Uji dhe Natyra

KONFERENCA DHE EKSPOZITA E PËRBASHKËT BALLKANIKE

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SHUKALB | SHUKOS

TREATMENT OF URBAN WASTEWATER; EVALUATION OF GREJGOVC RIVER POLLUTION FROM WASTEWATER

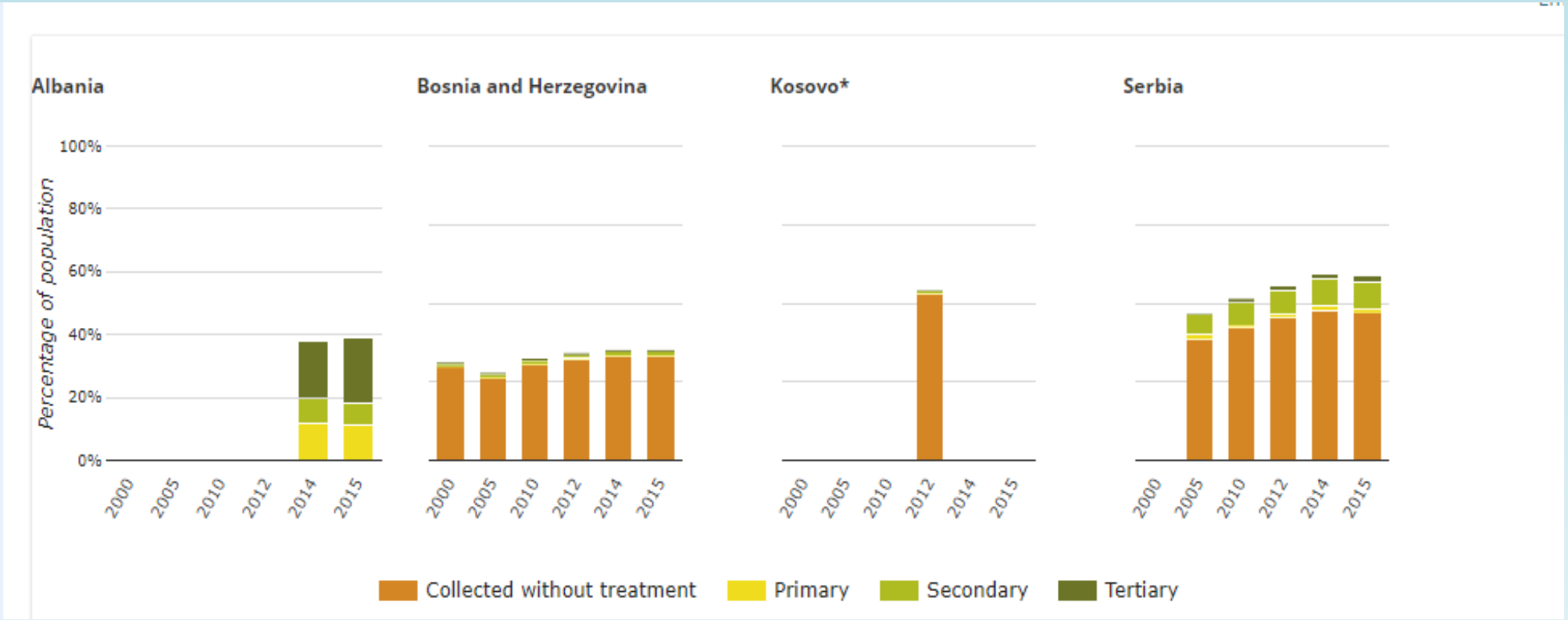
YOUNG WATER PROFESSIONALS OF KOSOVO

TIRANA, 2018

Objectives

- Evaluation of Grejkovc river pollution from wastewater.
- Physical and chemical analysis of wastewater and water used for drinking.
- Offering a solution.

Treatment of urban sewage is essential to ensure public health and environmental protection. Treatment of urban sewage in all parts of Europe has improved over the last decades



Sewage problems increased gradually over the same period as urban population growth, as the natural capacity of self-purification of surface waters was no longer able to keep up with the development of time.

EXISTING SITUATION

- The sewage of the village Grejkoc is discharged directly into the river of this village.
- All homes may have access to the sewerage network but not all are connected.
- The sewerage network also collects water from the roofs of the houses according to the observation made near the main road, but not the atmospheric drainage along the roads.

- The sewerage network in this village besides the sewage in it has also directly connected the sources of some underground wells which some of the inhabitants have in their properties

- The water of these wells is clean and in some cases used for drinking.

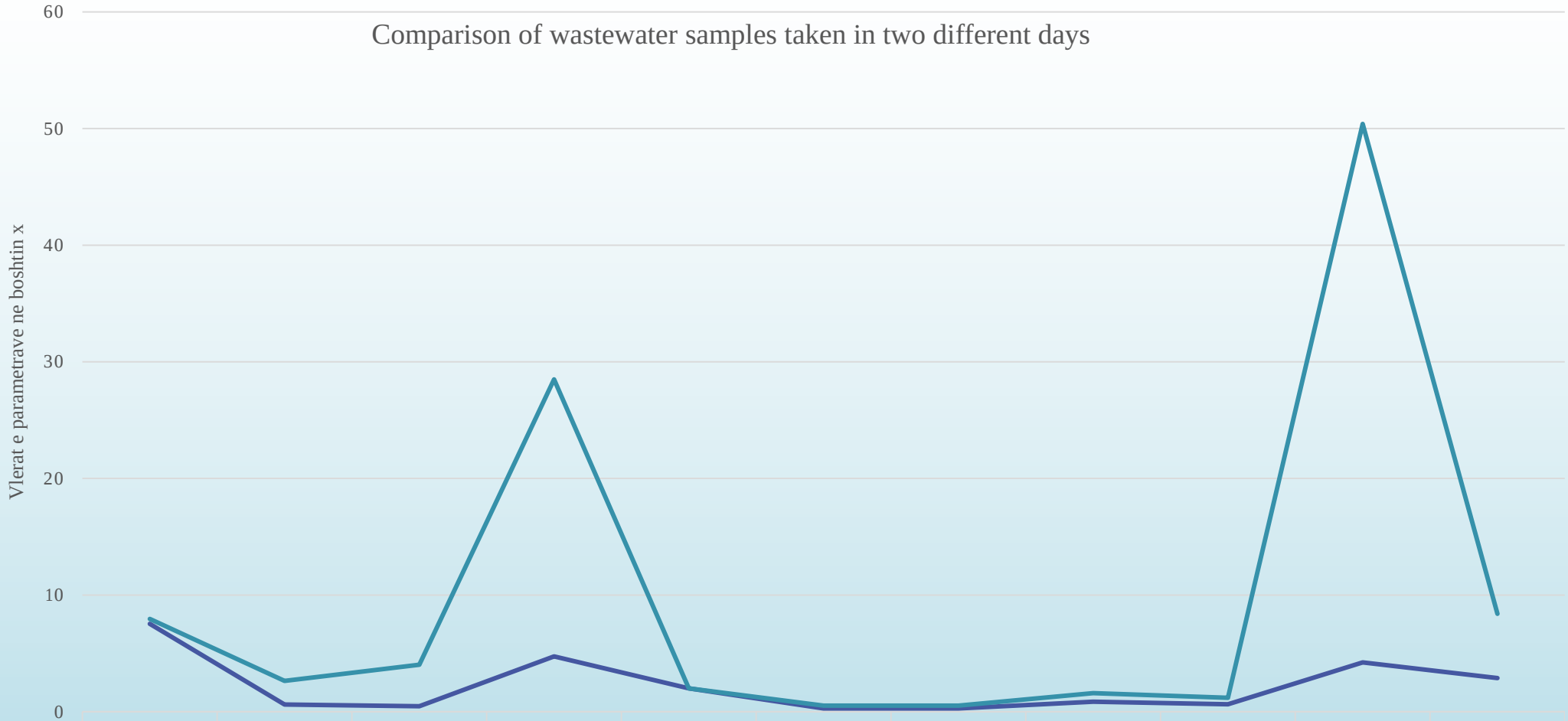
- The large amount of water in these wells discharged into the sewer directly reduces the pollution of this sewage system.

- There are two discharge points in the river.

- There is no septic tank.

- After analyzing the external factors and geographic extent of the Ati Well, samples were taken from:

- The Grejkovc River,
- Surface Water Near the Ati Well
- Ati Well
- River contaminated near residential habitats
- Source of wastewater
- Wells
- Water from artisan resources



	pH	DO (mg/L)	Turbiditeti (NTU)	Azoti total (mg/L)	TSS (mg/l)	PO4-P (mg/l)	PO4-P total (mg/l)	PO4 (mg/l)	P2O5 (mg/l)	COD (mg/l)	BOD (mg/l)
Mostra 1	7.54	0.61	0.47	4.74	2	0.279	0.279	0.855	0.6389	4.23	2.88
Mostra 2	7.95	2.64	4.03	28.5	2	0.52	0.52	1.59	1.19	50.4	8.4

Table 1. Description of samples taken.

SAMPLE	DESCRIPTION
Sample I	Grekovc River
Sample II	Surface Water Near the Ati Well
Sample III	Pumping station
Sample IV	River contaminated near residential habitats
Sample V	Source of wastewater

TABEL 2. Physical parameter of the samples described in table 1.

		Sample				
Parameter	**Unit**	I	II	III	IV	V
O2	mg/L	2.70	2.48	-	2.69	2.64
pH	-	8.24	8.56	-	8.35	7.95
Temperature	˚C	22.1	22.2	-	21.60	21.40
%O2	-	36%	33%	-	35.30%	34.70%
Electrical Conductivity	us/cm	734	960	-	885	753
Turbidity	NTU	0.19	14.8	-	1.80	4.03

TABELA 3. Chemical parameters of samples described in table 1.

		Sample				
Parameter	**Unit**	I	II	III	IV	V
COD	mg/L	11.0	50.6	-	21.4	50.4
Total Nitrogen	mg/L	24.6	49.9	-	78.7	28.5
Total Suspended Solids	mg/L	5	26	-	2	2
PO4-P	mg/L	0.37	0.15	-	0.32	0.52
PO4-P total	mg/L	0.37	0.15	-	0.32	0.52
PO4	mg/L	1.14	0.46	-	1.00	1.59
P2O5	mg/L	0.85	0.34	-	0.75	1.19

Table 4. Description of samples taken	
Sample	**Description**
Sample I	Wells
Sample II	Ati's Well
Sample III	Water from artisan resources

Parametrat	Njesia	Sample I	Sample II	Sample III
Turbullira	NTU	0.29	0.26	0.27
pH		8.42	7.87	8.51
Ammonia	mg/l	0	0	0
Nitrite	mg/l	0	0	0
Nitrate	mg/l	0.3	1.1	1.0
KMnO4	mg/l	0.002	0.013	0.004
Iron	mg/l	0	0	0.13
Electrical Conductivity	uS/cm	849	621	624
Total Hardness	dH	27.44	19.04	21.28
Chlorure	mg/l	14	18	15

Conclusions

- Discharge without any treatment does not present high-level river pollution
- Adjustment of the river bed so that there would be no flooding during the heavy rainfall, which would affect the water quality.

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THANK YOU!