

This questionnaire has been designed by a work team of the Technological Center CARTIF to obtain information about the wastewater treatment plant in the field of the MEDAWARE project - Development of tools and guidelines for the promotion of the sustainable urban wastewater treatment and reuse in the agricultural production in the Mediterranean countries

1 BASIC DATA OF THE WASTEWATER TREATMENT PLANT

Name: Serap TARI	Position: Manager for Environmental Protection
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1. Where is your local wastewater treatment plant located?

Address: Yenimahalle, Eren Yildirim Sokak, Belediye Konutlari			
City: Silivri	County: Istanbul	State: Turkey	Zip: 34570
Telephone number +90-212-72725 70	Fax number +90-212-72724 88	E-mail address cevre@silivri-bld.gov.tr	

2. How many stages of treatment does your facility use?

Primary	<input type="checkbox"/>	_____
Secondary	<input checked="" type="checkbox"/>	Conventional Activated Sludge Wastewater Treatment Plant
Tertiary	<input type="checkbox"/>	_____
Other	<input type="checkbox"/>	_____

3. What is the capacity of the treatment plant?

Liters per day (average)	1 330 000
Number of People and/or Employees	3
Peak Daily Flow Estimate	_____

4. How is the sludge disposed of?

Burned	<input type="checkbox"/>	Landfill	<input type="checkbox"/>
Fertilizer	<input type="checkbox"/>	Other	<input checked="" type="checkbox"/>

Sent to marine outfall.

5. Where does the treated wastewater go after it leaves the plant?River or Stream
Ocean Lake
Other **6. In what year was the plant built?**

1995

7. Have there been any modifications of the plant in recent years?

No

8. Are there any plans for additional improvements to the plant?

Due to a change in Greater Municipality Law, this treatment plant will be included in the responsibility of the Istanbul Greater Municipality leading to a modification in sewage system. Hence, existing municipal wastewater treatment plant will be out of service in a couple of months.

9. Wastewater analysis information (influent)

Wastewater BOD	315 mg/l
Wastewater COD	580 mg/l
Wastewater Suspended Solids	190 mg/l

10. Treated water- Local government requirement - If known (effluent)

Wastewater BOD	45 mg/l
Wastewater COD	65 mg/l
Wastewater Suspended Solids	20 mg/l

2 WASTEWATER TREATMENT INFORMATION

11. Primary Treatment Processes

	<i>Processes</i>	<i>Size (if know)</i>	<i>Main operational problems (if exists)</i>
<input type="checkbox"/>	Bar or bow screen	_____	_____
<input type="checkbox"/>	Grit removal	_____	_____
<input type="checkbox"/>	Primary sedimentation	_____	_____
<input type="checkbox"/>	Comminution	_____	_____
<input type="checkbox"/>	Oil / fat removal	_____	_____
<input type="checkbox"/>	Flow equalisation	_____	_____
<input type="checkbox"/>	pH neutralisation	_____	_____
<input type="checkbox"/>	Imhoff tank	_____	_____
<input type="checkbox"/>	_____	_____	_____
<input type="checkbox"/>	_____	_____	_____

12. Secondary Treatment Processes

	<i>Processes</i>	<i>Size (if know)</i>	<i>Main operational problems (if exists)</i>
<input type="checkbox"/>	Activated sludge	_____	_____
<input type="checkbox"/>	Extended aeration	_____	_____
<input type="checkbox"/>	Aerated lagoon	_____	_____
<input type="checkbox"/>	Trickling filter	_____	_____
<input type="checkbox"/>	Rotating bio-discs	_____	_____
<input type="checkbox"/>	Anaerobic treatment/UASB	_____	_____
<input type="checkbox"/>	Anaerobic filter	_____	_____
<input type="checkbox"/>	Stabilisation ponds	_____	_____
<input type="checkbox"/>	Constructed wetlands	_____	_____
<input type="checkbox"/>	Aquaculture	_____	_____
<input type="checkbox"/>	_____	_____	_____
<input type="checkbox"/>	_____	_____	_____

13. Tertiary Treatment Processes

	Processes	Size (if know)	Main operational problems (if exists)
<input type="checkbox"/>	Nitrification	_____	_____
<input type="checkbox"/>	Denitrification	_____	_____
<input type="checkbox"/>	Chemical precipitation	_____	_____
<input type="checkbox"/>	Disinfection	_____	_____
<input type="checkbox"/>	(Direct) filtration	_____	_____
<input type="checkbox"/>	Chemical oxidation	_____	_____
<input type="checkbox"/>	Biological P removal	_____	_____
<input type="checkbox"/>	Constructed wetlands	_____	_____
<input type="checkbox"/>	Aquaculture	_____	_____
<input type="checkbox"/>	_____	_____	_____
<input type="checkbox"/>	_____	_____	_____

14. Advanced Treatment Processes

	Processes	Size (if know)	Main operational problems (if exists)
<input type="checkbox"/>	Chemical treatment	_____	_____
<input type="checkbox"/>	Reverse osmosis	_____	_____
<input type="checkbox"/>	Electrodialysis	_____	_____
<input type="checkbox"/>	Carbon adsorption	_____	_____
<input type="checkbox"/>	Selective ion exchange	_____	_____
<input type="checkbox"/>	Hyperfiltration	_____	_____
<input type="checkbox"/>	Oxidation	_____	_____
<input type="checkbox"/>	Detoxification	_____	_____
<input type="checkbox"/>	_____	_____	_____
<input type="checkbox"/>	_____	_____	_____

Other comments

The capacity of the existing municipal wastewater treatment plant (designed for 7000pe) is not sufficient any more. Although there were plans for upgrading the plant, the projects were abandoned due to the change in the Greater Municipality Law. A new wastewater treatment plant with higher capacity will be installed by Istanbul Greater Municipality, and the existing treatment plant will be put out of service.

3 CONTROL AND MONITORING SYSTEMS

15. Which are the most critical process parameters that may affect the efficiency of the wastewater treatment plant?

<i>Parameter</i>	<i>Process</i>	<i>Current Automatic Control?</i>	
<input type="checkbox"/> Wetwell levels	On-off pumping	Yes <input type="checkbox"/>	No <input type="checkbox"/>
<input type="checkbox"/> Sludge depth	Primary treatment	Yes <input type="checkbox"/>	No <input type="checkbox"/>
<input type="checkbox"/> Solids Retention Time (SRT)	Conventional activated sludge	Yes <input type="checkbox"/>	No <input type="checkbox"/>
<input type="checkbox"/> Dissolved oxygen concentration	Conventional activated sludge	Yes <input type="checkbox"/>	No <input type="checkbox"/>
<input type="checkbox"/> Return flowrate from the clarifier	Conventional activated sludge	Yes <input type="checkbox"/>	No <input type="checkbox"/>
<input type="checkbox"/> Internal recycle	Biological nutrient removal	Yes <input type="checkbox"/>	No <input type="checkbox"/>
<input type="checkbox"/> Methanol feed rate	Biological nutrient removal	Yes <input type="checkbox"/>	No <input type="checkbox"/>
<input type="checkbox"/> Air / solids ratio	Dissolved air flotation thickening	Yes <input type="checkbox"/>	No <input type="checkbox"/>
<input type="checkbox"/> Sludge depth	Gravity thickening	Yes <input type="checkbox"/>	No <input type="checkbox"/>
<input type="checkbox"/> Belt speed	Gravity belt thickening	Yes <input type="checkbox"/>	No <input type="checkbox"/>
<input type="checkbox"/> Chemical dosage rate	Chemical addition for water-solids separation	Yes <input type="checkbox"/>	No <input type="checkbox"/>
<input type="checkbox"/> Chlorine dosage rate	Chlorination	Yes <input type="checkbox"/>	No <input type="checkbox"/>
<input type="checkbox"/> _____	_____	Yes <input type="checkbox"/>	No <input type="checkbox"/>
<input type="checkbox"/> _____	_____	Yes <input type="checkbox"/>	No <input type="checkbox"/>
<input type="checkbox"/> _____	_____	Yes <input type="checkbox"/>	No <input type="checkbox"/>
<input type="checkbox"/> _____	_____	Yes <input type="checkbox"/>	No <input type="checkbox"/>
<input type="checkbox"/> _____	_____	Yes <input type="checkbox"/>	No <input type="checkbox"/>

<input type="checkbox"/>	_____	_____	Yes <input type="checkbox"/>	No <input type="checkbox"/>
<input type="checkbox"/>	_____	_____	Yes <input type="checkbox"/>	No <input type="checkbox"/>
<input type="checkbox"/>	_____	_____	Yes <input type="checkbox"/>	No <input type="checkbox"/>
<input type="checkbox"/>	_____	_____	Yes <input type="checkbox"/>	No <input type="checkbox"/>
<input type="checkbox"/>	_____	_____	Yes <input type="checkbox"/>	No <input type="checkbox"/>

16. In your opinion, what are the main problems with the control system of the wastewater treatment plant?

17. In your opinion, what treatment processes / parameters should be monitored / controlled automatically?

If you have any questions about this document, please contact us by e-mail at yolnun@cartif.es

Thank you for your collaboration.