



# ENVIRONMENT

# Waste Water & Treatment (WWT)

There is nothing we can't handle on **waste water (WW)**: from active participation in the implementation process of WW projects to proposals for optional use of reclaimed water & re-use of treated water, and innovative ideas on the extension of WWT plants and their optional multi-purpose functioning.

## In the WWT Sector EPSILON offers:

Engineering, feasibilities, regional planning, consulting, contract research, legal and regulatory support, training, educational and capacity building services aimed to assisting and addressing the challenges of WWT. EPSILON experts have been active in contracts for research, design, construction and operation & maintenance of WWT Plants (WWTPs) and Water-Supply and Sewerage Networks (WSSNs), whilst our diverse group of engineers, scientists and professionals provide technical solutions in the fields of:

- **Development of preliminary studies, including selection of the most technical and economic efficient options** for WWT sites, activities and infrastructure building.
- **Preparation of technical specifications and contracts** for WWT projects, as well as **participation in Tender evaluation committees and support to the PIU / Employers activities**.
- **Decision on the type of water-supply and sewerage pipes selection**.
- **Selection of efficient and appropriate options for treatment of sludge**.
- **Innovative ideas and decisions on use and re-use of sludge generated in WWT process**.
- **Consultancy for preparation of WWT costs and tariffs** in conformity with local legislation, rules and particulars.
- **Consultancy for selection of waste water technological equipment**, including for biological treatment, mechanical treatment, disinfection and systems for Supervisory Control and Data Acquisition.
- **Full conversant compliant to EU and local national legislation**, the experts of EPSILON assure **compliance with Acquis and relevant Directives in the water sector**, including observance of restrictions for sensitive areas and discharged waters in sewerage networks and water bodies.

# Recent projects on WWT:

The **EPSILON Group** track record includes numerous Waste Water Treatment projects at international-, national- and regional-level. The multi-years experience of our group's partners and staff guarantees high quality services for any WWT challenge.

## Indicative projects:

1. **Integrated project for Sofia water cycle** (2012)
2. **Wastewater Collection and Treatment located in Gorna Oryahovitsa, Republic of Bulgaria** (2007)
3. **Wastewater collection and treatment located in Razardjik, Republic of Bulgaria** (2008)
4. **Wastewater treatment located in Blagoevgrad, Republic of Bulgaria** (2009)
5. **Wastewater Collection and Treatment in Burgas-Meden Rudnik** (2009)
6. **Targovishte Wastewater Collection and Treatment, Bulgaria** (2011)
7. **Lovech Wastewater Collection and Treatment, Bulgaria** (2010)
8. **Montana Wastewater Collection and Treatment in Bulgaria** (2009)
9. **Smolian Integrated Water Project in Bulgaria** (2009)
10. **Sevlievo Wastewater Collection and Treatment in Bulgaria** (2009)
11. **Popovo Wastewater Collection and Treatment in Bulgaria** (2009)
12. **Varna Integrated Water Project in Bulgaria** (2011)
13. **Balchik Integrated Water Project in Bulgaria** (2010)
14. **Integrated Water Project in the town of Sliven** (2011)
15. **Integrated Water Project in the town of Kyustendil** (2010)
16. **Technical Assistance for Institutional Strengthening and Preparation of ISPA and Cohesion Fund Projects in the Water and Solid Waste Sector located in Bulgaria** (2011). The WWTPs serve 2.75 million population equivalents and treat 829 101 m<sup>3</sup> water per day. [www.moew.government.bg/?show=94](http://www.moew.government.bg/?show=94)
17. **Water-supply and sewerage networks in the cities of Sofia** (2011), **Varna** (2010), **Kyustendil** (2010), **Smolyan** (2011), **Targovishte** (2011), **Gorna Oryahovitsa** (2011), **Shumen** (2011), **Balchik** (2011) and **the village Ivaylo - Pazardjik district** (2011). Total length of the constructed & rehabilitated water-supply network: 284 km; total length of the sewerage network: 168 km. These projects covered construction, supply & mounting of equipment, supervision, technical assistance & support, preparation of feasibility & preliminary studies, design in different stages, reporting to relevant authorities & audit trials services, communication with all stakeholders.
18. **URS / FGS-NAVY: Environmental Governing Standards** (2014). Technical analyses of the whole spectrum of national & EU environmental laws for over 20 years.
19. **National Waste Management Plan Revision** (2013). Elaboration of 18 waste management plans in Greece for equal waste streams including domestic, hazardous & industrial waste, in accordance with EU & national policies.

20. **EIA for the Drainage Works & Biological Treatment Plant of the Municipality of Elafonisos** (2013).
21. **Feasibility Study for the Recycled Water Pipeline System in Limassol, Cyprus** (2011).
22. **Drainage and wastewater study for the Municipality of Papagos** (2010). Design of works for the expansion & improvement of the existing storm water & wastewater network for establishing drainage & flood protection.
23. **Drainage and Biological Treatment Works Consultant for the Municipality of Nestoras** (2010). Response to technical problems: on-site consultation, reporting & analyses during the construction phase of sewerage & wastewater treatment networks & plants.
24. **Technical Consultant for the Recycled Water Pipeline System in Nicosia, Cyprus** (2008). Integrated study about the use of recycled water from sewage treatment plants.
25. **Interventions study in water supply of the city of Argos for reducing losses** (2008). Simulation of the internal network, reporting & mapping of pressure zones, database design, training of staff.
26. **Storm Drainage, Sewage Network and Wastewater Treatment Plant Studies for the Municipality of Messolonghi** (2001).

## Our WWT Services are supported by:

- Data and metadata harmonization & validation according to INSPIRE (using GoPublisher, HALE, EUOSME, Geoserver, Degree and other tools) by Epsilon Italia srl, [www.epsilon-italia.it](http://www.epsilon-italia.it)
- GIS/GPS/GSM/GPRS and other IST/ICT and field mapping technologies, also supported by Epsilon Italia srl, [www.epsilon-italia.it](http://www.epsilon-italia.it)
- Mapping via flights & robotic systems (UGV, UAV, UMW, sensors, telemetrics, aerial recording) as also supported by our associated company [www.aviontek.com](http://www.aviontek.com)
- Statistics databases (INSPIRE, GISCO/Eurostat, ecospecies)
- Geoinformation and GIS databases off the shelf for Greece & Cyprus
- RTD/R&D (H2020, National programmes)
- Capacity building, also offered by Epsilon Bulgaria ood, <http://epsilon-bulgaria.com>
- H/w, s/w, systems integration, supported by PC-Systems SA, [www.pcsystems.gr](http://www.pcsystems.gr)
- Management consulting also offered by Epsilon Consulting Ltd., Cyprus, [www.epsilon-cyprus.com.cy](http://www.epsilon-cyprus.com.cy)

We address cross-sectoral and institutional issues at international-, national- and local-level to ensure sustainability of natural resources and to support integrated and socially acceptable solutions. Our multi-discipline approach aims at protecting the environment, ensuring economic development, increasing public awareness, understanding uncertainties, managing risks and supporting policy adaptation.

**EPSILON** is certified according to **ISO 9001:2008** by TUV NORD for: civil & environmental engineering consulting services, design & development of information technologies and Geoinformatics and GIS, surveying- collection- and GIS data production, project management, remote sensing & photogrammetry services, and ICT/IST navigation services.



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