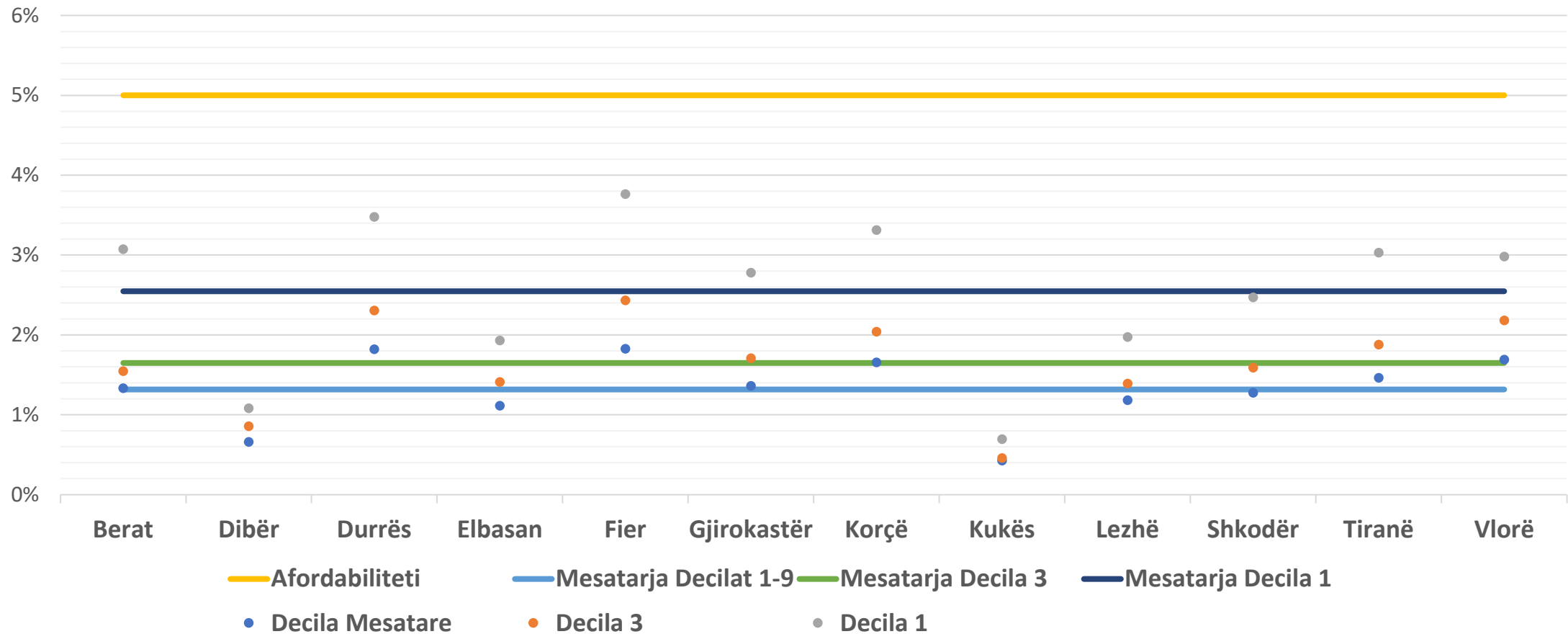
## Monthly Bills for Household Customers

No	Operator	2020			Monthly Bill Metered 12 m3 (4 persons) (in ALL/€) Household	Monthly Flat Rate Bill 18 m3 (4 persons) (in ALL/€) Household
		Water Supply		Sewerage		
		Volumetric Tariff (in ALL)	Fix Tariff (in ALL)	Volumetric Tariff (in ALL)		
		Household	Household	Household		
1	Berat-Kuçovë	48	100	13	998 /8.5	1,438/12
2	Bulqizë	17	100	0	365 /3	487/ 4
3	Krastë	30	0	7	533 /4.5	799 /6.7
4	Devoll	38	50	0	607 /5	881 /7.4
5	Delvinë	58	167	18	1,295 /11	1,842 /15.4
6	Dibër	27	0	0	389 /3.3	583 /5
7	Durrës	70	150	50	1,908 /16	2,772 /23
8	Elbasan	38	0	8	662 /5.5	994 /8.3
9	Fier	52	200	13	1,176 /10	1,644 /13.7

# Affordability - Metered Billing Case



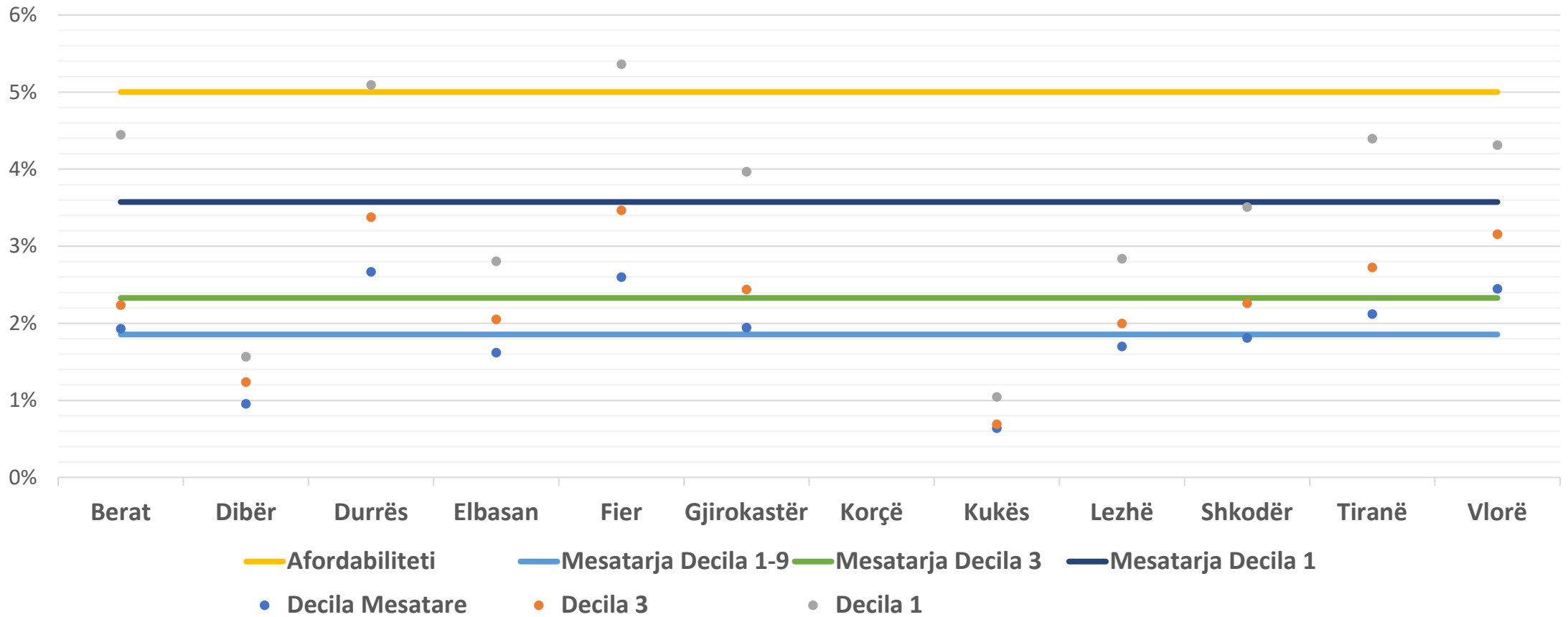
Average Metering Billing for the Sector (in %)



# Affordability - Flat Billing Case



## Average Flat Billing for the Sector (in %)



# Affordability - WSS Sector Average



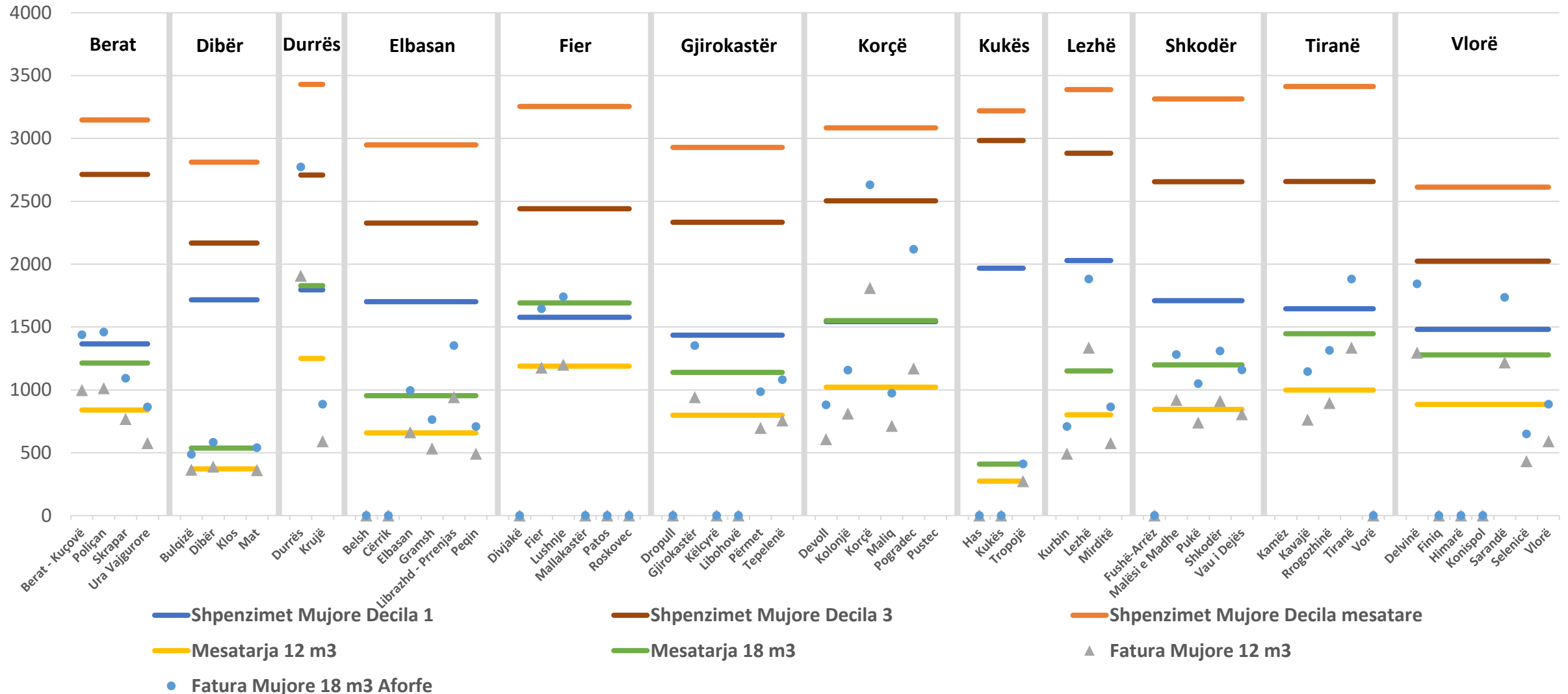
Deciles	For Metered Billing	For Flat Rate Billing
<b>Affordability Criteria</b>	<b>5%</b>	<b>5%</b>
<b>Average (Deciles 1-9)</b>	<b>1,2%*</b>	<b>1,85%*</b>
<b>Decile 3</b>	<b>1,65%</b>	<b>2,35%</b>
<b>Decile 1</b>	<b>2,55%</b>	<b>3,6 %</b>

\* *In case of non continuous regime of water supply, the affordability will double, i.e. 2,4% and 3,7%*

# Affordability as Average by Counties



Affordability by Counties Referring to the Border 5% of Monthly Expenditures (in ALL)



# O&M Cost Coverage and Collection Rate



O&M Cost Coverage and Collection Rate

No.	Activity	OPERATOR	O&M Cost Coverage and Collection Rate	Current Collection Rate	Collection	Costs O&M	OM Cost Coverage with Current Collection
			1	2	3=1*2	4	5=3/4
1	W&WS	Tiranë	3,961,162	87.1%	3,448,408	2,300,316	150%
2	W&WS	Durrës	1,059,706	74.0%	784,182	1,082,825	72%
3	W&WS	Vlorë	309,037	63.0%	194,693	550,541	35%
4	W&WS	Elbasan	326,343	63.1%	206,029	358,947	57%
5	W&WS	Fier	380,025	72.0%	273,618	368,828	74%
6	W&WS	Shkodër	297,106	71.0%	210,945	348,528	61%
7	W&WS	Korçë	363,059	73.8%	268,113	201,966	133%
8	W&WS	Berat-Kuçovë	231,660	82.9%	192,096	172,921	111%
9	W&WS	Kavajë	158,415	50.0%	79,208	259,374	31%
10	W&WS	Lushnje	154,193	79.0%	121,812	206,920	59%
11	W&WS	Sarandë	185,741	79.0%	146,735	169,121	87%
12	W&WS	Pogradec	149,969	75.0%	112,476	127,422	88%
13	W&WS	Kamëz	212,584	95.8%	203,705	132,434	154%
14	W&WS	Lezhë	197,379	85.1%	167,974	111,293	151%
15	W&WS	Gjirokastër	86,936	75.0%	65,202	96,579	68%
16	W&WS	Maliq	40,698	82.4%	33,531	54,828	61%
17	W&WS	Dibër	48,510	48.5%	23,527	53,552	44%
18	W	Devoll	36,626	62.8%	22,992	30,075	76%
19	W&WS	Kurbin	48,414	79.4%	38,444	124,167	31%
20	W&WS	Cërrik	38,977	75.8%	29,558	56,802	52%
21	W&WS	Belsh	42,915	68.8%	29,528	63,267	47%

## Comments

- ❑ **At the national level, based on average, affordability seems guaranteed, however the assessment should be made case by case for to each region.**
- ❑ **Generally each county has average utility tariffs that meet the affordability criteria, both for metered billing and in the flat rate.**
- ❑ **For customers with meters there are still margins to increase the tariff and being affordable economically by household customers, including deciles 3 of customers (with the exception of Durrës and Korçë counties).**
- ❑ **Most companies are quite problematic with a current collection rate of around 70% and urgently need to analyze the reasons of the low collection rate and should take measures to improve it to avoid the problem of Tariff Affordability.**
- ❑ **The O&M cost recovery table shows that the companies intending to cover part of the total costs (including CAPEX) with tariffs in the future not facing affordability problems are the companies: Tirana, Korça, Lezha, Berat-Kuçova, Kolonjë and Kamëz.**



# Affordability - REFERENCES



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- ✓ ***Guerrini A. and Romano G. (2014), Water management in Italy: Governance, Performance and sustainability. Available at: <http://www.springer.com/gp/book/9783319078175>***
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# Thank You !

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